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Predicting Behavior from Psychopathic and Antisocial Personality Traits in a Student
Sample

A thesis
presented to
the faculty of the Department of Criminal Justice and Criminology
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Arts in Criminal Justice and Criminology

by
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May 2008

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Keywords: Psychopathy, Antisocial Personality, Behavior

ABSTRACT

Predicting Behavior from Psychopathic and Antisocial Personality Traits in a Student

Sample

by

Maryann Stone

Psychopathic personality is associated with a myriad of social and behavioral problems including violence, criminal activity, and overall failure to conform to social standards. In this study, psychopathic and antisocial personality traits are measured in a sample of college students via self-report surveys using questions derived from Hare's Psychopathic Checklist-Revised (PCL-R; 1991). Reliability and factor analyses were used to validate the inventory and create factor-based indices that were used to predict antisocial behavioral outcomes including violence, seeking revenge on persecutors, and suicidal ideation, in addition to other analogous and deviant behaviors. Findings showed a relationship between personality and behavior indicating that characteristics of one's personality may aid in the prediction and prevention of deviant behaviors. Implications for public policy, including the identification of traits that may be related to the propensity for such behaviors, are reviewed in the context of school shootings such as the incident at Columbine High School.

ACKNOWLEDGEMENTS

While this process feels like it has taken quite a long time to complete, the past two years have gone by extremely fast. There are several people whom I would like to thank, knowing that without them I would not be where I am today, nor would this experience have had such a profound impact on my life.

First, I would like to thank my family—Mom, Dad, and Robby—for their unending and unconditional love and support. You have continued to believe in me and have given me endless encouragement, which has given me the strength and ability to achieve my goals and become the person that I am today. I love you with all my heart.

I would not have been able to make it through this program if it had not been for meeting some very special friends. Kat, I am so lucky to have met such a good friend—it seems like we have known each other forever. I will forever cherish our five-minute phone calls that always turn into two-hour venting sessions! Thanks for always listening and assuring me that I would make it through. Wherever we end up in our lives, I know that we will remain the best of friends.

To my other CJGAs, the experience of graduate school would not have been half of what it has been had I not had your support, friendship, and entertainment in the office. Our study sessions have been invaluable in more ways than one, and all the time in the office has been more than educational, to say the least! You all have kept me smiling and laughing through it all.

I will forever be indebted to my committee members. I would like to express my extreme gratitude to Dr. Gillespie. You have been a wonderful professor, mentor, and friend. I appreciate all of your time, support, and help that you have put into this project,

as well as the patience and guidance you have expressed. You have helped me to grow both academically and as a person, and I will forever be grateful. Dr. Ellwanger, thank you for your vast amounts of help and expertise. I have learned a lot by completing this project and would likely not have gotten through it without your invaluable insight. Dr. Whitehead, I would also like to thank you for all of your help, not only on this project, but during the past two years as well. Your kind demeanor inspires and motivates others to be the best they can be.

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CHAPTER 1

INTRODUCTION

Psychopathy has been a growing topic of interest since the early 19th century when clinician Philippe Pinel applied the term *insanity without delirium* to individuals who displayed a lack of remorse and restraint in their behavior and to a time in the 20th century when Hervey Cleckley observed some of his psychiatric patients displaying characteristics different from those of other patients suffering from mental illnesses. A long debate has since begun, attempting to determine if these individuals, now known as psychopaths, are suffering from some mental illness or if they constitute a separate group of individuals. Even in the early research of Cleckley, it was suggested that psychopaths could be found at any level of society and in any occupation (Patrick, 2006).

After much research, psychopathy is currently considered a personality disorder characterized by interpersonal traits of remorselessness, manipulation, and grandiosity, along with a lifestyle of antisocial behavior. While the characteristics and behaviors of psychopaths often lead these individuals into a life of crime, many psychopaths are able to avoid the criminal justice system either through escaping detection or by relying on behaviors that are just deceitful enough to sidestep the law yet are still obvious breaches of society's norms, allowing these "subcriminal" or "successful" psychopaths to avoid arrests and convictions (Hare, 1993). Given the low base rate in the general population, it is not surprising that the majority of studies on psychopathy have taken place within forensic settings. Additionally, researchers and clinicians have thus far failed to develop a practical, effective structure for studying non-incarcerated, or subcriminal, psychopaths, which has resulted in a severe deficiency of studies on this population. Because of this, it

seems only logical for attempts to be made to develop new methods for researching psychopathic personality in non-incarcerated samples and for future use in prevention and treatment (Kirkman, 2002).

Research conducted on non-incarcerated psychopaths may well lead to gaining further knowledge of the psychological concepts involved in psychopathy, as well as the environmental conditions that may influence the perpetration of, or the prevention of, antisocial behaviors. Studying psychopathic characteristics in individuals who violate society's norms, yet whose behaviors do not meet the degree for prosecution or are undetected by the criminal justice system, could allow researchers to better recognize features that are particular to psychopathy and those that are strictly associated with criminality (Kirkman, 2002). According to Forth, Brown, Hart, and Hare (1996), drawing samples from populations where the likelihood of involvement in criminal behavior is considerably lower than forensic populations, such as university campuses, may reveal more about subcriminal psychopaths.

The compilation of personality traits associated with psychopathic personality (e.g., superficial charm, grandiosity, and pathological lying) may be accompanied by a lifestyle that is unlawful or in deviation of society's standards (Edens, Marcus, Lilienfeld, & Poythress Jr., 2006). When diagnosing an individual with psychopathic personality disorder, the individual must present with a constellation of symptoms or traits that are mutually occurring and differ from other symptom clusters (Cooke & Michie, 2001). Thus, an individual may possess psychopathic characteristics but cannot be classified as a psychopath unless he or she exhibits a distinct cluster of the symptoms. While this construct intersects with the diagnosis of antisocial personality disorder in the *Diagnostic*

and Statistical Manual of Mental Disorders (American Psychiatric Association (APA), 2000), psychopathy is a discrete disorder that has a greater concentration on interpersonal and affective traits. Psychopathic personality is said to exhibit symptoms early in life and remain relatively stable throughout adulthood. Although psychopathic individuals generally do not show a lack of intelligence, it seems that they are incapable of using their intelligence to learn from their wrongdoings (Brinkley, Newman, Widiger, & Lynam, 2004). The emphasis that has been placed on psychopathy in recent literature suggests that this construct is of growing interest for both theoretical and practical applications, probably due in large part to the substantial amount of emotional and physical devastation attributed to individuals with psychopathic personalities.

Terminology

Many researchers, those in academia, and even clinicians relate the terms *psychopathy*, *sociopathy*, and *antisocial personality disorder* as being indistinguishable from one another. After much debate throughout the history of researching psychopathy and other disorders, it has been determined that these terms, in fact, should not be viewed as synonymous, nor should they be used interchangeably (Hare, 1993). Frequently, it is the beliefs and ideology of each individual that influence his or her choice in the use of these terms. Several of those who believe that the origins of psychopathy lie in the social experiences of the individual prefer the term *sociopath*, while those who trust that psychopathy is a combination of psychological, biological, and genetic factors often favor the use of the term *psychopath*. Accordingly, one clinician could diagnose an individual as a sociopath, while another could diagnose the same individual as a psychopath (Hare, 1993). Sociopathy, however, is not a recognized psychiatric

condition. Contrary to psychopaths, sociopaths often have a conscience, but their understanding of what is right and wrong originates from their subculture or group's expectations rather than the expectations of society as a whole (Babiak & Hare, 2006). It is often believed that sociopaths may have progressed into respectable, honest citizens if they had faced positive social experiences during childhood, rather than the abuse and incompetence these individuals are often confronted with because of the lack in socialization of their parents or caregivers (Patrick, 2006). Further, antisocial personality disorder, as described in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; APA, 2000), refers mainly to antisocial and criminal behaviors because it was alleged that personality traits, such as those of psychopathy, would not be able to be assessed reliably by clinicians; thus, antisocial personality disorder is diagnosed through a group of behaviors that could be assessed by the typical clinician. The diagnostic criteria for antisocial personality disorder require "a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years, as indicated by three (or more) of the following":

- (1) Failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest
- (2) Deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure
- (3) Impulsivity or failure to plan ahead
- (4) Irritability and aggressiveness, as indicated by repeated physical fights or assaults
- (5) Reckless disregard for safety of self or others

(6) Consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations

(7) Lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another. (APA, 2000, p. 706)

The individual must also be at least 18 years of age at the time of diagnosis, have a history of symptoms of conduct disorder before 15 years of age, and the antisocial behavior cannot be exclusively during a manic episode or as a result of schizophrenia (APA).

The principal difference, then, of psychopathy and antisocial personality disorder is that psychopathy is characterized by a collection of both antisocial behaviors and personality traits, while the latter primarily concerns deviant behaviors (APA, 2000; Babiak & Hare, 2006; Cunningham & Reidy, 1998; Hare, 1993; Millon, Simonsen, Birket-Smith, & Davis, 1998). It must be noted, though, that the DSM-IV-TR (APA, 2000) does state that the pattern of behavior that is the essential feature of antisocial personality disorder has also been referred to as psychopathy, sociopathy, or dissocial personality disorder. It should also be mentioned that the DSM-IV-TR states that one cannot be diagnosed with antisocial personality disorder if the criminal behavior employed for personal gain is not complemented with the personality traits associated with the disorder (APA). Further, “only when antisocial personality traits are inflexible, maladaptive, and persistent and cause significant functional impairment or subjective distress do they constitute antisocial personality disorder” (APA, pp. 705-706).

Because the central focus is on behavioral characteristics, many researchers have argued that the criteria for antisocial personality disorder are not consistent with

psychopathy as a personality construct. The consequence of this is that the current criteria are excessively wide-ranging, resulting in inclusion of individuals with “distinctly different dispositions within the same diagnostic category because of their similar behavior” (McHoskey, Worzel, & Szyarto, 1998, p. 195).

The literature has presented various criticisms concerning the validity and reliability of diagnosing antisocial personality disorder (APD). Because the criteria for diagnosis have continued to change with each edition of the DSM, many weaknesses are presented with diagnosis of this disorder (Cunningham & Reidy, 1998). According to evaluation of previous editions of the DSM, “DSM-II criteria for APD share no common criteria with DSM-III and only one with DSM-III-R. DSM-IV shifts toward more general criteria, while the accompanying DSM-IV text retains specific features echoing DSM-III-R...Most notably, DSM-IV criteria neglect the interpersonal/affective symptoms which emerged from the prototypical analysis and from the PCL-R [Psychopathy Checklist—Revised]” (Cunningham & Reidy, p. 334). Further changes to the criteria of antisocial personality disorder are thus expected in future editions of the DSM. As criteria continue to change and the number of variations increases, the probability that the diagnosis of antisocial personality disorder is a distinct category continues to decrease (Cunningham & Reidy).

Because of the weaknesses associated with the diagnosis of APD, researchers are beginning to view psychopathy, as defined by the Psychopathy Checklist-Revised (PCL-R), to be a more reliable construct for identifying personality traits and antisocial behaviors associated with these disorders. “The clear criteria, verifiable scoring, psychometric and predictive research support, and pervasive symptom diagnostic cutting

score of the PCL-R have led to growing research and forensic utilization. It is anticipated that PCL-R psychopathy will become a more frequently encountered and accepted construct in forensic mental health testimony” (Cunningham & Reidy, 1998, p. 341).

Psychopathy, as well as sociopathy for that matter, is not listed in the DSM-IV-TR as a mental disorder, whereas antisocial personality disorder is among the mental disorders known as Cluster B personality disorders. While most criminals meet the criteria for antisocial personality disorder, most are not psychopaths. According to Cunningham and Reidy (1998), estimates show that about 75% of male prison inmates meet the criteria for antisocial personality disorder, while only about one third of these offenders would meet PCL-R criteria for psychopathy. Many individuals who behave defiantly or criminally but avoid prison, on the other hand, are actually psychopaths. For some, however, the view remains that psychopathy is actually an exceptionally severe form of antisocial personality disorder (Skeem, Johansson, Andershed, Kerr, & Loudon, 2007).

Current Study

Purpose

Because of the controversy that currently surrounds the use of self-report scales to measure psychopathy (Vaughn & Howard, 2005), as well as the fact that it would simply be unfeasible for the researcher to interview a large sample of students using a measure such as the PCL-R, and because the researcher has not been trained on this rating scale, it is important to understand that the current study is not an attempt to make any type of clinical diagnosis regarding any mental illness or personality disorder, including psychopathy. The researcher is only attempting to assess the presence of psychopathic

traits within the sample of students. This study will also investigate potential differences between genders in the relationship between psychopathic characteristics and deviant behaviors.

The aim of the current study is to recognize psychopathic traits within the sample of college students and to create a model to assess if these psychopathic traits, demographic characteristics, and other antisocial personality traits (e.g., low tolerance of frustration, alienation) are predictors of certain analogous and antisocial behaviors. The psychopathic characteristics will be investigated by identifying traits recognized in The Psychopathy Checklist-Revised (Hare, 1991). The researcher also anticipates the investigation of the prospect that psychopathic traits may be of relation to certain deviant school behaviors such as weapon carrying on campus and making threats to others. Further, it is not the intention of the researcher to either diagnose or label any individual as a psychopath or an individual likely to carry out any analogous, violent, or criminal behaviors.

Pertaining to psychopathic traits, the current study focuses on those found in the PCL-R (Hare, 1991). Because this screening instrument has come to be known as the gold standard for psychopathy assessment, the current study aims to identify interpersonal traits and antisocial behaviors found in this widely accepted and reliable diagnostic tool. However, because the researcher is untrained in the use of the PCL-R, and because it remains unfeasible due to time restrictions and other limitations, no attempts at diagnoses will be made. It is important, nevertheless, to identify and be familiar with the principal characteristics of this disorder.

It should be noted that this study is for research purposes only. It must be clear and understood that there could be negative, even harmful, consequences in labeling anyone a psychopath without proper assessment and diagnosis by a trained professional. The researcher seeks to do no such thing and wishes only to identify the potential of predicting certain behaviors from personality traits, such as those of psychopathy, in a student sample. Ultimately, the researcher seeks to answer the question, can psychopathic and other personality traits be used to predict analogous and deviant behaviors in a sample of college students?

Study Design

The Psychopathy Checklist Revised (PCL – R) is possibly the most widely known and commonly used scale to diagnose psychopathy, a personality disorder that has become of much interest in a variety of settings. This measure was originally created to assess psychopathy in males within forensic settings. Although it has begun to be used in other populations, this rating scale requires a timely interview with the individual, including access to personal files and collateral information to assure that the information the individual is supplying in the interview is accurate. Further, a professional that has been trained to conduct the interview and score the individual on each item must perform the interview. This measure can be used to diagnose for both clinical and research purposes, but also generates dimensional scores (see Table 1).

As the gold standard for measuring psychopathic personalities, the PCL-R consists of traits within an interpersonal and affective factor and a behavioral or lifestyle factor. It is conceivable that there exist individuals with various psychopathic traits but who do not meet the full criteria to be clinically diagnosed with psychopathy. It is

possible that some of these individuals can be identified in non-incarcerated samples. Identification of these traits may further the ability to predict behavioral patterns among these and other comparable individuals.

The current study will use a survey questionnaire to identify psychopathic and antisocial personality traits through self-report. Psychopathy measures will be derived from the PCL-R, while survey measures will also analyze various antisocial personality traits. Traits identified will then be used to determine if particular behaviors are a consequence of the elements of the individual's personality.

A random sample of classes of undergraduate college students was drawn and potential participants were enrolled in a mid-sized university during the fall 2007 semester. The researcher contacted instructors through e-mail, requesting permission to give the survey during their class time to voluntary participants. The survey questionnaire featured statements regarding 18 psychopathic traits (derived from the PCL-R; Hare, 1991), antisocial personality traits (e.g., fascination with violence, depression, alienation), and behaviors (e.g., crimes against persons, property crimes, antisocial behaviors at school), which were answered on a five-point Likert scale by the respondent according to how much he or she agreed or disagreed with the statement provided. Ordinary Least Squares regression analyses were performed to determine if behaviors could be predicted from aspects of personality.

Demographics

It is important to understand that although many psychopaths are found within forensic populations (e.g., prisons, mental institutions), psychopaths can be found within noncriminal settings as well; Hare has classified individuals with psychopathy in the general population as *subcriminal psychopaths*. According to Hare (1993),

...Many psychopaths never go to prison or any other facility. They appear to function reasonably well—as lawyers, doctors, psychiatrists, academics, mercenaries, police officers, cult leaders, military personnel, business people, writers, artists, entertainers, and so forth—without breaking the law, or at least without being caught and convicted. These individuals are every bit as egocentric, callous, and manipulative as the average criminal psychopath; however, their intelligence, family background social skills, and circumstances permit them to construct a façade of normalcy and to get what they want with relative impunity...I prefer to call them *subcriminal psychopaths*. Their conduct, although technically not illegal, typically violates conventional ethical standards, hovering just on the shady side of the law. (pp. 113-114)

It is evident that psychopaths can exist in any population; Babiak and Hare (2006) estimate that approximately 1% of the population is psychopathic. Although no diagnoses will be made in this particular study, it is presumed that psychopathic traits will be found within the student sample and the researcher will be able to determine if these and other personality traits can be used to predict certain behaviors.

It remains possible that the personality attributes associated with psychopathy may be used to predict antisocial and deviant behavior. Because psychopaths are likely to be found anywhere in society, research on individuals in the general population with psychopathic characteristics, in addition to those in forensic settings, may aid in better understanding of the disorder. “Research on psychopathy was motivated by a need to control, diagnose, and treat maladjusted and socially dangerous individuals and, in particular, people who appeared to be rationally intact but yet failed to follow the dictates of conventional decorum” (McHoskey et al., 1998, p. 194). Identifying individuals in society who present the risk of emotionally or physically harming others is significant as it may lead to an effective diagnostic instrument, as well as further knowledge of the disorder and valuable treatment strategies.

Objectives

The current study will be investigating potential relationships between personality characteristics (e.g., psychopathic traits, low tolerance of frustration, alienation) and the commission of analogous, antisocial, deviant, and criminal behaviors. Differences in gender and personality will be assessed, in addition to the potential relationship between personality and antisocial behaviors at school (e.g., weapon-carrying on campus, threats).

Limitations

Despite the researcher’s best efforts in making this study as methodologically sound as possible, this study is not without limitations. First, because this study uses a sample of college students from a mid-sized rural university, findings may not be generalizable to college students in other regions of the country, students in more urban settings, or non-student populations. Additionally, this study used self-report

questionnaires that require the researcher to rely on respondents answering accurately. It is impossible to know, however, if respondents' answers were consistently accurate and honest, especially considering that some questions on the survey concern deviant and criminal behaviors. Further, as measures of behavior only concerned the past 12 months, the questionnaire required not only for respondents to recall their behaviors, but it fails to take into account that behaviors may change over time. Because of the accessibility to this non-incarcerated sample and in interest of identifying psychopathic personalities in students, the researcher felt that the best way to conduct the study was through self-report questionnaires.

CHAPTER 2

LITERATURE REVIEW

Psychopaths are said to constitute approximately 20% of the prison population and 1% of the general population that is not incarcerated (Hare, 1993). Research has also shown that the majority of offenses are committed by a minority of offenders; it is reported that 50% to 60% of known crimes are committed by the most unrelenting 5% to 6% of offenders (Lynam, 1996). Many of these chronic offenders are potentially psychopathic. It can be hypothesized, then, that offenders with psychopathic personality disorder are some of the most violent and persistent offenders. Compared to non-psychopathic offenders, psychopathic offenders commit a greater number of crimes, commit more types of crimes, and are more violent in their crimes, proving to be quite prolific and versatile (Lynam, 1996).

While it is conceivable that individuals with psychopathic personalities would be likely to end up in the criminal justice system, many are able to breach society's norms while nevertheless avoiding illegal behaviors. Others, still, may break the law, but for one reason or another are able to evade arrest or conviction. This review of literature on psychopathy will explore the possible origins of the disorder, diagnostic issues and instruments, and Hare's description of the subcriminal psychopath. Past research that has examined the relationship between personality and behavior will also be reviewed in addition to the personality structure and how personality and psychopathic traits have been linked to violence and other analogous or deviant behaviors. Further, research that has examined psychopathy and antisocial personality in the context of school shooting

incidents such as the Columbine High School massacre, as well as policy implications that have taken these issues into account, will be reviewed.

The origins of the term *psychopathic* lie in 19th century Germany when it began to refer to individuals who had some psychic abnormality but were not considered to be mentally diseased (Millon et al., 1998). Psychopathy came to be known as “a morbid perversion of natural feelings, affections, inclinations, temper, habits, moral dispositions, and natural impulses, without any remarkable disorder or defect of the intellect or knowing and reasoning faculties, and particularly without any insane illusion or hallucination” (Millon et al., p. 35).

There remains a debate concerning various interpretations of definitions of psychopathy concerning antisocial behavior. On one side of the debate are those who contend that antisocial behavior is a basic feature of psychopathy. Those who support this idea argue that psychopathy is a “higher order construct” that is composed of four facets. On the other side of the debate lie those who believe Facets 1 and 2 contain the key features of psychopathy and Facets 3 and 4 are not primary to the disorder. Another side of the debate, that perhaps lies somewhere in the middle of the two previous arguments, says that Facets 1, 2, and 3 contain the principal features of psychopathy, while Facet 4 contains the more specific antisocial behaviors that are actually a consequence of the disorder instead of a fundamental trait (Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007).

Origins of Psychopathy

As many clinicians believe that a sociopath emerges through certain social experiences of the individual, a psychopath is often thought to be the product of

biological and genetic factors in addition to the social background of the individual. Research suggests that a biological predisposition may influence interpersonal and affective traits, while an unfavorable social environment may lead to the circumstances essential in developing an antisocial lifestyle (Kirkman, 2002). If this is the case, identifying the personality traits associated with psychopathy at a young age may allow for intervention before the interpersonal characteristics lead them into criminality or an antisocial lifestyle.

As cunning and manipulative liars, conversations with psychopaths are actually a product of much mental activity, though the manner in which their words come out may make it appear not so. This may represent the possibility that psychopaths exhibit inadequate mental processes, much the same way that their behaviors seem to not follow standards of society (Hare, 1993). Many researchers contend, however, that psychopaths do not represent a homogeneous group of individuals and, instead, may not share the same etiological or pathological processes. It is not clear at this time if there is one common etiology that triggers the expression of psychopathic traits or if there are multiple etiologies that can lead an individual to become psychopathic (Brinkley et al., 2004, p. 71).

Multiple biological theories exist as to the potential origin of psychopathy. First, frequently discussed in the field of evolutionary psychology, some argue that individuals aim to spread their gene pool as much as possible. The theory assumes that the principal aim of living is to reproduce, though it is not thought to be a conscious goal of the individual (Hare, 1993). Psychopaths are said to seek to mate with as many partners as possible in attempts to have many children, thus passing on their genes. According to

this theory, as they mate with many partners, they show little concern for the well being of the children and simply move on to the next sexual encounter. Further, this goal is often accomplished through their ability to lie, deceive, manipulate, and cheat with no regard for their offspring or partner, frequently abandoning and neglecting them without thought (Hare, 1993).

Another biological theory for the origin of psychopathy claims that the disorder is a result of some dysfunction of or damage to the frontal lobes of the brain. There have not been, however, any current studies that have been able to identify brain damage in psychopaths. This theory, along with the speculation that psychopathy may be a result of individuals' brains maturing at a slower rate than others, does not have any evidence to support the fact that it may be nothing more than just a theory (Hare, 1993).

The two hemispheres of the human brain each perform certain functions. A potential reason for the lack of regulation in a psychopath's mental processes is that the two cerebral hemispheres are actually competing against one another, interfering with the capability to correctly process mental activity. This conflict may then lead to a distortion of language when the psychopath attempts to carry a conversation, causing a tendency for contradictory statements (Hare, 1993). Because there are other individuals who exhibit problems with speech and language (e.g., dyslexics, stutterers), it is important to note that there must be some other underlying issues in the origin of psychopathy.

As psychopaths are often able to converse with others at a level that appears to be of high intellect, researchers believe that there must be something else occurring within the psychopathic individual. This, as proposed by Hare (1993), may be that psychopaths are able to communicate the language, but "a language that is two-dimensional, lacking

in emotional depth” (p. 129). Psychopaths may have learned the words of the language but are actually incapable of truly understanding what they mean and the feelings behind them. They may be able to act out the feelings by mimicking what they have seen from others in the past but do not actually feel the emotions. Moreover, in laboratory studies researchers have found that psychopaths respond to emotional words with the same level of brain activity as they respond to neutral words. A control sample is more likely to produce a much larger brain response to emotional words than neutral words. Thus, these findings lend support to the case that psychopaths lack emotional depth and are unable to feel emotion in relation to their words (Babiak & Hare, 2006; Hare, 1993). “This deficiency has fascinating implications, especially when considered in the context of psychopaths’ social interactions—manipulative deceit uninhibited by empathy or conscience. For most of us, language has the capacity to elicit powerful emotional feelings...but to the psychopath, a word is just a word” (Hare, 1993, p. 131). This inability to understand their words may be the reason why psychopaths appear to lack a conscience.

Further, as psychopaths are often perceived to be proficient liars, their contradictory statements and inability to properly organize their language demonstrates their failure in maintaining a meaningful conversation while attempting to make their story seem consistent to the listener. Because they do not understand the emotional association of their words, the dialect of psychopaths may seem odd to others but can also be quite convincing to the confused listener (Hare, 1993). In addition, psychopaths are quite proficient in avoiding answering questions that might be posed regarding their inconsistent and conflicting statements. According to Hare (1993):

This raises an important issue: If their speech is sometimes peculiar, why are psychopaths so believable, so capable of deceiving and manipulating us? Why do we fail to pick up the inconsistencies in what they say? The short answer is, it is difficult to penetrate their mask of normalcy: The oddities in their speech are often too subtle for the casual observer to detect, and they put on a good show. We are sucked in not by what they say but by how they say it and by the emotional buttons they push while saying it. (p. 142)

Psychopaths are quite often able to obscure the facts in such a way that the “show” they are putting on is actually what draws the attention so that the listener overlooks the inconsistencies. Psychopaths have one goal—to get what they want—and they are usually willing to deceive, lie, and manipulate others to achieve this goal. During the show they are putting on, psychopaths tend to use various hand motions and body language that is often distracting to the listener, drawing their attention away from the actual words being spoken.

Because of the probability that psychopathy has at least some biological origin, the personality traits and antisocial behaviors are often detected during childhood. Studies have shown that in adults diagnosed with psychopathy, caregivers during childhood were generally perceptive to the fact that something was amiss with the child at a young age. These children are commonly “inexplicably ‘different’ from normal children—more difficult, willful, aggressive, and deceitful; harder to ‘relate to’ or get close to; less susceptible to influence and instruction; and always testing the limits of social tolerance” (Hare, 1993, pp. 157-158). It appears, however, that there is not a lot

that parents can do to control these behaviors, even when there is an early emergence of these behaviors. According to Hare (1993), the best chance for intervention is in early childhood when the indication that something is wrong first becomes known. Because there are programs for childhood behaviors problems that have proven to be successful, it is possible that if children who show behavioral problems are treated at an early age their behavioral patterns may be modified. Some of the psychopathic traits and behaviors may be able to be modified at an early age, teaching them to satisfy their needs in ways that are prosocial (Hare, 1993). Further, the DSM-IV currently has no complete diagnosis for these behaviors in childhood, though many are diagnosed with attention-deficit hyperactivity disorder (ADHD), conduct disorder (CD), or oppositional defiant disorder (ODD) (APA; Hare, 1993). None of these disorders, however, completely account for all of the personality traits and behaviors that these young psychopaths possess. Ultimately, Hare (2006) contends that it is probable that psychopathic traits and temperament are significantly accounted for through genetic factors; however, the psychopathic lifestyle is likely a result of multifaceted interactions between these predispositions and social forces.

In addition to biological theories, some contend that psychopathy is actually a result of some unfortunate social or psychological circumstance in childhood (e.g., abuse, poverty, rejection, etc.). There appears, however, to be no consistent evidence to support this theory. Further, some researchers contend that psychopathy may be a result of poor parental attachment styles. Though these experiences may lead individuals into a life of antisocial behavior and crime, it is unlikely that psychopathy is strictly a result of any social factor (Hare, 1993). Hare (1993), moreover, reasons that childhood problems such

as a failure to bond may actually be a symptom of psychopathy rather than a cause. It is likely, thus, that psychopathic personality is not a result of any one simple biological or social factor, but a combination of the two. It remains possible that there is some genetic or biological predisposition to psychopathy and that social experiences during childhood affect the manner in which psychopathy develops in the individual (Hare, 1993).

Recent twin studies have shown that it is likely that genetic factors play a significant role in psychopathy and likely explain how the characteristics of the disorder vary from one psychopath to the next (Babiak & Hare, 2006). Nevertheless, “whether viewed as a mental disorder, an unusual pattern of psychobiologic/neurologic processes, an evolved ‘cheater’ strategy for passing on one’s gene pool, or as a pathologic variant of normal personality, psychopathy clearly presents society with a serious problem” (Hare, 2006, p. 710). Current research suggests that it is likely that there may be “multiple causal pathways that result in the constellation of personality traits typically associated with psychopathy” (Brinkley et al., 2004, p. 72). There remains a responsibility of researchers, however, to better understand the etiology of psychopathy, as this may allow for the construction of effective prevention and treatment strategies directed at the principal mechanisms at the core of antisocial behavior (Brinkley et al.).

Personality and Behavior

Over 50 years ago Kluckhohn and Murray noted that each individual is like every other human being in that it is human nature that we all are born with certain characteristics. They further observed that all individuals are like some other individuals, as we share a common culture with certain others. Finally, as each individual is unique,

every individual is like no other because each has his or her own combination of genes and personal life experiences (Hergenhahn & Olson, 2007).

Personality is said to differentiate individuals by their established patterns of thoughts, emotions, and behaviors. Accordingly, one's personality exhibits the various ways that individuals respond to strains and challenges. In other words, one's behavior is a function of how his or her personality facilitates analysis of events and the choices made in reaction to such events (Senna & Siegel, 2002). Psychological research has found that, when investigating the relationship of personality and crime, even aggressive adolescents have been shown to have unstable personality structures. In one study, Steiner, Cauffman, and Duxbury found personality traits to be predictive of both past and future criminal behavior, even after controlling for age, length of incarceration, number of previous offenses, and the seriousness of offense (1999).

There is growing suspicion that heredity is largely responsible for one's personality. It appears that siblings tend to share comparable personality traits, suggesting that the genes play a greater role in personality development than do common experiences. Currently, researchers have begun to concentrate not on whether genes have an influence on personality but to what extent and in what ways they play a role (Hergenhahn & Olson, 2007). It remains likely, however, that some personality traits are determined by genetics while other traits are learned through experience (Hergenhahn & Olson).

Trait theorists maintain that individual personality traits remain stable throughout time. Further, it is suggested that one will behave consistently throughout life in like situations (Hergenhahn & Olson, 2007). Thus, it could be argued that psychopaths are

often not receptive to treatment simply because their psychopathic personalities are established at a young age and remain stable throughout life. Because they lack feelings of remorse and guilt and view their behavior as acceptable, their personality structure allows them to continue through life believing that their conduct is appropriate to pursue their wants and needs. The manner in which one behaves, relative to the expectations of society, largely establishes which behaviors are viewed by society as normal and which are not (Hergenhahn & Olson). Because those with psychopathic personalities tend to follow their own set of rules, they likely do not consider their behavior as abnormal since they are not concerned with society's behavioral expectations.

According to those who trust in the learning process, individuals are able to create any type of personality through manipulation of rewards and punishments. Accordingly, these theorists believe that personality is malleable and can be influenced by the individual's choice of methodically manipulating rewards and punishments for behavior (Hergenhahn & Olson, 2007). With the psychopath's lack of conscience, he or she may be able to act in deviant ways to seek quick gratification. The behavior is then reinforced through the reward, further developing psychopathic personality traits. Furthermore, Sigmund Freud alleged that all humans are hedonistic (i.e., constantly seeking pleasure and avoiding pain; Hergenhahn & Olson). As such, pleasure is experienced when one's needs are satisfied and, conversely, one experiences distress when at least one need is not fulfilled. Consequently, one's goal would be to maintain a constant state of pleasure by satisfying all biological needs.

Research has shown that the general population has the same personality structure as patients in psychiatric facilities. Additionally, the same aspects of personality explain

human behaviors in both populations. Further, it has been found that personality plays an important role in psychopathologic vulnerabilities (Cloninger, Svrakic, & Przybeck, 2006). According to the DSM-IV-TR, personality traits are defined as “enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal context” (APA, 2000, p. 686).

Personality disorders are characterized by only those personality traits that are persistently maladaptive and impair function or cause personal distress. The individual’s behaviors deviate from society’s expectations in at least two of the subsequent areas: cognition, affectivity, interpersonal functioning, and impulse control (APA). Personality disorder is marked by an onset of behavior in adolescence or early adulthood and diagnosis requires the assessment of long-standing patterns of behavior, which often necessitates multiple interviews and collateral information.

Further, personality traits, according to the definitions of an “act” and a “disposition,” describe behaviors that tend to occur for a length of time and in different settings. Thus, personality and psychopathic traits only describe what individuals are capable of doing or how they may often be inclined to behave, though they cannot express indefinitely how one will behave at any time and in every circumstance (Millon et al., 1998). Accordingly, psychopathic traits or dispositions convey characteristics or behaviors that a psychopath is most likely to possess, but the psychopath may not exhibit these in every situation at all times. This further describes the distinction between psychopathy and antisocial personality disorder as the latter categorizes individuals strictly by their actions, where the former considers both actions and psychological traits (Patrick, 2006). Research has shown, however, that adults with personality disorder have

a higher risk for participation in violent behavior, although there appears to be a lack in the number of community-based studies that have explored this association (Johnson et al., 2000).

Palermo and Kocsis (2005) describe individuals with a psychopathic personality to possess a bad character. Character is said to derive from “a composite of distinctive qualities formed by mental and emotional traits that, under external and internal stimuli, show that person’s generally consistent mode of reaction and reveals the personality dynamism” (Palermo & Kocsis, p. 42). Character is typically developed from the individual’s natural intuition and emotional proclivity. Essentially, a person’s character can be considered as his or her “personality in action,” and appears to be directly related to each individual’s disposition (Palermo & Kocsis, p. 42). Research has shown that understanding the character of an offender is vital to understanding criminal behavior, for it is the absence of such character that is the source of much meaningless crime.

Allport suggested that the basic components of personality are temperament, intelligence, and physique (Allport, 1961, as cited in Hergenhahn & Olson, 2007). Further, he contended that all three elements are genetic and that temperament is the emotional element of the personality. He defined each trait as “a neuropsychic structure having the capacity to render many stimuli functionally equivalent, and to initiate and guide equivalent (meaningfully consistent) forms of adaptive and expressive behavior” (Allport, 1961, p. 347, as cited in Hergenhahn & Olson). Thus, traits are what lead a person to behave in the same ways during similar situations. Individuals act differently in comparable situations because each individual possesses a unique set of traits.

Because individuals react to situations in terms of their traits, life experiences are said to be managed by their personal traits (Hergenhahn & Olson).

Although it appears that there are no current treatments for psychopathy that present a successful approach to mitigating psychopathic traits and behaviors, there are some implications that can be taken from research. The primary focus of identifying individuals with psychopathic characteristics has been to allocate offenders to particular correctional interventions based on personality factors in addition to behavior (Listwan, Van Voorhis, & Ritchey, 2007). Research on personality has aided in differential supervision and treatment based on the understanding of how personality relates to behavior. Classifying individuals in this manner is important to “(a) improve our understanding of criminal behavior, (b) match offenders to interventions, (c) manage prison populations, and (d) predict future offending” (Listwan et al., p. 61). It has also been shown that when controlling for age, location, gender, and race, personality is a predictor of criminal behavior, although it is important to recognize that the relationship between personality and criminal behavior remains quite complex.

It is often assumed that psychopathy remains stable in adulthood. According to Lyman and colleagues:

Basic research in personality suggests, however, that stability needs to be explained. With emerging evidence that individual differences in psychopathy are stable across time, research is now needed that explores the reactive, evocative, and proactive person-environment transactions that promote stable individual differences. (2007, p. 162)

Reactive transactions transpire when individuals interpret and react to an environmental experience based on their predispositions. Evocative transactions take place when, based on the individual's personality, particular reactions are reminiscent of their social background and environments. Proactive transactions happen when individuals opt for or construct certain social environments based on their personalities (Lynam et al., 2007). Individuals' personalities are thus continually strengthened and emphasized by these person-environment transactions. According to this view, psychopathic behavior is reinforced through negative consequences. Psychopaths, then, appear to be quite unaffected by treatment because their accrual of these negative consequences has severely limited more acceptable and prosocial opportunities. If the behavior is intervened early on, before the accumulation of negative consequences, there may be a better hope for treatment of psychopathic individuals. When antisocial behavior is not identified and there is no effective intervention, psychopathy is likely to remain stable over time (Lynam et al.).

It has been reported that children diagnosed with conduct disorder, compared to children who are not, are 17 times more likely to develop antisocial personality disorder as adults (Washburn et al., 2007). Further studies have shown that a greater number of conduct disorder symptoms, not just a diagnosis of conduct disorder, provide a greater risk for antisocial personality disorder. Additionally, other disorders and factors might play a role in the propensity of youths to develop antisocial personality disorder, including attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), depression, low anxiety levels, and substance abuse. Conversely, anxiety disorders in childhood may help in preventing the development of antisocial personality

disorder in adulthood. A study performed by Washburn et al. found that adolescents who are detained and youths receiving treatment for mental health issues are likely to develop antisocial personality disorder as they enter adulthood. Approximately one fifth of the detained adolescents in their study went on to develop antisocial personality disorder. It is also suggested that antisocial behavior in childhood may be reinforced by a greater association with deviant peers, leading to stability in antisocial behavior over time.

More than 3 decades ago, Blair indicated a need to differentiate psychopathy from (a) all other personality disorders, (b) severe psychoneurosis, (c) typical adolescent behavior, and (d) hardened criminals (Kirkman, 2002). As a result, four leading distinguishing characteristics of psychopathy were identified: thrill-seeking, pathological glibness, antisocial pursuit of power, and absence of guilt. The significance of these four constructs is that they are all features of personality that may (or may not) be articulated through criminal behavior (Kirkman). In this view it is said then that it is because of these personality and emotional difficulties that those with psychopathic personalities are likely to use antisocial behaviors for personal gain.

Diagnosis

Much of the prior research that has taken place on psychopathy has occurred inside of prisons, using convicted offenders whose information is easily available to aid in diagnosis (Hare, 1993). Although when literally translated the word psychopathy means *mind disease* or *mental illness*, psychopathy is generally considered a personality disorder, not a mental illness. In fact, the American Psychiatric Association's current edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000) does not even include this disorder. Thus, psychopaths are not considered mentally ill by

professional clinicians or professionals within the criminal justice system. Psychopaths do not suffer from hallucinations, delusions, or the inability to make a rational decision. Psychopaths are conscious and aware of their actions and are able to make rational choices (Hare, 1993).

Proper diagnosis can be essential in managing psychopaths. Accurate clinical diagnosis requires assessment of the individual, along with any available institutional files, and collateral information that supports the narrative of the individual. Further, a reliable diagnostic instrument that can be used widespread is a significant need for diagnosis of psychopathy. Just as misdiagnosis and labeling of an individual can have extremely negative consequences, so can the failure to identify, diagnose, and treat individuals with the disorder. “Diagnoses yield sticky labels; faulty predictions based on inaccurate diagnoses can result in confusion and disaster. The anecdote to the problem, the preventive against disaster, lies in the careful use of procedures derived from solid scientific research. Anything less is unacceptable” (Hare, 1993, p. 191).

One of the first to study psychopaths was the psychiatrist Hervey Cleckley. Cleckley spent much time with patients in a psychiatric facility and observed that many of the patients did not present the typical symptoms of mental illness. As it turns out, these patients were most likely psychopaths. Cleckley first published his book *The Mask of Sanity* in 1941, though his intentions were not to create an official diagnostic tool for psychopathy. Because of this, Cleckley never scientifically tested the disorder he called *semantic aphasia* (Babiak & Hare, 2006). The characteristics identified by Cleckley were then used to form a rating scale for measuring psychopathic personality disorder (McHoskey et al., 1998).

The PCL-R—The Gold Standard of Diagnosis

Robert Hare spent many years researching psychopathy and attempting to create a reliable instrument to identify and diagnose psychopaths within prison populations. According to Hare (1993), “The result was a highly reliable diagnostic tool that any clinician or researcher could use and that yielded a richly detailed profile of the personality disorder called psychopathy. We named this instrument the *Psychopathy Checklist*” (p. 32). Since the development of the Psychopathy Checklist—Revised (PCL-R) in 1991, this instrument is now considered the gold standard for assessing and diagnosing psychopathy in forensic samples. It appears that after the PCL-R was created, for the first time in history, those who referred to a “psychopath” were finally signifying the same thing (Hercz, 2001).

Hare (1991, 1993) contends that the core features of psychopathy fall under two clusters—emotional and interpersonal traits and the characteristically antisocial behaviors and lifestyle. Hence, the PCL-R is organized as a two-factor model (see Tables 1 and 2). Before describing the characteristics of each factor, it must be noted that many individuals have some of the symptoms of psychopathy but are not psychopaths; as psychopathy is a disorder, it entails that one possess a “cluster of related symptoms” in order to be diagnosed as a psychopath (Hare, 1993, p. 34). In other words, a psychopath can only be diagnosed as such if he or she displays most of the characteristics of both the personality trait element and the element of antisocial behaviors that characterize the disorder.

The two correlated factors, with Factor 1 reflecting the verbal, affective, and interpersonal aspects of the disorder and Factor 2 the socially deviant, irresponsible,

impulsive, and parasitic behaviors, present a valuable description of the disorder as a whole (Hare, 1991). As each factor measures essential elements of the disorder, assessing only one of the factors is considered to be inadequate measurement of psychopathy (Cunningham & Reidy, 1998).

Table 1

Factor 1: Selfish, Callous, and Remorseless Use of Others

Item	Description
1	Glibness/superficial charm
2	Grandiose sense of self-worth
4	Pathological lying
5	Conning/manipulative
6	Lack of remorse or guilt
7	Shallow affect
8	Callous/lack of empathy
16	Failure to accept responsibility for own actions

Source: Hare, R.D. (1991). *The Hare psychopathy checklist—revised*. Tonawanda, NY: Multi-Health Systems.

Table 2

Factor 2: Chronically Unstable, Antisocial, and Socially Deviant Lifestyle

Item	Description
3	Need for stimulation
9	Parasitic lifestyle
10	Poor behavioral controls
12	Early behavior problems
13	Lack of realistic goals
14	Impulsivity
15	Irresponsibility
18	Juvenile delinquency
19	Revocation of conditional release

Note: Three items (11, 17, 20) are not included in either factor.

Source: Hare, R.D. (1991). *The Hare psychopathy checklist—revised*. Tonawanda, NY: Multi-Health Systems.

Moreover, psychopathic personality disorder has recently become understood to manifest four components—interpersonal, affective, lifestyle, and antisocial. Similar to the two factors associated with the PCL-R, the Psychopathic Checklist Screening Version (PCL: SV) separates the items into these four dimensions (Patrick, 2006). The *interpersonal* component describes how people present themselves to others (deceitful, grandiose, and superficial), the *affective* component describes emotional aspects (a lack of remorse and empathy, the failure to accept responsibility), the *lifestyle* component reflects how these individuals live within society (impulsive and irresponsible traits, lacking goals), and the fourth component, *antisocial*, shows a history of poor behavioral controls and adolescent and adult antisocial behavior (Babiak & Hare, 2006). The PCL: SV presents an instrument more appropriate for screening within the general population as opposed to within prisons or other forensic settings, though it is derived from the PCL-R. The PCL: SV also requires trained professionals, in addition to an interview and collateral information, to score each item (Babiak & Hare). Similarly, to be identified as a psychopath, one must display a collection of these characteristics. To simply possess some of the traits does not consequentially classify a psychopath, though it may signal warning signs that should perhaps be further investigated.

The Common Perception of the Psychopath

Frequently, when someone thinks of the term psychopath it is equated with what is seen in the media and in films. Psychopathy is not considered a mental illness, nor should it be likened to the typical psychotic murderer often portrayed in movies and the like. Although psychopathy is still used as a diagnostic term, it is likely that many laymen actually are thinking of individuals with some sort of psychosis, a mental disorder

that is different from psychopathy. Further, “the common assumption that all psychopaths are grisly serial killers who torture and maim for kicks” is quite inaccurate (Hare, 1993, p. 74). Hare (1993) approximates that there are less than 100 serial killers, but two or three million psychopaths, in North America. Thus, there are 20,000 to 30,000 psychopaths who are not serial killers for every one psychopath who does commit serial murder. Moreover, psychopaths can be found in almost any setting, from criminal arenas, to academia and white-collar business corporations.

Given their personality, it comes as no surprise that psychopaths make good imposters. They have no hesitation in forging and brazenly using impressive credentials to adopt, chameleonlike, professional roles that give them prestige and power. When things fall apart, as they usually do, they simply pack up and move on. In most cases they select professions in which the requisite skills are easy to fake, the jargon is easy to learn, and the credentials are unlikely to be thoroughly checked. (Hare, 1993, p. 108)

A principal element to psychopathy is the lack of conscience that these individuals possess. Throughout an individual’s life there are many experiences that aid in building this conscience while he or she is also learning to follow the system of rules set forth by society. Psychopaths, however, never grasp this concept. While they know the rules and understand right from wrong, they simply choose to do what they want, regardless if these actions are in conjunction with society’s expectations. Hare (1993) presents a list of reasons why most people follow rules and regulations, including: (a) a rational appraisal of the odds of being caught, (b) a philosophical or theological idea of good and evil, (c) an appreciation of the need for social cooperation and harmony, and (d)

a capacity for thinking about, and being moved by, the feelings, rights, needs, and well-being of those around us (p. 75).

While most people learn the rules of society and, in effect, build the inner voice that attempts to regulate behavior, known as the conscience, it appears that psychopaths never build the ability to resist temptation or feel guilt when rules are defied (Hare, 1993). It is the process of socialization, through means such as parenting, religion, and schooling that most people construct their beliefs and values, which then influence the manner in which they interact with others. Because psychopaths never develop a conscience, or, if they do, develop quite a weak one, they will usually act in ways that will get them what they want or do what they believe they can get away with. Hare (1993) speculates as to why psychopaths exhibit such weak, or even non-existent, consciences and suggests: (a) psychopaths have little aptitude for experiencing the emotional responses—fear and anxiety—that are the mainsprings of conscience, (b) the “inner speech” of psychopaths lacks emotional punch, and (c) psychopaths have a weak capacity for mentally “picturing” the consequences of their behavior (pp. 76-77).

First, because they lack these emotions, the psychopath does not feel the anxiety that usually presents itself when one considers the possible consequences of a particular action; he or she is not able to experience a sense of fear or anxiety and therefore is not deterred from perpetrating antisocial behaviors. Second, psychopaths are deficient in their ability to communicate with themselves mentally. Consequently, and because having a conscience requires the individual to be able to both envision the consequences as well as to converse mentally, these emotions and feelings of guilt are not properly sensed by the psychopath. Finally, psychopaths lack in their ability to imagine the

consequences or punishments for their behavior and thus seek the distinct rewards that are immediately offered, rather than understanding that the costs may actually outweigh the benefits of their actions (Hare, 1993).

Sanity

Though many people often equate psychopathy with psychosis, these are actually two separate disorders. As psychopathy is a personality disorder, psychopaths are, in fact, sane by both psychiatric and legal standards (Hare, 1993). According to Smith (1999), the very ability of the psychopath to execute a complex plan of manipulation and exploitation of others indicates that psychopathic individuals should, at the least, be legally responsible for their behavior. Psychopaths are deemed rational individuals, able to control their behavior and capable of understanding what is right and what is wrong. Though psychopaths are able to grasp the potential consequences of their actions, they appear to simply choose to follow their own rules with no regard to the prospective costs or penalties. As a result, psychopaths are rarely deterred. Some argue, however, that because their mental processes appear to be impaired and they lack the emotional depth to truly understand the effects their actions may have, they should not be held accountable for their behaviors.

According to Palermo (2007), serious crime offenders with diagnosable personality disorders do not commit these crimes because of an authenticated mental disorder, but the crimes are a reflection of an individual with a severe personality disorder who shifts into a resemblance of a mental illness where his or her rationality is impaired. Further, in the opinion of Palermo, individuals with severe personality disorders who commit violent offenses that are likely to happen again should be viewed

as being afflicted with a disease of the mind. He further states that these individuals should not be held legally responsible for the crimes (2007). According to psychiatric and legal standards, though, psychopathic individuals fully understand their actions and effects of their actions and must, then, accept full responsibility (Hare, 1993).

Gender Differences

The research regarding gender and psychopathy is limited, especially that which concerns female psychopathy (Verona & Vitale, 2006; Vitale, Smith, Brinkley, & Newman, 2002). Much of the research that has been conducted on psychopathy, especially that which uses the PCL or PCL-R for assessment, pertains to institutionalized males. Consequently, it is difficult to determine if this research can be generalized to other groups, including females and non-forensic samples (Vitale et al., 2002). Important to this research, then, is to investigate the reliability and validity of these diagnostic tools in samples and populations other than institutionalized males. According to Vitale and colleagues (2002), the studies that have examined the reliability and validity of these other groups have concluded the PCL-R to be a valid instrument in assessing psychopathy in female samples.

However, it is also noted that when using the PCL-R to assess female psychopathy, these studies have introduced significant methodological concerns. For example, when comparing male and female samples, female samples generally have a much lower base rate of the disorder. Because of this, it has been suggested that perhaps the PCL-R be used as a dimensional tool for assessing psychopathy in females, rather than as a categorical tool (Vitale et al., 2002). Additionally, the possible difference in factor structure of the PCL-R in female samples has been questioned. However, it is

important to note that only one study has taken place examining the factor structure of the PCL-R on a female sample. This study, although containing a small sample size and a failure to separate the sample by race, found a factor structure different from the two-factor structure typically found with male samples (Vitale et al., 2002).

While it seems that the research on female psychopathy is growing, it continues to be inhibited by limitations. First, female samples are generally limited in size, making it difficult to determine if the findings are valid. Second, the literature available on females with psychopathy has demonstrated the use of studying different characteristics of psychopathy in females than in male samples. This has made it particularly difficult to reliably compare findings from male samples with female samples. Finally, another limitation in studying female psychopathy has involved the fact that these studies have failed to address race. Just as the research on psychopathy has primarily used institutionalized males, it has mostly involved White samples. Thus, researchers should be cautious when employing this measure on other races, as the validity of the PCL-R for other races is not fully understood (Vitale et al., 2002).

Many people believe that females cannot have psychopathic personality disorder. Because psychopaths are often portrayed as behaving in extremely violent and aggressive manners, it is often believed that psychopathy is strictly a male disorder. Females can, in fact, be psychopathic, although they may exhibit different antisocial behaviors than males with psychopathy. As Cleckley observed psychopathic traits in both males and females, he did note that the contexts in which these traits were exhibited differed between genders. Female psychopaths appeared to display these traits more often in the home and in personal relationships, manifesting their traits in general as violations of their expected

gender roles. Male psychopaths, on the other hand, were more likely to display these traits in more public arenas, such as in bars, in business, and in the military (Verona & Vitale, 2006). Among offenders, the prevalence of psychopathic females is thought to be equal to that of psychopathic males (Babiak & Hare, 2006), though it should be noted that Loucks and Zamble found in an informal review of journals that only about 2% of articles provide information concerning female offenders (1999). Furthermore, as Hare has identified a PCL-R score of 30 and above to classify psychopaths, it may be the case that this cut score does not apply to all populations, including females (Vitale, Brinkley, Hiatt, & Newman, 2007).

Antisocial behavior, clearly measured in the PCL-R in items such as juvenile delinquency, revocation of conditional release, and criminal versatility, is a key element of psychopathy. It is known, however, that females commit fewer violent and criminal offenses than males, indicating that the cut off score used in male samples may not be appropriate for female samples (Vitale et al., 2007). Further, item analysis of the PCL-R has shown differences between genders in conning/manipulative, early behavior problems, juvenile delinquency, and criminal versatility. These findings reveal differences between male and females in items particular to antisocial and criminal behavior (Verona & Vitale, 2006). It should be mentioned, however, that arrests for young men in the United States have decreased for crimes such as theft, assault, and weapons charges, while rates have risen for arrests of young women for the same offenses (Crawley & Martin, 2006).

Additionally, a higher prevalence of males within the general population exhibit characteristics that make them diagnosable for antisocial personality disorder. Because

APD mainly concerns deviant behavior, this may be an indication of behavioral differences in genders and the way psychopathy manifests itself, rather than interpersonal or affective differences (Forth et al., 1996). Other studies have also indicated that females may exhibit more of the personality components associated with psychopathy such as glibness, grandiosity, callousness, and a lack of empathy compared to males who may exhibit more of the antisocial features of the disorder (Verona & Vitale, 2006).

Like most behaviors, the behaviors of psychopaths are influenced by society's gender roles. Because of this, although male and female psychopaths maintain similar personality features, their behaviors regularly vary (Babiak & Hare, 2006). Psychopaths tend to use behavioral expectations as a means of further manipulating others. As male psychopaths may more often use aggression and intimidation to achieve desires, female psychopaths may instead use the nurturing, passive stereotype of women to get what they want from others (Babiak & Hare).

Similarly, most researchers agree that a key feature of the psychopathic male is an abnormality in processing emotion, which has been demonstrated in multiple areas of research (Sutton, Vitale, & Newman, 2002; Vitale et al., 2002). The processing of emotion in psychopathic females, however, is less understood. More recent research has revealed that psychopathic female offenders are similar to their counterparts in personality and behavioral features but may differ in other characteristics of psychopathy. Psychopathic males appear to be less able to restrain a behavior that had been previously rewarded in response to negative effects, while women with psychopathy have been found to not demonstrate similar repetitive reactions (Sutton et al.). This may be explained by the possibility that psychopathic females differ from psychopathic males in

emotion processing. However, findings from a study by Sutton et al. revealed that the characteristic deficit in emotion processing in male psychopathy underlies psychopathy in females as well. More specifically, it appears that both psychopathic males and females display an abnormal response to unpleasant or threatening stimuli (Sutton et al.).

According to Vitale et al. (2007), while female psychopaths appear to display similar interpersonal traits and abnormalities in psychophysiological measures of processing emotion as psychopathic men, the performance of psychopathic females on behavioral regulation studies has not diverged from the performance of nonpsychopathic women on these behavioral tasks.

When assessing psychopathic personality disorder in male samples, findings have revealed a positive relationship between PCL-R scores and antisocial personality disorder diagnoses. In addition, studies have showed psychopathic males to have higher levels of substance abuse. Commission of antisocial behaviors has also been found to be associated with psychopathy in male offenders. When assessed using the PCL or PCL-R, male offenders diagnosed with psychopathy have been found to commit more than double the amount of violent and non-violent crimes than non-psychopathic individuals (Vitale et al., 2002). Because of the lack of research on psychopathic females, however, it is not known whether these findings are generalizable to female psychopaths.

In a study conducted by Vitale et al. (2002) on 528 adult female offenders, the authors found a distinctively lower base rate of psychopaths than generally found with male samples, though they did find PCL-R scores to be similar for both Caucasian and African American women. The authors of this study subsequently sought to determine if the PCL-R was a reliable measure of psychopathy for female samples and if those

identified as psychopathic displayed similar personality and behavioral characteristics to psychopathic males. Vitale et al. contend that their results support the reliability and validity of the PCL-R in measuring psychopathy in female offenders. Further, the authors suggest that the low base rate of psychopathy in their female sample may indicate that although approximately 25% of male inmate populations are psychopathic individuals, there may simply be a lower prevalence of psychopathy in populations of female offenders (Vitale et al., 2002; Vitale et al., 2007). The authors do, however, note the possibility that the items in the PCL-R do not effectively measure the construct of psychopathy as it is expressed in females. Although PCL-R scores were similar for Caucasian and African American women in the study, African American females were found to have significantly higher scores for Factor 1 than Caucasian females, though overall there were few differences between races.

Forth et al. (1996) conducted a study using a sample of male and female undergraduate students. Findings from the study, which used the PCL-R: SV, revealed significant differences in male and female psychopathy score distributions. Further, the amount of psychopathic traits differed significantly from males to females, as males had much higher scores on all items than females. In addition, the proposed two-factor model of the PCL-R: SV was not found with the sample used for this study. With the expected low base rate in this student sample, it is possible that the limited range of scores was reason for the inability to replicate the two-factor structure for this noncriminal sample. Symptoms of antisocial personality disorder were positively related to the scores in the sample; 21% of males and 1% of females met the criteria for a diagnosis of APD. The study also found that students with a higher prevalence of psychopathic characteristics

were also more likely to engage in a greater variety of antisocial behaviors as well as more nonviolent antisocial activities (e.g., alcohol and drug abuse). For male participants, a relationship was also found between psychopathy and violent behavior. These findings advance the prospect that manifestations of psychopathy may differ between genders and between noncriminal and criminal psychopaths, furthering the need for more research on these groups.

Though the research on female psychopathy remains limited, the literature that has examined this concept both through self-report data and interview-based assessments suggests a lower base rate of psychopathy in females than in males. Additionally, it is likely that the behavioral components of psychopathy manifest themselves differently in males and females, with females more typically displaying more interpersonal and affective traits and males exhibiting greater levels of antisocial and criminal behaviors. Instruments used to measure psychopathy have, however, been found to be both reliable and valid in assessing the construct in both males and females, suggesting that psychopathy is related to similar personality indices in both genders. Finally, some uncertainty still remains regarding whether items in the PCL-R can effectively differentiate characteristics in psychopathic and nonpsychopathic females (Verona & Vitale, 2006).

Divergence from the Norms of Society

According to Hare (1993), psychopaths make up approximately 20% of inmates in prison and account for more than half for all serious crimes committed. Many psychopaths, however, never come in contact with the criminal justice system. “In many respects it is difficult to see how *any* psychopaths—with their lack of internal controls,

their unconventional attitudes about ethics and morality, their callous, remorseless, and egocentric view of the world, and so forth—could manage to avoid coming into conflict with society at some point in their lives” (Hare, 1993, p. 86). With their criminal versatility, many psychopaths do end up within the criminal justice system. Those who do not, though, present great amounts of potential harm for the rest of us (Millon et al., 1998). Hare (1993) presented an example of a diagnosed psychopath whose career was as a lawyer: “School had presented no problems for him, he said. ‘I was bright enough to get through college without studying very hard. Some of my classes were pretty large and I sometimes got someone else to take my place during exams’” (p. 108). As seen in this example, psychopaths may not always end up in the criminal justice system but often continue to manipulate many individuals and society as a whole.

The core personality traits of psychopaths may appear as attractive characteristics, even skills, to others, not only aiding in their ability for a successful career, but they also serve to help the psychopath play on the vulnerability and gullibility of others in order to get what they want (Babiak & Hare, 2006). The interpersonal and behavioral traits found in psychopaths also create a powerful recipe for crime (Hare, 1993). As psychopaths are usually impulsive, willing to grasp any opportunity that presents advantages, they do not stop to consider the effects their behavior may have on others. They are willing to take an opportunity that is presented or to manipulate others until they get what they want. They often seek out those who appear vulnerable and play on weaknesses to further themselves. Although everyone presents some vulnerability, psychopaths often pursue individuals who are especially trusting or gullible. They are unable to empathize with the feelings of others and, therefore, do not care how damaging their actions are.

Psychopaths are willing to use threats and violence to fulfill a simple want or need, rarely, if ever, regretting their actions. According to Hare (1993), “in general, psychopathic violence tends to be callous and cold-blooded, and more likely to be straightforward, uncomplicated, and businesslike than an expression of deep-seated distress or understandable precipitating factors. It lacks the ‘juice’ or powerful emotion that accompanies the violence of most other individuals” (Hare, 1993, p. 92).

Psychopaths also may vary not only in which characteristics are more notable in some than in others but also in the needs that they are inclined to satisfy. As some may search to satisfy the basic needs of life, such as food and sex, others seek to obtain status or fame. They also vary in their means of obtaining these needs. For example, some psychopaths may be more aggressive in their attempts to satisfy these needs, while others are more likely to use a more subtle form of manipulation or intimidation (Babiak & Hare, 2006).

Subtypes of Psychopathy

Differing combinations in features of psychopathy may suggest separate “styles” of psychopaths. According to Babiak and Hare (2006), three psychopathic styles have been discovered. Though all three styles share the traits in the affective dimension of psychopathy, they each present differences in the other domains. The *classic style* psychopath presents a high number of traits in each of the dimensions and would most likely score the highest on a screening instrument such as the PCL-R. The *manipulative style* psychopath would present a greater number of features within the interpersonal and affective components, while displaying fewer features in the lifestyle and antisocial components. The manipulative psychopath has been found to be one more likely to

succeed in business and other professions because of his or her capacity for misleading and cheating others as well as his or her ability to deceive and convince others into believing that he or she has the skills and talent necessary for the job. The *macho style* psychopath would present higher scores on the affective, lifestyle, and antisocial components but not on the interpersonal component. This type of psychopath appears to be more aggressive and less manipulative and charming than other psychopaths (Babiak & Hare). Additionally, others have proposed as many as 10 psychopathic subtypes including the unprincipled psychopath, the disingenuous psychopath, and the malevolent psychopath to name a few (Millon et al., 1998; O'Connor, 2005a).

The traditional subtypes of psychopathy are the *primary psychopath* and the *secondary psychopath*, originally identified by Karpman in 1941. The primary psychopath is said to have a genetic affective insufficiency, while the secondary psychopath seemingly has acquired this affective disorder from environmental and social factors (Skeem et al., 2007). Secondary psychopaths are seen as being more acquiescent to treatment programs because their behaviors are viewed as emotional reactions and adaptations to social factors, whereas the behaviors of primary psychopaths are apparently caused by a heritable deficit. According to these subtypes, the primary psychopath is likely to score higher on Factor 1 traits of the PCL-R, as he or she is more likely to coldheartedly use violence and manipulation to take advantage of others. Conversely, the secondary psychopath is more aggressive and more frequently violent, making him or her likely to score high on Factor 2 traits (Skeem et al.). “Distinguishing primary from secondary psychopathy is crucial to understanding the causes of antisocial behavior. Both are associated with antisocial action, but to plan appropriate interventions

and treatments it is necessary to understand the different personality processes that underlie these acts” (McHoskey et al., 1998, p. 195).

Skeem et al. (2007) recently conducted a study and identified variants of psychopathy that appear comparable to the primary and secondary psychopath. Their findings, however, contradicted the premise that primary psychopaths have more Factor 1 traits and secondary psychopaths have more Factor 2 traits. This study found that both subtypes scored high on total PCL-R scores, with mean scores being only 2 points apart. Furthermore, both groups were shown to be similar in psychopathic traits overall. The authors do, though, note that such indifference in the subtypes may have been caused by the selection of the sample for the study (Skeem et al.). According to this study, primary and secondary psychopaths are differentiated by the secondary psychopath’s “(a) emotional disturbance (anxiety, major mental and substance abuse disorders, borderline features, impaired functioning), (b) interpersonal hostility (irritability, paranoid features, indirect aggression), and (c) interpersonal submissiveness (lack of assertiveness, withdrawal, avoidant and dependent features” (Skeem et al., p. 405).

As discussed in Verona and Vitale (2006), Widom identified four subtypes of incarcerated females in 1978 while attempting to determine if female offenders fit the profile of psychopathy as described by Cleckley: (1) a psychopathic or undercontrolled type, exhibiting hostility and aggression, extensive criminal histories, and relatively low scores on anxiety; (2) a secondary or neurotic psychopath type, exhibiting high impulsivity and high levels of anxiety, depression, and other maladjustment; (3) an overcontrolled type with hyponormal scores on hostility and anxiety, higher psychological defensiveness, and fewer previous convictions; and (4) a “normal”

criminal type, scoring in the mid-range on most personality scales with a peak in hostility (p. 417). As these subtypes are similar to those identified in male offenders, Widom concluded that although subtypes appear similar between genders, the undercontrolled and psychopathic subtypes appear to be less prevalent and overcontrolled types appear to be more prevalent in female offender samples compared to male offender samples (Verona & Vitale).

A question that has been raised continuously throughout the literature is whether individuals with psychopathic personality comprise a distinct class of individuals (e.g., a taxonomy) or if psychopathy can be classified as a dimensional construct where psychopathic attributes are spread along a continuum. In other words, research has currently been examining if psychopaths are distinctly different from non-psychopaths, classifying psychopathy as a strict category, or if psychopathy represents a dimension where the features vary in degree, not kind, and cannot be classified as a discrete entity (Cunningham & Reidy, 1998; Murrie et al., 2007). While studies have found evidence for both arguments, it has been suggested that perhaps psychopathy occurs as a dimension in childhood, and if not intervened, it may become a taxonic construct in adulthood. If this is the case, if psychopathic features are identified in childhood, the features may still be malleable and responsive to treatment. Conversely, if intervention does not take place early on, adult psychopaths may not be responsive to rehabilitation and treatment efforts (Murrie et al.). Furthermore, if psychopathy is indeed dimensional, diagnosis and scoring may be better used for quantifying how psychopathic an individual is, rather than simply classifying an individual as either a psychopath or not. It should be noted that the current edition of the DSM recognizes personality disorders as taxonomies

(McHoskey, Worzel, & Szyarto, 1998). It appears that at this time, however, there is no clear consensus among researchers concerning the latent structure of this disorder.

The Subcriminal Psychopath

Individuals with psychopathic personalities who do not make it into the criminal justice system and function relatively well within society are referred to by Hare (1993) as *subcriminal psychopaths*. Though they maintain the very same core personality traits as those who are caught and punished, these psychopaths are able to avoid being caught and punished by maintaining a façade of normalcy. As these individuals often hold a career with some sort of status, some view them as a benefit to the rest of society. “Just as they are able to ignore society’s rules, the argument goes, intelligent psychopaths are able to transcend the bounds of conventional thought, providing creative spark for the arts, the theater, design, and so on” (Hare, 1993, p. 113). However, as Hare (1993) highlights, “Whatever the merits of this argument, they are more than offset...by the broken hearts, shattered careers, and used-up people left in their wake as they cut a zigzag route through society, driven by a remorseless need to ‘express themselves’” (p. 113).

Although the behaviors of subcriminal psychopaths do, most often, not break the law, their actions are usually against the traditional ethics and morals of society. “Case examples [of subcriminal psychopaths] illustrate the maladaptive aspects of psychopathic personality when it is found in the absence of severe criminality. Duplicitous (but not necessarily illegal) tactics such as deception, exploitation, and manipulation can have serious negative social consequences” (Patrick, 2006, p. 461). Between their personality traits and antisocial behaviors, however, a formula for crime is developed. It is not

unusual for a subcriminal psychopath to progress into criminal behavior and eventually end up in prison or a similar institution (Hare, 1993). It also must be understood that those psychopaths who do eventually end up in the criminal justice did not simply develop this personality and behavior suddenly; they had been a psychopath all along, but were just cunning or lucky enough that their behavior had not previously called attention to the justice system and allowed them to escape detection.

Studies performed by Paulhus et al. found that subclinical, or subcriminal, psychopaths have the most serious effect on society. It was shown that these psychopaths are often involved in substance use, cheating, bullying, and plagiarism (as cited in Babiak & Hare, 2006). Of the personalities that appear to be most problematic for society, including narcissism, Machiavellianism, and psychopathy (known as the dark triad), it seems that psychopathy may have the largest negative impact.

Research on psychopaths within the general population has been severely limited compared to that of psychopaths in prisons or other institutions. It is much of a challenge not only to identify and recruit those within the general population, but the fact remains that there is an absence of a well-validated diagnostic or measurement instrument for assessment of those that are not in forensic settings (DeMatteo, Heilbrun, & Marczyk, 2006). For these reasons, subcriminal psychopathy “is a conceptually complex phenomenon that has proven difficult to elucidate via empirical research” and self-report measures of psychopathy often demonstrate low validity (Patrick, 2006, p. 472). It should be noted, however, that research to date comparing samples of incarcerated psychopaths with non-incarcerated psychopaths provide evidence of multiple similarities between the two groups. Moreover, research of psychopathy in non-criminal and non-

clinical samples is likely to be generalizable to individuals who are more severely affected with this disorder (Sellbom & Verona, 2007). Thus, research on subcriminal psychopaths can prove to be quite important. Because most literature on psychopathy focuses on criminal samples, researchers have been virtually unable to separate the features of psychopathy from features of criminality. Further research on subcriminal psychopaths may be useful in recognizing what may prevent a psychopath from entering into a life of crime. Likewise, studying subcriminal psychopaths may also lead researchers to learn if subcriminal psychopaths really differ from their criminal counterparts in terms of antisocial behavior, or if they are simply just better able to avoid detection (Forth et al., 1996).

Researchers have also presented three conceptual perspectives of subcriminal psychopaths. The first perspective views “noncriminal psychopathy as a subclinical manifestation of the disorder” (Patrick, 2006, p. 462). In other words, those who follow this theme believe that subcriminal psychopaths exhibit the same etiological process of the disorder, but are less severely affected than psychopaths who are incarcerated. It is believed, then, that the difference between subcriminal and criminal psychopaths is not one of etiology but one of degree. Perhaps, it has been suggested, psychopathic characteristics should be measured dimensionally in noncriminal and nonforensic samples, as opposed to measuring the disorder as a discrete entity (Forth et al., 1996). The second perspective regards “noncriminal psychopaths as a moderated expression of the full disorder” (Patrick, p. 462). Those who assert this theme as a more accurate view believe that in addition to sharing the same etiological processes with criminal psychopaths, subcriminal psychopaths also maintain the same level of severity of the

disorder. “In this view, the critical difference between the two alternative manifestations (phenotypes) arises from moderating factors that shape the behavior expression of the underlying trait disposition (genotype; Patrick, p. 462). Thus, behaviors may differ because of factors such as intelligence, wealth, education, or individual behavioral temperament. The third conceptual perspective views “noncriminal psychopathy from a dual-process perspective” (Patrick, p. 462). This concept expresses that there is an apparent difference in etiology of the interpersonal traits and the antisocial behavioral traits of psychopathy. According to this perspective, subcriminal psychopaths may display more interpersonal traits compared to criminal psychopaths who likely exhibit more antisocial behaviors, leading to an increase in criminal acts, arrests, and convictions. Individuals who exhibit an elevation of interpersonal traits but a reduction of behaviors in the antisocial domain may very well be able to function in society, avoiding problems with the criminal justice system (Patrick). When looking at this perspective with regard to the PCL-R, this theme demonstrates that subcriminal psychopaths would score high on Factor 1 traits, while criminal psychopaths would likely score high the Factor 2 antisocial behaviors.

Although these conceptual perspectives each represent theories with different notions, it is important to note that they are not three separate, mutually exclusive models of subcriminal psychopaths (Patrick). In a study on psychopathy in a noninstitutionalized and noncriminal sample by DeMatteo, Heilbrun, and Marczyk (2006), results showed that this sample scored significantly higher on Factor 1 traits than Factor 2. This finding lends support to the third conceptual perspective concerning why subcriminal

psychopaths may avoid antisocial behavior and interaction with the criminal justice system.

In 1970, Richard Christie profiled the characteristics of a hypothetical successful manipulator. Quite similar to Hare's subcriminal psychopath, the successful manipulator was alleged to have "(a) a lack of interpersonal affect in interpersonal relationships, (b) a lack of concern with conventional morality, (c) a lack of gross psychopathology, and (d) low ideological commitment" (McHoskey et al., 1998, p. 193).

The successful manipulator was conceptualized as someone devoid of affective attachments to others, with normal reality contact, who would be both willing and able to manipulate others. Thus, Christie's original conceptualization of the high MACH [Machiavellian] individual includes characteristics that are central to defining psychopathic personality.

(McHoskey et al., 1998, p. 193)

Research on Student and Noncriminal Samples

The growing interest in subcriminal psychopaths is leading more researchers to examine psychopathy in samples from nonforensic settings. Because of the impracticality of interviewing and examining institutional files and collateral information in these settings, many researchers have turned to using self-report measures for noninstitutionalized samples. Additionally, many researchers have begun to use college and university students as a means to investigate psychopathic traits of individuals within society. Moreover, the validity of self-report measures has been questioned for use in measuring psychopathy. Many self-report instruments only assess the antisocial behavior aspect of psychopathy and neglect the interpersonal and affective traits associated with

the disorder. Consequently, by definition of the subcriminal psychopath, these measures would overlook psychopaths who maintain a history of avoiding detection and incarceration (Lilienfeld & Andrews, 1996). Self-report measures, however, allow researchers to study large numbers of people in a short period of time and without having to interview, assess files, or use collateral information (Lynam, Whiteside, & Jones, 1999). In order to study successful psychopaths, especially because of the likelihood of low base rates in these populations, a large pool of participants is needed in order to identify a small sample of psychopathic individuals. Thus, self-report measures appear to be the most ideal instrument for nonforensic samples (Lynam et al., 1999).

Until recently, it was believed that items concerning criminality and antisocial behaviors were unsuitable for use in nonforensic samples. Currently, however, it is now more understood that these items, even when used in college student samples, have revealed enough variation for use in such samples (Williams, Paulhas, & Hare, 2007). Further, Williams et al. found evidence for the addition of criminality items in a college sample, in addition to identifying a four-factor structure resembling the four factors now proposed by Hare for the PCL-R. Their study provided support for the possibility of measuring a four-factor structure of psychopathy, similar to that found in forensic diagnostic tools, in a college sample by using a self-report instrument.

Lynam et al. (1999) performed two studies on almost 2,000 undergraduate students using Levenson's Self-Report Psychopathy Scale (LSRP) to examine the reliability and validity of this self-report measure in a noninstitutionalized sample. In addition to finding the LSRP valid for use as a self-report measure of psychopathy, the results may help future researchers better understand how psychopathy manifests itself in

noninstitutionalized populations. Furthermore, these findings add to the limited literature available on female psychopathy. Because a two-factor model of the LSRP was almost indistinguishable for both males and females, this suggests that the manifestation of psychopathy is comparable in both genders. Finally, although researchers continue to question the use of self-report instruments, the results of these studies suggest that perhaps self-report measures of psychopathy are more useful than previously thought, especially in nonforensic samples (Lynam et al., 1999). One suggested reason for this is that institutionalized populations often feel the need to present themselves in a certain light, as their future may depend on responses to such measures; noninstitutionalized populations, on the other hand, may be more likely to give accurate responses on such measures because one's responses do not determine outcomes such as treatment decisions.

Using a sample of undergraduate students, Lilienfeld and Andrews (1996) sought to develop a valid self-report measure of psychopathic personality traits for use in nonforensic settings. Findings from their study indicate that psychopathy is indeed a construct that should be studied in noncriminal populations. They also suggest that psychopathy may be a disorder that results from the interactions of particular personality traits in the individual that lead to negative, antisocial outcomes (Lilienfeld & Andrews). Lilienfeld and Andrews were able to successfully create a self-report instrument capable of measuring underlying psychopathic personality traits without concentrating on the antisocial or criminal behaviors that subcriminal psychopaths most often do not possess, allowing for an instrument that may be useful in assessing psychopathy in noncriminal samples such as college students. Examining such individuals may allow for important

information regarding possible factors that may protect certain individuals with psychopathic traits from taking part in an antisocial or criminal lifestyle (Lilienfeld & Andrews).

Characteristics Associated with School Shootings

With the recent events at schools such as Virginia Tech, and the still infamous Columbine High School shooting, researchers have sought to understand what may lead individuals to commit such crimes. While it remains important to refrain from creating a profile of individuals who may be capable of committing such crimes as mass murder at school, researchers aim to identify signs of trouble in order to take steps to aid in preventing additional school shootings (O'Toole, 1999).

While the actual risk of a school-shooting incident at any school is rare, it is important to understand that the potential remains. According to Donohue, Schiraldi, and Ziedenberg (1998), the leading research indicates that there is only a one in a million chance of suffering a school-associated violent death. Although these seemingly senseless acts are uncommon, the extraordinary attention that the recent incidents have received has led to a virtual moral panic within society. Because the extensive media coverage on such events has led to a mislabeling of school shootings as a “trend,” the fear concerning safety at school, or lack thereof, has been exacerbated (Donohue et al.). “Based upon a review of the available data it is apparent that the recent school shootings were extremely idiosyncratic events and not part of any discernible trend. Ironically, they may have received magnified coverage because of the rarity of these tragic events rather than their typicality” (Donohue et al., p. 4).

School authorities must be able to identify threats of violence and have a plan of action in place to fairly and rationally respond to such situations. The Federal Bureau of Investigation (FBI) initiated a research proposal in 1998 to study the behavioral aspects of school shootings. The study identified and included 18 cases of prior school shootings or unsuccessful attempts. The researchers sought a better understanding of the shooting incidents, the shooters, the shooters' backgrounds, the schools where the incidents took place, and other features that may have been influential to the crime (O'Toole, 1999).

Some individuals have taken the stance that the best way to respond to the possibility of more school shootings is to create a profile of the typical school shooter in an effort to identify the next potential suspect. Such measures, however, can be quite dangerous as they may wrongly label a multitude of students as potential school shooters (O'Toole, 1999). These nonviolent students may exhibit certain personality traits and behaviors and thus be labeled as a potential school shooter when, in fact, they are completely harmless. According to O'Toole, it is virtually impossible to predict acts as rare as school shootings. A multitude of students may display identifiable risk factors, but there is no reliable way to identify the few individuals who may actually go on to commit a violent school shooting. However, retrospectively speaking, identifying signs that may have gone unnoticed in prior school shootings can bear valuable insight in attempts to better understand indications of possible danger. At the time of publication, O'Toole acknowledged that no characteristics or traits had been identified that could reliably single out a school shooter.

The Four-Pronged Assessment Model

It is important to take threats seriously. According to O'Toole, after a student has made a threat, all aspects of the individual should be assessed "to determine if he or she has the motivation, means, and intent to carry out a proclaimed threat" (1999; p. 10). The Four-Pronged Assessment Model can be used after determining that a threat is in fact serious and the student needs to be investigated further. Accordingly, if a threat is deemed serious and the student is found to display problems in the majority of the four areas, intervention should be taken immediately. The Four-Pronged Assessment Model consists of: (1) personality of the student, (2) family dynamics, (3) school dynamics and the student's role in those dynamics, and (4) social dynamics (O'Toole, p. 10). Although it may be impractical to thoroughly assess all four prongs, it is important to consider the totality of the circumstances when evaluating the student. It is essential to have all information available in order to determine if the student is actually capable of carrying out the threat (O'Toole).

Warning Signs

While O'Toole created a list of characteristics and behaviors that may be regarded as warning signs if a student has made a threat and the student displays most or all of the traits in all four categories, she cautions:

It should be strongly emphasized that this list is not intended as a checklist to predict future violent behavior by a student who has not acted violently or threatened violence. Rather, the list should be considered only after a student has made some type of threat and an assessment has been developed using the four-pronged model. If the assessment shows

evidence of these characteristics, behaviors and consistent problems in all four areas or prongs, it can indicate that the student may be fantasizing about acting on the threat, has the motivation to carry out the violent act, or has actually taken steps to carry out a threat. (emphasis in original; 1999; p. 15)

Prong One. The first potential warning sign has been termed *leakage*. This occurs when the student exposes, either deliberately or not, certain indications of thoughts, fantasies, feelings, or intentions that may suggest a pending act of violence. These clues may present in the form of spoken words, subtle or unsubtle actions, or writings such as poetry, journal entries, essays, or songs. An additional type of leakage includes attempts at acquiring the help of friends or classmates to prepare for or participate in an act of violence. Leakage may be one of the most important clues in identifying a student planning an act of violence at school (O'Toole, 1999). Leakage can also include a fascination with violence in things such as movies and television shows in addition to a preoccupation with violent themes that is revealed through conversations, jokes, or stories.

Other warning signs in Prong One include a low tolerance for frustration, poor coping skills, a lack of resiliency, a failed love relationship, the inability to forgive or forget wrongs against them, depression, narcissism, alienation, dehumanization of others, lack of empathy, an exaggerated sense of entitlement, an attitude of superiority, an exaggerated or pathological need for attention, externalization of blame, masking of low self-esteem, anger management problems, intolerance for difference, inappropriate humor, seeks to manipulate others, a lack of trust or suspicious of others' motives, a

closed social group, a change in behavior, rigid and opinionated, unusual interest in sensational violence, fascination with violence-filled entertainment, negative role models, and behavior appears relevant to carrying out a threat (O'Toole, 1999).

Prong Two. The following are warning signs associated with the student's family dynamics: turbulent parent-child relationship, acceptance of pathological behavior (by family), access to weapons, lack of intimacy, there is no limitation placed by family on the student's conduct or the family has little involvement in the student's life, and no limits are placed on or there is no monitoring of the students use of the television or internet (O'Toole, 1999).

Prong Three. Warning signs related to school dynamics can include: the student's attachment to school, a tolerance for disrespectful behavior, inequitable discipline, an inflexible culture, pecking order among students, a code of silence among students, and unsupervised computer access. It is important to note:

If an act of violence occurs at a school, the school becomes the scene of the crime. As in any violent crime, it is necessary to understand what it is about the school that might have influenced the student's decision to offend there rather than someplace else. While it may be difficult for educators/assessors to "critique" or evaluate their own school, one must have some degree of awareness of these unique dynamics – prior to a threat – in order to assess a student's role in the school culture and to develop a better understanding – from the student's perspective – of why he would target his own school. (emphasis in original; O'Toole, 1999, p. 22)

Prong Four. Finally, the social dynamics surrounding the student should be thoroughly assessed. These include easy or unmonitored access to movies, television shows, computer games, and Internet sites with themes and images of extreme violence, the student's peer group, use of drugs and/or alcohol, the student's interests outside of school, and possible copycat behavior following an incident elsewhere that was highly publicized (O'Toole, 1999).

It is especially important to note that although these warning signs may be significant in preventing a future school shooting, many of these characteristics, traits, and behaviors may not be relevant to the current sample being studied. For example, as undergraduate students are almost always no longer minors and may no longer live with family members, it is difficult to say that a lack of limitations on conduct or monitoring of the student's use of the television or Internet can be interpreted as a warning sign of impeding violence.

McGee and DeBernardo (1999) present a "hypothetical behavioral composite of the 'Classroom Avenger.'" In their article, McGee and DeBernardo describe a theoretical individual whom they say displays the characteristics that they associate with being potentially violent towards others in a school setting. They too caution, however, that there is no profile of a typical school shooter and it is impractical to attempt to determine whether a student will engage in such an incident simply through personality traits and behaviors; the possibility of being both over-inclusive and under-inclusive exists if using this composite as an assessment measure (McGee & DeBernardo). The authors examined a series of school shootings, which they characterized to be "Classroom Avenger" style incidents and presented the typical characteristics of this type of crime. A

majority of school shooters were found to be Caucasian males, from a middle-class or blue-collar background, and lived in a rural area with a population of less than 50,000 residents. Features prominent to these incidents and perpetrators included making explicit threats prior to the incident, accessing a gun from home, a precipitation of discipline or rejection and bullying, interest in the military or weaponry, existing as a social outsider, a feeling of having been wronged by others, suicidal ideation, chronic anger, and an interest in violence (TV, movies, music, etc.). Additionally, none of the offenders had a documented history of a serious mental illness, and only a small percentage (11%) had a known history of violence or police involvement (McGee & DeBernardo).

Using the characteristics identified in their sample of school shooting incidents, McGee and DeBernardo created an outline of the Classroom Avenger (1999). According to their depiction, the Classroom Avenger is “an individual who may have a well above average potential to behave in a lethally violent manner toward peers and/or parental/authority figures in a classroom or school setting” (McGee & DeBernardo, p. 7). This hypothetical individual is most often between 11 and 18 years old, is from a middle-class background, and lives in a suburban area. Family relationships are rather dysfunctional, though they may not appear so to others. There is often extreme friction between the parents, possibly including separation or divorce. The family environment is one of anger and hostility, with a constant battle over control. The individual may have first-degree relatives with substance abuse problems, a mental illness, or a personality disorder. He is often familiar or even proficient with the use of firearms and has access to them on a regular basis. Physical appearance often appears normal to others, though

the individual may prefer military-type attire. He invariably views himself as unattractive and has a negative body image. The academic performance of the Classroom Avenger is typically average but may even be above average. He often does not have a criminal history, though may partake in covert behaviors such as vandalism, but is not viewed as a menace at school. This individual does not have a close group of friends, tends to keep to himself, and lacks empathy. If he does have a close peer group, it usually consists of others who exhibit similar characteristics. The individual is bored by activities in which his peers participate but may be fascinated by weapons and violence. The Classroom Avenger does not exhibit symptoms of mental illness or psychosis but is often depressed, though this may not be visible to others. He may engage in temper tantrums and angry outbursts and places blame for his failures and hindrances on others. He is easily frustrated, his self-esteem is erratic, and he seeks to get revenge on others, perhaps obtaining notoriety at the same time. He will plan out his course of violent action in a calculated, selective, and premeditated manner; his act of violence will not be based on impulse. The typical Classroom Avenger will meet criteria for a diagnosis of atypical depression and mixed personality disorder with paranoid, antisocial, and narcissistic features but refuses any type of psychological treatment and can often hide symptoms from mental health professionals. He frequently engages in writings with a violent theme, whether it is in a journal, letters, or drawings (McGee & DeBernardo).

According to McGee and DeBernardo:

Verbal or written expressions of intent to kill and/or commit suicide or do something highly dramatic within the very near future, when made in this context and in the presence of the other primary variables of this profile,

are highly predictive of an imminent attack. They should prompt appropriate intervention including law enforcement involvement. (1999; p. 10)

While there is no one characteristic or variable that can identify a perpetrator of a school shooting or predict the occurrence of a violent shooting in a classroom or school setting, these traits and behaviors may assist in understanding the need for school professionals to take threats seriously and intervene when an individual displays many of these characteristics. Research can provide implications for the development of intervention strategies and become vital in preventing further school shootings from occurring.

Summary

Prior research has indicated that psychopathic personalities, though often found in forensic settings, can also be found in a variety of other settings. Because of their use of manipulation and exploitation for personal gain, it is possible that those who possess psychopathic personality traits are likely to pursue advanced education and high-level careers. The current study is an attempt to identify psychopathic personality traits in a sample of university students. Researchers have also found that personality is strongly related to behavior. As individuals with psychopathy are frequently involved in deviant behavior, the researcher seeks to investigate if psychopathic and antisocial personality traits are predictors of certain behavioral patterns.

As Hare (1993) indicated, psychopaths are rational beings capable of making sensible decisions. Although they understand the norms of society, psychopaths simply choose to follow their own rules to get what they want. These individuals, however, are

legally responsible for their behaviors and typically appear to be resistant to treatment. The possibility of preventing individuals with psychopathic personality traits from continuing into a life of deviancy seems to lie in identifying the traits as early as possible and attempting to demonstrate the ability to pursue desires through pro-social means. Because this is not often achieved, the potential for psychopathic personalities to be present in non-incarcerated samples appears to be quite likely. It is also possible that individuals who display psychopathic characteristics in noninstitutionalized populations, such as in undergraduate students, may also exhibit the warning signs that have been associated with school shootings (O'Toole, 1999). Thus, various personality traits, characteristics, and behaviors, including those associated with psychopathy, are being examined to determine if an association exists between them.

CHAPTER 3

METHODOLOGY

The previous chapters clearly demonstrate the probability that personality and behavior are interconnected. Theories on personality contend that behavior is a result of a collection of various personality traits unique to each individual. If personality traits explain the consistency of human behavior, it is probable that certain behaviors can be predicted from certain personality traits. Moreover, it is likely that psychopathic personalities are found in a multitude of settings, perhaps including university student populations. If deviant behaviors can be predicted from characteristics of personality, it may be suggested that it is possible to prevent certain behaviors by identifying particular personality traits possessed by the individual. This study uses a random sample of 544 undergraduate students, which can be considered sufficient to analyze various personality traits and determine if they can predict the commission of deviant behaviors. This chapter discusses the methodology used to select the random sample, to derive the matters to be analyzed on the survey, and the measures and analyses that will be used to determine if behaviors can indeed be predicted from personality.

Participants

The current study used paper-based questionnaires to survey a random cluster sample of undergraduate college students at a mid-sized public university in the Southeastern region of the United States. Because of time constraints, access to a student population, and the interest in identifying subcriminal psychopathic personalities in a non-forensic sample, the preferred sample for this study was college students enrolled in undergraduate courses during the fall semester of 2007. The Office of Institutional

Research at the university identified a cluster sample of classes from which the student sample was drawn. The sample represented enrollment ratios from each college at the university, allowing for a more generalizable sample and one that best represented the student body at the university. In order to allow for denial of permission to conduct the study in certain classes, refusal by potential participants to contribute to the study, and absences in each class, the original sample drawn was oversized to ensure a final sample size of at least 500 participants. A minimum of 500 participants should be sufficient to generalize the findings to a reasonable degree across the undergraduate student population of approximately 9,500; 500 participants would be equal to about 5% of the undergraduate student population at the university. According to Dillman (2007), a random sample of 369 participants would be sufficient to conduct a survey on a population of 9,500. Finally, all participants were enrolled in classes at the university during the 2007 fall semester.

The researcher contacted instructors for each class in the sample via e-mail and asked for permission to recruit participants and conduct the survey in the specified class during class time. The e-mails explained that the particular course was selected through a random sample and that the researcher wished to, with their permission, give the survey to volunteering students in the class. It further explained that the survey would take approximately 15 minutes to complete and offered a specific time and date to conduct the survey. Instructors were asked to respond to the e-mail either with permission to conduct the survey in their class, refusal to conduct the survey in their class, or with another preferred time and date to conduct the survey. The sample included 56 instructors and of the 41 instructors contacted, 27 gave permission for the survey to be given in their class

and surveys were given on a voluntary basis to participants in 24 classes; three of the courses where the instructor granted permission were not surveyed due to scheduling conflicts between the instructor or course time and the researcher, and five instructors were not contacted because of scheduling conflicts between the course time and the researcher. Six instructors denied permission, eight did not respond to the request, and the researcher was unable to obtain correct contact information for 10 instructors. Therefore, an overall response rate of 48% was found. According to the information provided by the Office of Institutional Research, there were 857 students enrolled in the classes that allowed for recruitment. Of these potential participants, 563 students chose to voluntarily participate in the study for a response rate of 66%. It should be noted that 19 cases were omitted from the study after being identified as extreme outliers. Therefore, the final sample size was 544. The response rate may also be underestimated, as it is logical to assume that a number of students were likely absent at the time the survey was conducted and enrollment in the courses could have changed from the time the sample was drawn to the time the survey was conducted. Additionally, it is possible that some students may have been enrolled in more than one of the random classes chosen for the sample; in these cases, students who had already completed the survey in a previous course were asked to not participate a second time.

The survey questionnaire consisted of nine pages, including a two-page introduction. Included in the introduction was a list of resources and instructions to retain the list of resources if any participant felt he or she or someone he or she knew would find the resources useful. The survey was composed of five parts (see Appendix A).

Measures

Demographics

The survey used for this study included demographic measures including gender, age, college classification (e.g., freshman, sophomore), college major, race, relationship status, marital status, current living arrangements, sexual orientation, current annual income, number of children, and substances used in the past 12 months (see Appendix A). Age was measured at the ratio level by asking the respondent to write in his or her current age in years. Other demographic variables were measured by having the respondent check the appropriate box for each demographic variable, while respondents were asked to write in their college major.

Psychopathic Characteristics

The researcher derived questions from Hare's Psychopathic Checklist—Revised (1991) for survey questions pertaining to psychopathic personality characteristics (see Appendix A). While there are self-report measures available to assess psychopathy in nonforensic samples, there are multiple weaknesses associated with these measures. For instance, the construct of psychopathy is considered to be composed of a set of interpersonal and affective traits in addition to a socially deviant lifestyle. Many of the self-report measures available for use only assess the antisocial behaviors associated with psychopathy. This presents a problem as by definition, subcriminal psychopaths, those most likely to be found in a student sample, exhibit the core personality traits associated with psychopathy without the history of a criminal lifestyle (Lilienfeld & Andrews, 1996; Lynam et al., 1999). In addition, although the PCL-R does have a screening version, this self-report measure still requires a lengthy interview as well as collateral information,

making this measure unfeasible for this study. For these reasons, the researcher decided to develop a self-report survey with statements derived from Hare's PCL-R. The researcher included in the survey statements assessing both the core personality traits of psychopathy (e.g., callousness, grandiosity, lack of empathy) and the antisocial behaviors associated with psychopathy (e.g., parasitic lifestyle, poor behavioral controls, irresponsibility). The survey also included other personality traits (e.g., low tolerance for frustration, alienation, depression) to determine if these traits can also be used to predict antisocial behaviors. Finally, the survey incorporated statements concerning the commission of various analogous, antisocial, and criminal behaviors.

The 20 characteristics found in the PCL-R have been identified as a cluster of traits that compose two factors. As the most widely used scale to identify psychopathic personalities, the PCL-R requires a cluster of symptoms in both the interpersonal and affective factor as well as in the behavioral and lifestyle factor. Table 3 provides a list of the items found in the PCL-R. While an individual may possess psychopathic traits, a collection of these traits must be identified for a diagnosis of psychopathy (Hare, 1991; Hare, 1993). It remains possible, however, that those who simply possess psychopathic traits, but do not meet the diagnostic criteria for psychopathy, may still be identified in non-incarcerated samples. If this is the case, identification of these traits may aid in predicting behavioral patterns among these and comparable individuals.

Various statements were presented on the survey, each associated with a psychopathic trait. Respondents were asked to circle the number referring to how strongly they agreed or disagreed with each statement. All questions on the survey regarding psychopathic characteristics used a Likert scale to measure responses. The

Likert scale used the following as potential responses to each statement: 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree.

Table 3

Items in The Psychopathy Checklist—Revised (PCL-R)

Item #	Characteristic description
1	Glibness/superficial charm
2	Grandiose sense of self-worth
3	Need for stimulation/proneness to boredom
4	Pathological lying
5	Conning/manipulative
6	Lack of remorse or guilt
7	Shallow affect
8	Callous/lack of empathy
9	Parasitic lifestyle
10	Poor behavioral controls
11	Promiscuous sexual behavior
12	Early behavior problems
13	Lack of realistic, long-term goals
14	Impulsivity
15	Irresponsibility
16	Failure to accept responsibility for own actions
17	Many short-term marital relationships
18	Juvenile delinquency
19	Revocation of conditional release
20	Criminal versatility

Source: Hare, R.D. (1991). *The Hare psychopathy checklist—revised*. Tonawanda, NY: Multi-Health Systems.

Glibness and Superficial Charm. Though psychopaths may appear charming to others, this appeal is actually quite superficial. An individual who exhibits this characteristic may often carry on engaging and entertaining conversations while always ready to respond in a skillful, cunning manner. These individuals also appear quite knowledgeable in a variety of subjects and may be rather friendly and pleasant, though their stories often are beyond what is believable to most, and their knowledge is purely

contrived (Hare, 1991). They are rarely, if ever, afraid to say anything and are quite the opposite from a shy or self-conscious individual (O'Connor, 2005a).

Grandiose Sense of Self-Worth. Individuals with a grandiose sense of self-worth believe they have worth and abilities much greater than they actually do. Their egocentricity allows these individuals to easily preclude embarrassment concerning legal issues and believe that any legal matters are a result of an unfortunate lack of luck, though they do not consider that these problems may have a negative influence on their future. They may also view themselves as the victim of the crime when they are forced to suffer consequences such as jail time. Individuals with an ostentatious sense of worth frequently aspire to take up careers with status, seek to impress others, and are extremely narcissistic. They commonly believe that they can live in accordance with their own rules and appear unable to comprehend the idea that others may express opinions different from their own (Hare, 1991, 1993). Hare (1993) explains, “psychopaths consider the rules and expectations of society inconvenient and unreasonable, impediments to the behavioral expression of their inclinations and wishes. They make their own rules, both as children and as adults” (p. 67). These individuals also present as arrogant, opinionated braggarts (O'Connor, 2005a).

Need for Stimulation and Proneness to Boredom. These individuals feel the need to engage in high-risk or exciting activities to maintain stimulation; they are constantly searching for something new and exciting to avoid boredom and monotony. This may include experimenting with or using a variety of drugs. They tend to change jobs frequently and feel that school, work, and long-term relationships are unexciting and

monotonous. Any responsibility that seems boring is often eagerly abandoned or simply never attempted (Hare, 1991).

Pathological Lying. A pathological liar's main characteristic is deceit. He or she is willing to lie about his or her past regardless of the fact that others can easily invalidate the story. These individuals lie with such ease that if caught in a lie they simply change their story to obscure the facts and lead others to suppose the facts were merely jumbled to begin with. As a result, the individual leaves "a series of contradictory statements and a thoroughly confused listener" (Hare, 1993, p. 46). There also appears to be some inherent worth to the individual in his or her capability of lying to and deceiving others and the individual is left feeling quite pleased with his or her ability to lie so gracefully (Hare, 1991).

Conning and Manipulative. Individuals who are conning or manipulative use deception and trickery to "cheat, bilk, defraud, or manipulate others" (Hare, 1991, p. 20). They often use scams to manipulate others for their own personal gain. The behaviors associated with this characteristic are often illegal, but conning and manipulative individuals also manipulate others without breaking the law. These individuals are willing to use others for gain in areas such as money, status, power, and sex. They are also often, unknown to their partners, involved in many intimate relationships at the same time (Hare, 1991).

Lack of Remorse or Guilt. Someone who possesses a lack of remorse or guilt expresses no trepidation for how the consequences of his or her actions may affect others, especially victims and society, but instead is more concerned with the effects on him or herself. The individual may be willing to admit that he or she does not feel any guilt or

remorse for his or her actions. Conversely, he or she may express that he or she feels remorse, but his or her actions show otherwise. He or she often contends that other individuals, society, or the criminal justice system are actually to blame and feel that he or she was not judged fairly by others (Hare, 1991).

Shallow Affect. Those who exhibit a shallow affect often appear unemotional and incapable of showing a variation of emotion. Their emotions may be inappropriately associated with certain behaviors and frequently emotions do not accurately depict the situation (Hare, 1991). Hare (1993) presents Cleckley's view of the psychopath's shallow affect:

The [psychopath] is unfamiliar with the primary facts or data of what might be called personal values and is altogether incapable of understanding such matters. It is impossible for him to take even a slight interest in the tragedy or joy or the striving of humanity as presented in serious literature or art. He is also indifferent to all these matters in life itself. Beauty and ugliness, except in a very superficial sense, goodness, evil, love, horror, and humor have no actual meaning, no power to move him. He is, furthermore, lacking in the ability to see that others are moved. It is as though he were color-blind, despite his sharp intelligence, to this aspect of human existence. It cannot be explained to him because there is nothing in his orbit of awareness that can bridge the gap with comparison. He can repeat the words and say glibly that he understands, and there is no way for him to realize that he does not understand. (pp. 27-28; taken from Cleckley's 1941 book *The Mask of Sanity*)

Callous or Lacking in Empathy. These individuals appear self-centered and show a cruel indifference for the feelings and wellbeing of others. Others are simply objects to be used for personal gain and callous individuals rarely show reluctance to ridicule others. As they believe that showing any emotion is actually showing weakness, they simply do not care what transpires in the lives of anyone but themselves (Hare, 1991). Further, they are unable to relate to the feelings of others so they simply have no concern for them, whether it is concern for family members or strangers. They also insist that others who show weakness are, in fact, deserving of manipulation and exploitation.

Parasitic Lifestyle. A parasitic lifestyle describes an existence that is dependent on others for financial means. This person does not maintain a stable job, but instead calculatedly relies on others for financial support, even using intimidation and manipulation to play on others to obtain personal gain. Although these individuals are quite capable of maintaining gainful employment, they purposefully use others for support instead (Hare, 1991).

Poor Behavioral Controls. An individual with poor behavioral controls is often seen as quick to react, often becoming angry or even violent. This individual may respond to insignificant events with aggressiveness and threats, which are often seen as being out of context for the situation. Frequently, this individual's short-tempered behavior is also short-lived, and the individual may soon after act as if nothing unusual had occurred (Hare, 1991).

Promiscuous Sexual Behavior. Individuals who exhibit promiscuous sexual behavior engage in many casual sexual relations with others. These individuals may have an "indiscriminate selection of sexual partners, maintenance of several sexual

relationships at the same time, frequent infidelities, prostitution, or a willingness to participate in a wide variety of sexual activities” (Hare, 1991, p. 23). These individuals may also have been charged with or have convictions for sexual assault, as they are not beyond pressuring or forcing others into sexual relations with them.

Early Behavior Problems. Early behavior problems are described as problems with a child’s behavior before the age of 12 years. According to Hare (1991), “these problems may include persistent lying, cheating, theft, robbery, fire-setting, truancy, disruption of classroom activities, substance abuse (including alcohol and glue sniffing), vandalism, violence, bullying, running away from home, and precocious sexual activities” (p. 24). As many children may engage in some of these behaviors, Hare (1991) refers to those whose behavior is much more serious than that of siblings or other children and may end in consequences such as police contact or school suspension or expulsion.

Lack of Realistic, Long-Term Goals. Individuals who lack realistic, long-term goals tend to live in the present and avoid plans for the future. They may drift from place to place and change their plans often. They do not appear to be bothered by the fact that they may not have accomplished much in life and also may express that they have not given much attention to the idea of maintaining a stable job or simply are not interested in doing so (Hare, 1991). These individuals simply appear to have no direction in life (O’Connor, 2005a).

Impulsivity. Impulsive individuals usually act without forethought or planning and do not contemplate potential consequences to their actions. They often make life-changing decisions on the spur of the moment and do not notify others of their intentions.

These individuals may do something simply because an opportunity was presented, without considering the possible effects (Hare, 1991).

Irresponsibility. Individuals in this category frequently do not carry out their commitments to others. This irresponsibility is seen in all areas of the individual's life and often puts others at risk. These individuals simply have no sense of duty to anyone or anything (Hare, 1991). "The irresponsibility and unreliability of psychopaths extend to every part of their lives. Their performance on the job is erratic, with frequent absences, misuse of company resources, violations of company policy, and general untrustworthiness. They do not honor formal or implied commitments to people, organizations, or principles" (Hare, 1993). Included in this lack of responsibility are children. These individuals view children as a nuisance and often leave them unattended for great lengths of time.

Failure to Accept Responsibility for Own Actions. Individuals who fail to accept responsibility for their own actions will usually place the blame on someone or something else, make excuses for their behavior, and attempt to justify or rationalize the behavior. Even if there is an abundance of evidence proving that the individual is responsible, he or she may still deny responsibility. If this type of individual does admit to doing something, he or she often then minimizes or even completely refutes the results of those actions (Hare, 1991).

Many Short-Term Marital Relationships. Hare (1991) describes a marital relationship to be any relationship where the partners live together and there is some level of commitment from either or both partners. Sexual orientation of these relationships is not differentiated, so both heterosexual and homosexual relationships are considered.

This item is often omitted in the PCL-R if the individual is either young or has not had sufficient contact with a number of potential partners (e.g., has spent a large amount of time in prison; Hare, 1991).

Juvenile Delinquency. Individuals with a history of juvenile delinquency are those with a history of criminal or antisocial behaviors before the age of 18 years. This category can include both charges and convictions of criminal behavior during adolescence (Hare, 1991). This may also include expressions of antagonism, aggression, exploitation, manipulation, or callous, ruthless tough-mindedness (O'Connor, 2005a).

Revocation of Conditional Release. This category describes an individual who has violated the terms of conditional release (e.g., parole, probation, mandatory supervision, bail, or restraining orders) during adulthood. Violations may include new charges or conviction or other non-criminal violations that are specified conditions. Also included is escape from an institution. Similar to the “many short-term marital relationships” category, this category is often omitted if the individual is young or if there has been no prior contact as an adult with the criminal justice system (Hare, 1991).

Criminal Versatility. The final item on the PCL-R involves the versatility of the individual's criminal offenses. These individuals have charges or convictions for a variety of different criminal offenses. “Their antisocial and illegal activities are *more varied and frequent* than are those of other criminals. Psychopaths tend to have no particular affinity, or ‘specialty,’ for any one type of crime but tend to try everything” (Hare, 1993, p. 68; italics in original). This item may also be omitted if the individual is young or if other offenses are denied or are proven to have not occurred. Criminal offenses have been divided into 15 separate categories in the PCL-R and a score of two is

given if the individual has committed six or more crimes in different categories, a score of one if he or she has committed crimes in four or five of the categories, and a score of zero for crimes in three or fewer categories. All offenses found on the individual's adult criminal record are considered for this item.

Reliability

Reliability of items was assessed using Cronbach's alpha to determine if the variables assessing psychopathy were truly measuring a single unidimensional latent construct (psychopathy). Because the reliability values were low, factor analysis was conducted to identify factors that do indeed measure the single underlying construct of psychopathy. Six factors were then extracted and labeled by the researcher, creating a psychopathy scale for the current study. Thus, the factors composing the psychopathy scale for this study include deception and manipulation, risky behavior, short-sightedness or indolence, impulsivity, short temper and irritability, and charming and convincing.

Antisocial Personality Traits

Various antisocial personality traits were also assessed in the questionnaire. The survey included items to measure tendencies for low tolerance for frustration, poor coping skills, depression, alienation, exaggerated need for attention, anger management problems, intolerance of others, lack of trust, and a tendency for being overly opinionated. As with psychopathy, reliability for many of these variables was low. Factor analysis was then performed and four factors were selected for use in the antisocial personality scale, including a tendency towards anger and violence, alienation from others, low tolerance of frustration, and hopelessness or despair.

Many of these characteristics have been found in several of the shooters in previous mass school shootings (Chandras, DeLambo, Chandras, & Eddy, 2006). Thus, the researcher wished to assess these characteristics in the current student population in an attempt to determine if individuals who have committed other antisocial or deviant acts in the past 12 months may also possess these characteristics. It is possible that these traits can help predict antisocial behaviors, or it may simply be that a variety of these traits are frequently found within student populations. Assessing these traits may provide implications for future research, understanding, and policy recommendations for threat intervention and school safety, as well as further knowledge on personality characteristics in student samples.

Antisocial Behaviors

A variety of items measuring behaviors were included in the survey. These behaviors included personal crimes, property crimes, suicidal ideation, and weapon carrying on campus. Factor analysis was conducted, creating new factors composed of items that measure the specific behaviors being assessed in the current study. A four-factor structure was found for behavior and the researcher elected to use all four components in the study. As a result, the behaviors assessed in the current study were behaviors related to a criminal or deviant lifestyle, suicidal ideation, behaviors associated with a college lifestyle, and seeking revenge on others.

The behaviors were measured using a five-point Likert scale, with 1 = Never or 0 times, 2 = Occasionally or 1 or 2 times, 3 = Regularly or 3-6 times, 4 = Almost all of the time or 6-12 times, and 5 = Always or 12+ times. Respondents were asked to circle the number that best represented their answer regarding the past 12 months. It is important to

note that the same five-point scale was used for measuring psychopathy and antisocial personality items, but a different five-point scale was used to measure behavior. This is important to mention especially when statistical analyses are conducted and interpreted. Because a separate scale was used to score behaviors, use of terms such as *a positive relationship* or *a negative relationship* may actually indicate the opposite. Additionally, some questions in the survey assessed familial matters such as mental illness and substance abuse within the family and family relationships.

Variables

Dependent

The dependent variables in this study are antisocial behaviors. The aim of the study was to determine if these behaviors could be predicted from the independent variables. The antisocial, deviant, and criminal behaviors examined in this study included crimes against persons, crimes against property, suicidal ideation, behaviors related to school, and analogous behaviors (e.g., smoking, consumption of alcohol, proneness to accidents) and were formed into components through factor analysis (e.g., criminal or deviant lifestyle, suicidal ideation, college lifestyle, seeking revenge on persecutors). Some behaviors were measured using a five-point scale assessing how much the respondent agreed or disagreed with the statement concerning the particular behavior and other behaviors were measured using a five-point scale that analyzed how frequently the respondent partook in each particular behavior in the past 12 months.

Independent

The current study assessed a multitude of independent variables. The first independent variable included demographic factors. The demographic aspects included

in the self-report questionnaire were gender (male or female), age, school classification (e.g., freshman, sophomore, etc.), major, race, relationship status, marital status, current living arrangements, sexual orientation, current income level, and children. It should be noted that not all demographic variables were ultimately assessed in the current study.

An independent variable of great interest in this study was psychopathic personality characteristics. This variable was assessed via statements derived from The Psychopathic Checklist—Revised (PCL-R; Hare, 1991). This scale includes 20 items used to describe psychopathic personality disorder. The current study omitted two of the items (revocation of conditional release and criminal versatility) because of the low likelihood of these being found in the student sample used for the study. Therefore, statements on the survey were derived to measure the presence and degree of 18 items on the PCL-R. The 18 psychopathic characteristics from which items were derived were (1) glibness and superficial charm, (2) grandiose sense of self-worth, (3) need for stimulation and proneness to boredom, (4) pathological lying, (5) conning and manipulative, (6) lack of remorse or guilt, (7) shallow affect, (8) callous or lacking in empathy, (9) parasitic lifestyle, (10) poor behavioral controls, (11) promiscuous sexual behavior, (12) early behavioral problems, (13) lack of long-term goals, (14) impulsivity, (15) irresponsibility, (16) failure to accept responsibility, (17) many short relationships, and (18) juvenile delinquency. After factor analysis was performed, six dimensions of psychopathy were used to assess psychopathic characteristics in the sample (e.g., deception and manipulation, risky behavior, short-sightedness or indolence, impulsivity, short temper and irritability, charming and convincing). These items were measured on a five-point

scale assessing the extent to which each respondent agreed or disagreed with the statement provided.

A third independent variable assessed was antisocial personality traits. Ten personality traits originally composed this independent variable. These included: (1) low tolerance of frustration, (2) poor coping skills, (3) depression, (4) alienation, (5) exaggerated need for attention, (6) intolerance for others, (7) interest or fascination with violence, (8) lack of trust, (9) opinionated, and (10) anger management problems. Factor analysis resulted in four factors used to measure antisocial personality: tendency towards anger and violence, alienation from others, low tolerance of frustration, and hopelessness or despair. The personality traits were evaluated by how much the respondent agreed or disagreed with the associated statement using a five-point scale.

Analyses

Hypotheses

The current study investigates multiple hypotheses regarding personality traits and behaviors. The researcher seeks to determine if analogous, deviant, and criminal behaviors can be predicted from psychopathic characteristics or antisocial personality traits. While the researcher is unaware of any comparable studies, past research on psychopathy, personality, and behavior have been helpful in formulating hypotheses for the current study. The formal hypotheses are stated below.

- Hypothesis 1: Behaviors can be predicted from an individual's personality construct, including through the presence of psychopathic traits and antisocial personality traits.
- Hypothesis 2: There is a positive relationship between psychopathic characteristics and the commission of antisocial behaviors.

- Hypothesis 3: Males have a greater likelihood for the possession of psychopathic personality traits.
- Hypothesis 4: There is a positive relationship between psychopathic characteristics and antisocial behavior at school (e.g., weapon carrying).
- Hypothesis 5: There is a positive relationship between antisocial personality and behavior.
- Hypothesis 6: There is no statistically significant relationship between age and psychopathic characteristics.
- Hypothesis 7: There is a positive relationship between antisocial personality and seeking revenge on persecutors.

Bivariate Statistics

Bivariate statistical analyses were run to analyze potential differences in gender for predicting behaviors from psychopathic and antisocial personality traits in the student sample. Independent-Samples t-Tests were conducted to determine potential differences in means concerning psychopathic and personality characteristics, as well as antisocial behaviors, by gender.

One-way Analysis of Variance (ANOVA) tests were also conducted using the psychopathy scale, antisocial personality scale, and behavior scale. The ANOVA tests were conducted to examine potential differences in psychopathy, antisocial personality, and behavior, for individuals with varying relationship statuses, marital statuses, and living arrangements.

Multivariate Statistics

Ordinary Least Squares (OLS) regression was used to predict the dependent variable (antisocial and deviant behavior) from the various independent variables (i.e., psychopathic characteristics, antisocial personality traits). Thus, a series of regression models were created using the key variables in the study. OLS regression analyses were used in the current study to assess the relationship between the dependent variable and several independent variables. The goal for using regression in this prediction study was to develop models to make predictions about the dependent variable (behavior) based on the observed values of the independent variables (demographics, psychopathic characteristics, and antisocial personality traits). Because this study is one of prediction, this statistical method allows the researcher to combine several variables to “produce optimal predictions of the dependent variable” (Allison, 1999, p. 3).

The dependent variables used in the regression models included *criminal or deviant lifestyle* (commission of robbery, commission of homicide, commission of rape or sexual assault, commission of arson, having kept a list of people who have wronged you, having made plans to hurt someone at school or on campus, having burglarized a dwelling, having brought a weapon to school, having made a threatening statement to someone at school or on campus), *suicidal ideation* (having considered ending one’s own life, having written material that reflects anger or frustration, having attempted suicide), *college lifestyle* (frequent consumption of alcohol, smoking, skipping numerous classes), and *seeking revenge on persecutors* (having been bullied by peers, having thought or fantasized about getting back at others through violent means, having been involved in physical fights). The independent variables used in this study to make predictions

concerning the dependent variables were *demographic characteristics* (age, gender, race, relationship status), *psychopathic characteristics* (six components), and *antisocial personality traits* (four components).

Summary

The current study was undertaken in an attempt to predict behavior from various personality traits, largely those associated with psychopathic personality disorder. A series of OLS regression models were conducted to make predictions on the dependent variable (behavior) from a variety of independent variables. Data were collected via a paper-based self-report survey questionnaire. Variables were assessed using five-point Likert scales through which participants indicated either the degree to which they agreed or disagreed with each statement, or how often they had engaged in the behavior specified in each statement. The final sample for this study was composed of 563 undergraduate students who agreed to voluntarily participate in the study. Nineteen of these cases were then omitted from the study after being identified as extreme outliers ($n = 544$). Because this was a systematic, random sample, there is a greater guarantee for reliable results.

CHAPTER 4

RESULTS

The primary purpose of this study was to determine if general antisocial behavioral outcomes could be predicted from various psychopathic and antisocial personality traits in a noninstitutionalized sample. The researcher performed various analytical techniques to determine if these personality traits were present in the student sample and to analyze the relationships between independent and dependent variables. It is important to note that the researcher ultimately omitted 19 cases after identifying them as extreme outliers, resulting in a final sample size of 544. The analytic strategy employed several techniques. First, univariate statistics were used to describe the composition of the sample. Bivariate statistics, specifically Independent-Samples t-Tests and one-way Analysis of Variance (ANOVA) tests, were performed to examine possible gender differences and differences based on living situation, relationship status, and marital status within the sample. It should be noted that while Independent-Samples t-Tests and ANOVA can determine if differences are present, these statistical analyses do not show causality. Next, reliability analyses were conducted using Cronbach's alpha. Because the reliability was low for some measures in this sample, factor analyses were subsequently conducted in an attempt to improve measurement accuracy. Finally, Ordinary Least Squares regression analyses were run to determine potential relationships obtaining among the independent and dependent variables.

Univariate Description of Sample

Frequencies

Frequencies were analyzed for gender, race, relationship status, sexual orientation, income, and age (see Table 4). With a sample size of 544 participants, 220 were male (40.4%) and 324 were female (59.6%). Concerning race, 493 respondents (90.6%) identified themselves as White, while 50 respondents (9.2%) identified themselves as non-White. The frequency statistics for gender and race are quite comparable to those of the entire undergraduate student population at the university where the study took place, implying that the sample is fairly representative of the population for both gender and race. Frequencies for relationship status revealed 42.5% (n = 231) to be single, and the remaining 57.2% to be not single (i.e., dating, married, other). Frequencies were also conducted for sexual orientation and showed that 95.6% of participants reported themselves to be heterosexual (n = 520) and 3.3% of respondents reported to be either of bisexual or homosexual orientation (n = 18).

Table 4

Frequencies

Variable	Frequency	Percentage
Gender		
Male	220	40.4%
Female	324	59.6%
Total	544	100%
Race		
White	493	90.6%

Table 4 (continued)

Variable	Frequency	Percentage
Non-White	50	9.2%
Missing	1	0.2%
Total	544	100%
Relationship Status		
Single	231	42.5%
Not single	311	57.2%
Missing	2	0.4%
Total	544	100%
Sexual Orientation		
Heterosexual	520	95.6%
Bisexual or Homosexual	18	3.3%
Missing	6	1.1%
Total	544	100%

Descriptives

Descriptive statistics were run for the interval-ratio level variable of age (see Table 5). The analysis revealed that the minimum age was 18 years and the maximum was 57 years, with a mean age of 21 years and a standard deviation of 4.70 years.

Descriptive statistics were also run for each dimension extracted from factor analysis (see Table 5).

Table 5

Descriptive Statistics for Components

Dimension	Range	Mean	Std.Dev.
Age	18 - 57	21.22	4.70
Psychopathy	48.00 – 135.00	112.87	12.56
Deception and manipulation	10.00 - 45.00	38.08	5.15
Risky behavior	6.00 - 25.00	20.93	3.87
Short-sightedness or indolence	7.00 - 30.00	25.07	3.27
Impulsivity	3.00 - 15.00	9.30	2.54
Short tempter and irritability	3.00 - 15.00	12.52	2.29
Charming and convincing	3.00 - 15.00	6.80	2.06
Antisocial Personality	19.00 – 80.00	63.98	8.21
Tendency—anger or violence	6.00 - 30.00	26.05	3.75
Alienation from others	3.00 - 15.00	11.53	2.45
Low tolerance of frustration	4.00 - 20.00	13.66	2.91
Hopelessness or despair	3.00 - 15.00	12.69	2.09
Behavior	22.00 – 87.00	27.88	5.92
Criminal or deviant lifestyle	13.00 - 53.00	14.31	2.82
Suicidal ideation	3.00 - 12.00	3.73	1.37
College lifestyle	3.00 - 15.00	5.68	2.49
Seeking revenge on persecutors	3.00 - 12.00	4.17	1.57

Note. Items and factors derived from factor analysis.

Reliability

Cronbach's alpha was used to assess the reliability of psychopathic features (see Table 6). Unfortunately, when determining if the items were reliable measures of the latent psychopathy construct, reliability was quite low. Although the PCL-R has been proven to be both reliable and valid when used to assess psychopathy in forensic samples, it appears that deriving questions from this diagnostic tool and using them in a self-report questionnaire on a college sample does not result in similar levels of reliability sufficient to measure psychopathy in this particular sample. Thus, the researcher conducted a factor analysis to identify dimensions being measured by the items. Reliability was also assessed via Cronbach's alpha for antisocial personality traits and behaviors assessed in the study (see Tables 7 and 8).

Table 6

Reliability of Items on the Original PCL-R Measuring Psychopathic Characteristics

Characteristic	Cronbach's alpha
Glib or superficial charm	.576
Grandiose sense of self-worth	.211
Need for stimulation and proneness to boredom	.408
Pathological lying	.300
Conning and manipulative	.719
Lack of remorse or guilt	.075
Shallow affect	.439
Callous or lacking in empathy	.597
Parasitic lifestyle	.438

Table 6 (continued)

Characteristic	Cronbach's alpha
Poor behavior control	.628
Promiscuous sexual behavior	.717
Early behavior problems	.449
Lack of long-term goals	.305
Impulsive	.227
Irresponsible	.558
Failure to accept responsibility for own actions	.596
Many short relationships	-
Juvenile delinquency	-

Note. Items from Hare's (1991) Psychopathy Checklist-Revised (PCL-R).

Table 7

Reliability of Items Measuring Other Antisocial Personality Traits

Trait	Cronbach's alpha
Low tolerance of frustration	.548
Poor coping skills	.133
Depression	.657
Alienation	.788
Exaggerated need for attention	-
Anger management problems	.439

Table 7 (continued)

Trait	Cronbach's alpha
Intolerance	-
Interest or fascination with violence	.586
Lack of trust	-
Opinionated	-
Family issues	.522

Note. Original personality traits assessed before performing factor analysis.

Table 8

Reliability of Items Measuring Antisocial Behaviors

Type of Behavior	Cronbach's alpha
Analogous behaviors	.609
Personal crimes	.890
Property crimes	.880
School crimes	.595
Suicide	.876
Anger	.844

Note. Behavioral items assessed before performing factor analysis.

Scale Development

Dimensions of Psychopathy

Because reliability was low for the items derived from the PCL-R, exploratory factor analysis was used to reveal the latent structure of the set of variables examined in the study. Principal Axis factor analysis for psychopathic characteristics identified 12 dimensions, or factors, with eigenvalues greater than one. It is the researcher's responsibility to ultimately decide how many factors to extract for use in the scale, with the goal of explaining as much of the total variance as possible, while using the smallest number of factors (Bryant & Yarnold, 1995).

After examining the eigenvalues, scree plot, reliability values, and factor loadings (see Table 9), the researcher felt that six factors were the most appropriate solution for the psychopathy scale. After doing the same for the antisocial personality items and behavior items, the researcher felt that four factors were appropriate measures for both the antisocial personality and behavior scales.

Table 9

Reliability of Factors Determined from Factor Analysis

Factor	Cronbach's alpha
Psychopathy	.684
Deception and manipulation	.815
Risky behavior	.719
Short-sightedness or indolence	.692
Impulsivity	.717
Short temper and irritability	.703

Table 9 (continued)

Factor	Cronbach's alpha
Charming and convincing	.568
Antisocial Personality	.686
Tendency towards anger and violence	.691
Alienation from others	.776
Low tolerance of frustration	.647
Hopelessness or despair	.650
Behavior	.626
Criminal or deviant lifestyle	.821
Suicidal ideation	.633
College lifestyle	.622
Seeking revenge on persecutors	.506

Dimensions of Antisocial Personality

Factor analysis was subsequently employed to derive reliable measures for both the antisocial personality and behavior scales. In doing so, the same analytic strategy as previously described was employed. There were seven factors identified with eigenvalues greater than one after running the factor analysis for the antisocial personality items. After examining these eigenvalues, the reliability of the factors, the scree plot, and the factor loadings, it was decided that four was the appropriate number of factors to explain the largest amount of the total variance while using the smallest number of factors (see Table 9).

Behavioral Outcome Measures

Principal Axis factor analysis was also performed on the behavioral items assessed in the study. Although it could be argued that because the first factor identified for the behavioral items explained over 50% of the total variance that the solution is unidimensional, the researcher made the decision to use all four factors. This decision was made primarily because of the likelihood that there would be a lack of variation in the current sample for many of the items in the first factor (e.g., commission of homicide, rape, arson, etc.). Further, one of the original objectives of the study was to examine components related to suicidal ideation and other less criminal yet still antisocial behaviors. Because of this, the researcher ultimately decided to include all four factors of behavior in the final behavior scale (see Table 9).

Bivariate Analysis

Correlation

Pearson's correlation coefficients were analyzed for each factor in the psychopathy, antisocial personality, and behavior scales generated for this study. The correlations were then formed into a correlation matrix (see Table 10). The Pearson r coefficient, which can range from -1 to $+1$, shows the linear relationship between two variables. A negative value indicates a negative relationship (i.e., as one variable increases the other variable decreases), while a positive value represents a positive linear relationship (i.e., as one variable increases the other variable increases as well). A Pearson r value of zero indicates no linear relationship between the two variables. Further, by squaring Pearson's r , we can determine the proportion of variance shared by the two variables.

Table 10

Pearson Correlation Matrix of Factors

Variable	DM	RB	SSI	I	STI	CC	TAV	AFO	LTF	HD	CDL	SI	CL	SRP
DM	-----													
RB	.450**	-----												
SSI	.517**	.492**	-----											
I	.204**	.299**	.206**	-----										
STI	.503**	.371**	.418**	.197**	-----									
CC	-.012	-.034	-.192**	.269**	-.062	-----								
TAV	.536**	.462**	.415**	.203**	.556**	-.063	-----							
AFO	.390**	.148**	.354**	-.045	.357**	-.243**	.327**	-----						
LTF	.271**	.119**	.263**	-.026	.615**	-.155**	.285**	.402**	-----					
HD	.572**	.331**	.449**	-.012	.492**	-.221**	.439**	.511**	.381**	-----				
CDL	-.298**	-.227**	-.228**	-.131**	-.220**	-.054	-.245**	-.124**	-.118**	-.223**	-----			
SI	-.169**	-.179**	-.233**	-.112**	-.214**	-.014	-.202**	-.333**	-.216**	-.269**	.356**	-----		
CL	-.228**	-.540**	-.284**	-.345**	-.209**	-.139**	-.263**	-.057	-.077	-.162**	.278**	.231**	-----	
SRP	-.251**	-.240**	-.202**	-.159**	-.316**	-.028	-.376**	-.280**	-.242**	-.241**	.549**	.348**	.239**	-----

Table 10 (continued)

Note. DM = Deception and manipulation; RB = Risky behavior; SSI = Short-sightedness or indolence; I = Impulsivity; STI = Short temper and irritability; CC = Charming and convincing; TAV = Tendency towards anger and violence; AFO = Alienation from others; LTF = Low tolerance of frustration; HD = Hopelessness or despair; CDL = Criminal or deviant lifestyle; SI = Suicidal ideation; CL = College lifestyle; SRP = Seeking revenge on persecutors.

** $p \leq .01$

Included in the correlation matrix is each of the six factors of psychopathy (i.e., deception and manipulation, risky behavior, short-sightedness or indolence, impulsivity, short temper and irritability, and charming and convincing), the four factors of antisocial personality (i.e., tendency towards anger and violence, alienation from others, low

tolerance of frustration, and hopelessness or despair), and the four behavior factors (criminal or deviant lifestyle, suicidal ideation, college lifestyle, and seeking revenge on persecutors). The correlation matrix shows moderate to moderately strong positive linear relationships between the following variables where $p \leq .01$: deception and manipulation and risky behavior ($r = .450$), deception and manipulation and short-sightedness or indolence ($r = .517$), deception and manipulation and short temper and irritability ($r = .503$), deception and manipulation and tendency towards anger and violence ($r = .536$), deception and manipulation and hopelessness or despair ($r = .572$), risky behavior and short-sightedness or indolence ($r = .492$), risky behavior and tendency towards anger and violence ($r = .462$), short-sightedness or indolence and short temper and irritability ($r = .418$), short-sightedness or indolence and tendency towards anger and violence ($r = .415$), short-sightedness or indolence and hopelessness or despair ($r = .449$), short temper and irritability and tendency towards anger and violence ($r = .556$), short temper and irritability and low tolerance of frustration ($r = .615$), short temper and irritability and hopelessness or despair ($r = .492$), tendency towards anger and violence and hopelessness or despair ($r = .439$), alienation from others and low tolerance of frustration ($r = .402$), alienation from others and hopelessness or despair ($r = .511$), and criminal or deviant lifestyle and seeking revenge on persecutors ($r = .549$). Additionally, a moderately strong negative relationship was found between risky behavior and college lifestyle ($r = -.540$; note the difference in scales used for behavior).

Additionally, a correlation matrix was generated to examine possible relationships between the three scales developed (see Table 11). The correlation matrix shows a moderately strong positive relationship between psychopathy and antisocial personality (r

= .601) at $p \leq .01$. A moderately strong negative relationship was also found for psychopathy and behavior ($r = -.516$) and a moderate negative relationship between antisocial personality and behavior ($r = -.389$).

Table 11

Pearson Correlation Matrix of Scales

	Psychopathy	Antisocial Personality	Behavior
Psychopathy	-----		
Antisocial Personality	.601**	-----	
Behavior	-.516**	-.389**	-----

** $p \leq .01$

Independent-Samples t-Tests

Independent-Samples t-Tests were run across each of the three scales (i.e., psychopathy, antisocial personality, behavior) to check for significant differences by gender. Because gender is a dichotomous independent variable and each scale is measured at the interval-ratio level, Independent-Samples t-Tests are appropriate. Because Levene's Test for Equality of Variance suggested that the assumptions of homogeneity had been met, the uncorrected t-ratio was inspected. The first dependent variable examined was psychopathy (see Table 12). The mean for males was 109.55 and the mean for females was 115.08. The t-test determined that these means were significantly different with a mean difference of -5.531 at $p \leq .01$ ($t = 4.965, p = .000$). These results suggest that males, on average, exhibit more psychopathic characteristics than females.

Next, differences in means were examined for the dependent variable of antisocial personality (see Table 12). Males were found to have a mean of 62.61, while females had a mean of 64.90, with a mean difference of 2.287. These results were also significantly different at $p \leq .01$ ($t = 3.160, p = .002$). This suggests that males in the sample display a greater average score on antisocial personality measures that were assessed.

Finally, an Independent-Samples t-Test was conducted for the behavioral outcomes to determine if there was a difference in means for gender (see Table 12). A mean of 28.84 was reported for males and a mean of 27.44 was reported for females. These means were statistically different at $p \leq .01$. There was also a statistically significant difference found between male and female behavioral outcomes ($t = 3.077, p = .002$). This suggests that males tended toward more antisocial behaviors than did females.

Table 12

t-Test Comparison of Means of Psychopathy, Antisocial Personality, and Behavior by Gender

Variable	Mean	t	df	Sig.	Mean Diff.
Psychopathy					
Gender		4.965**	505	.000	5.531
Male	109.55				
Female	115.08				
Antisocial Personality					
Gender		3.160**	525	.002	2.287

Table 12 (continued)

Variable	Mean	t	df	Sig.	Mean Diff.
Male	62.61				
Female	64.90				
Behavior					
Gender		3.077**	530	.002	1.598
Male	28.84				
Female	27.24				

** $p \leq .01$.

ANOVA

To examine possible relationships between current living arrangements (see Table 13), marital status (see Table 14), and relationship status (see Table 15) and the scales, one-way Analyses of Variance (ANOVA) were conducted. The one-way ANOVAs were used to determine whether current living situation, marital status, and relationship status are related to psychopathic characteristics, antisocial personality traits, or behaviors. The dependent variables were psychopathy, antisocial personality, and the behavior scales. The ANOVA for current living arrangements showed a statistically significant effect on the psychopathy scale ($F = 2.614, p = .012$), indicating that psychopathic characteristics differ between various living situations. Results also revealed a significant difference in psychopathy and relationship status, revealing that variation exists in psychopathy and one's relationship standing ($F = 3.444, p = .017$). The ANOVA did not, however, reveal a significant effect for the antisocial personality scale for current living arrangements, marital status, or relationship status ($F = 1.164, p = .322$; $F = .757, p = .554$; $F = 1.563, p$

= .197), respectively. The ANOVA conducted showed a statistically significant difference for relationship status and the behavior scale ($F = 5.086, p = .002$), indicative of variation in behavior based on relationship status.

Statistically significant effects were then examined by recoding the relationship status and living arrangement variables into dichotomous variables (i.e., single or not single, living alone or living with others) and subsequently running Independent-Samples t-Tests. By examining the means, the researcher was able to clearly determine which variables accounted for the difference in means. The t-Test examining relationship status found a mean of 111.14 for those not involved in a relationship (i.e., single) and a mean of 114.07 was found for those in a relationship (i.e., not single) when compared with the psychopathy scale ($p = .01$). This result demonstrates that those who are single have a greater average of psychopathic characteristics than those who are in a relationship. The t-Test comparing psychopathy and living arrangement means found a mean of 114.69 for those who live alone and a mean of 112.71 for those who live with others, though these findings were not statistically significant at $p \leq .01$ or $.05$ ($p = .147$)

An Independent-Samples t-Test was also conducted for the behavior scale and relationship status because of the significant effect found in the ANOVA. The t-Test showed a mean of 28.86 for those who are single and a mean of 27.15 for those in a relationship ($p = .002$). This finding demonstrates that those who are single participate in more antisocial behaviors than those who are in a relationship.

Table 13

One-way ANOVA Comparison of Means of Scales by Living Arrangements

Scale	F	<i>p</i>
Psychopathy	2.164	.012*
Antisocial Personality	1.164	.322
Behavior	1.616	.128

* $p \leq .05$. ** $p \leq .01$.

Table 14

One-way ANOVA Comparison of Means of Scales by Marital Status

Scale	F	<i>p</i>
Psychopathy	1.771	.133
Antisocial Personality	.757	.554
Behavior	2.039	.088

* $p \leq .05$. ** $p \leq .01$.

Table 15

One-way ANOVA Comparison of Means of Scales by Relationship Status

Scale	F	<i>p</i>
Psychopathy	3.444	.017*
Antisocial Personality	1.563	.197
Behavior	5.086	.002**

* $p \leq .05$. ** $p \leq .01$.

Multivariate Analysis

Multiple Regression

The primary objective of this study was to determine whether behavior can be predicted from psychopathic and antisocial personality traits; therefore, Ordinary Least Squares (OLS) regression analysis was performed. Multiple regression was used to analyze the ability of demographic variables and psychopathic and antisocial personality factors to predict self-reported antisocial behaviors in a student sample. All regression models achieved statistical significance. Fourteen predictor variables were used to determine the best fitting model for determinants of four different factors of behavior (e.g., criminal or deviant lifestyle, suicidal ideation, college lifestyle, and seeking revenge on persecutors; see Tables 16-19). In addition, multiple regression analysis was performed using the scales derived from factor analysis (i.e., combined factors for psychopathy and antisocial personality dimensions) as the predictor variables and the behavior scale as the outcome variable (see Table 20).

Table 16

Multiple Regression Analysis of Criminal or Deviant Lifestyle (n = 544)

	B	β	t	p
Constant	21.884		17.007	.000
Age	-.017	-.033	-.749	.454
Gender	.054	.011	.244	.807
Race	.642	.075	1.719	.086
Relationship status	-.449	-.095	-2.160	.031*
Deception and manipulation	-.066	-.145	-2.338	.020*
Risky behavior	-.030	-.050	-.905	.366
Short-sightedness or indolence	-.012	-.017	-.291	.771
Impulsivity	-.081	-.089	-1.812	.071
Short tempter and irritability	.037	.037	.550	.583
Charming and convincing	-.033	-.030	-.623	.533
Tendency towards anger or violence	-.072	-.115	-1.915	.056
Alienation from others	.021	.022	.405	.686
Low tolerance of frustration	-.051	-.063	-1.075	.283
Hopelessness or despair	-.076	-.067	-1.112	.267

Note. $R^2 = .139$. $R^2_{adj} = .113$.

* $p \leq .05$. ** $p \leq .01$.

Table 17

Multiple Regression Analysis of Suicidal Ideation (n = 544)

	B	β	t	p
Constant	7.817		10.788	.000
Age	-.009	-.030	-.700	.484
Gender	.298	.109	2.366	.018*
Race	.297	.060	1.140	.159
Relationship status	-.094	-.035	-.803	.422
Deception and manipulation	.025	.096	1.591	.112
Risky behavior	-.028	-.081	-1.486	.138
Short-sightedness or indolence	-.023	-.055	-.986	.325
Impulsivity	-.058	-.110	-2.299	.022*
Short temper and irritability	.024	.042	.628	.530
Charming and convincing	-.045	-.070	-1.499	.135
Tendency towards anger or violence	-.010	-.029	-.487	.626
Alienation from others	-.152	-.275	-5.291	.000**
Low tolerance of frustration	-.030	-.064	-1.115	.265
Hopelessness or despair	-.086	-.132	-2.247	.025*

Note. $R^2 = .173$. $R^2_{adj} = .148$.

* $p \leq .05$. ** $p \leq .01$.

Table 18

Multiple Regression Analysis of College Lifestyle (n = 544)

	B	β	t	p
Constant	15.125		12.673	.000
Age	.008	.013	.350	.727
Gender	-.262	-.051	-1.264	.207
Race	.314	.034	.904	.366
Relationship status	-.108	-.021	-.559	.576
Deception and manipulation	.027	.054	1.022	.308
Risky behavior	-.313	-.481	-10.032	.000**
Short-sightedness or indolence	-.026	-.034	-.693	.489
Impulsivity	-.200	-.205	-4.835	.000**
Short tempter and irritability	.078	.072	1.226	.221
Charming and convincing	-.165	-.136	-3.321	.001**
Tendency towards anger or violence	.017	.025	.486	.628
Alienation from others	-.013	-.013	-.284	.777
Low tolerance of frustration	-.090	-.104	-2.048	.041*
Hopelessness or despair	-.034	-.028	-.541	.588

Note. $R^2 = .355$. $R^2_{adj} = .336$.

* $p \leq .05$. ** $p \leq .01$.

Table 19

Multiple Regression Analysis of Seeking Revenge on Persecutors (n = 544)

	B	β	t	p
Constant	8.648		10.856	.000
Age	.002	.007	.164	.870
Gender	-.393	-.127	-2.837	.005**
Race	.636	.114	2.749	.006**
Relationship status	-.224	-.073	-1.741	.082
Deception and manipulation	.010	.033	.550	.583
Risky behavior	-.021	-.054	-1.021	.308
Short-sightedness or indolence	.023	.050	.913	.361
Impulsivity	-.044	-.075	-1.600	.110
Short tempter and irritability	-.045	-.069	-1.062	.289
Charming and convincing	-.031	-.043	-.947	.344
Tendency towards anger or violence	-.071	-.174	-3.039	.003**
Alienation from others	-.094	-.151	-2.963	.003**
Low tolerance of frustration	-.059	-.114	-2.016	.685
Hopelessness or despair	-.099	-.100	-1.649	.100

Note. $R^2 = .209$. $R^2_{adj} = .186$.

* $p \leq .05$. ** $p \leq .01$.

Table 20

Multiple Regression Analysis of Behavior (scale) (n = 544)

	B	β	t	p
Constant	53.161		21.596	.000
Age	-.002	-.002	-.043	.965
Gender	-.333	-.030	-.766	.444
Race	1.529	.077	1.989	.047*
Relationship status	-.957	-.088	-2.255	.025*
Psychopathy	-.173	-.407	-8.238	.000**
Antisocial personality	-.089	-.135	-2.793	.005**

Note. $R^2 = .287$. $R^2_{adj} = .278$.

* $p \leq .05$. ** $p \leq .01$.

Table 16 shows both relationship status and deception and manipulation to be significant predictors of a criminal or deviant lifestyle. Both of these variables show a negative relationship, indicating that individuals who are single, or not in a relationship, exhibit a criminal or deviant lifestyle more so than those who are involved in a relationship. Similarly, as one increases in deceptive or manipulative characteristics, he or she also increases in behaviors related to a criminal or deviant lifestyle. The model was found to account for approximately 11% of the total variance in the behaviors linked to a criminal or deviant lifestyle.

The regression model analyzing suicidal ideation (see Table 17) indicates a positive significant linear relationship between gender and suicidal ideation. This shows

that females are more likely to display suicidal ideation. Impulsivity ($p = .022$), alienation from others ($p = .000$), and hopelessness or despair ($p = .025$) are negatively significant predictors of suicidal ideation. In other words, as an individual becomes more impulsive, alienated from others, and hopeless, he or she increases in suicidal ideation. The regression model accounts for almost 15% of the variance in suicidal ideation.

As presented in Table 18, risky behavior, impulsivity, charming and convincing, and low tolerance of frustration are significant predictors of college lifestyle. As each of these characteristics increases, the individual becomes more involved in a college lifestyle (i.e., frequent consumption of alcohol, smoking, skipping classes). The R^2 value for this model (.336) indicates that the model accounted for approximately 34% of the total variance in the behaviors associated with a college lifestyle.

When examining the predictor variables for seeking revenge on persecutors, the regression model revealed gender, race, a tendency towards anger and violence, and alienation from others to be predictors of this behavior outcome (see Table 19). All were significant at $p \leq .01$. This finding suggests that males, non-Whites, and those with a greater tendency towards anger and violence and alienation from others are more likely to seek revenge on persecutors. This model accounted for nearly 19% of the total variance in these behaviors.

Finally, as seen in Table 20, race and relationship status are significant predictors of behavior at $p \leq .05$. Further, both psychopathy and antisocial personality share a negative relationship with behavior at $p \leq .01$. Finally, the adjusted R^2 value of .278 signifies that almost 28% of the total variance in behavior is accounted for by the model.

Because psychopathy and antisocial personality are related concepts and were both found to be statistically significant predictors of behavior, the researcher evaluated the analyses to determine if multicollinearity was present and to determine if these predictor variables were more highly correlated with each other than with the dependent variable (behavior). Additionally, it was important to assess the possible presence of multicollinearity to assure that the psychopathy and antisocial personality scales were not essentially measuring the same construct and so that reliable estimates of the individual regression coefficients were produced.

To assess multicollinearity, the tolerance values and Variance Inflation Factors were examined. A low tolerance value can indicate a near perfect linear combination of the independent variables and suggests that the variable with the low value should be removed from the regression equation. Because the tolerance values for both psychopathy and antisocial personality were greater than 0.6, multicollinearity appeared to not be an issue.

Variance Inflation Factors (VIF) were also examined to measure the influence of collinearity among the variables of psychopathy and antisocial personality. While these values are always greater than or equal to 1.0, a high value can indicate multicollinearity in a regression model. VIF values of 1.635 and 1.568 were reported for psychopathy and antisocial personality, respectively, and indicate that the assumption of noncollinearity within the regression model was not violated.

CHAPTER 5

DISCUSSION

Both psychopathic personality characteristics and antisocial personality traits affect behavior. Because of the influence personality has on behavior, recognizing and identifying certain traits of personality within an individual may play a role in predicting, and thus preventing, antisocial, deviant, and criminal behaviors. The primary purpose of this study was to determine if behavior of those in a nonforensic sample can be predicted from antisocial characteristics and traits, such as those associated with psychopathic personality disorder. Moreover, the identification of key personality traits that may predict behavior is vital in developing methods and strategies for prevention and intervention. In this chapter, the implications of the current study are reviewed in the context of school shootings such as the incident at Columbine High School.

While Hare's (1991) Psychopathy Checklist-Revised (PCL-R) remains the gold standard for analyzing psychopathic characteristics in forensic samples, the current study sought to examine these and other antisocial personality traits in a nonforensic student sample. The researcher created a self-report questionnaire, deriving various parts from the PCL-R, and also included parts related to other antisocial personality traits and the commission of certain behaviors. In addition, demographic variables that could potentially have an influence on behavior were included in the hypotheses and analyses.

The findings of this study provided evidence for the prediction of behavior from psychopathic and antisocial personality traits. Although reliability was low for the specific items from the PCL-R, factor analyses allowed for the development of scales analyzing psychopathic and antisocial personality traits specific to this sample. The

results, therefore, validate the hypothesis that personality has an influence on behavior. Thus, with the ability to predict behaviors from these traits, implications can be made as to how recognizing these traits may be beneficial to preventing the commission of various behaviors.

Previous literature on school shootings, specifically the massacre at Columbine High School, has shown a potential relationship between the perpetrators and certain psychopathic and personality characteristics. If these characteristics are common to these types of events, policy implications may arise from identifying them and implementing strategies to help prevent future school shootings. An examination of these traits and the findings of the current study, in addition to a demonstration of the potential relationship between certain personalities and behaviors will be found in this chapter, using the Columbine High School massacre as a chief example.

Methodology

For the current study, a self-report questionnaire was distributed to a random sample of students at a mid-sized university. The researcher developed the items on the survey, deriving multiple items from the PCL-R, a reliable and valid diagnostic instrument for forensic and institutionalized samples, and prior knowledge and research on antisocial behavior. Because reliability was low, the researcher created scales for psychopathy, antisocial personality, and behavior through Principal Axis factor analysis. The researcher subsequently selected six factors for measuring psychopathy, and four factors each for antisocial personality and behavior. Ordinary Least Squares regression analyses were then conducted to establish the predictability of behavior from psychopathic and antisocial personality traits.

Limitations

This study is not without limitations. A major empirical limitation in this study was the low reliability found for many of the items assessing psychopathic characteristics. The researcher derived the statements assessing psychopathy from the PCL-R, a highly reliable diagnostic instrument used to assess psychopathy in prison and forensic populations (Hare, 1991). When computing reliability statistics using Cronbach's alpha for the current student sample, however, reliability was found to be quite low for almost all psychopathic characteristics. Because of the low reliability, the researcher elected to perform factor analyses to identify the components measuring a latent construct (e.g., psychopathy).

After using exploratory factor analysis, the two-factor structure identified for the PCL-R was not replicated. This presented a further limitation for the study. Principal Axis factor analysis identified 12 components with eigenvalues above 1.0. The researcher then determined that six of these components were suitable for use in assessing psychopathic traits in the sample.

The sample selected for the current study may present some limitations as well. First, findings from the student sample may not be generalizable to other populations or even to other student samples in different regions or with differing demographical characteristics. Because this student sample was a random selection, however, it is representative of the undergraduate student population at this particular university.

Additionally, the use of self-report questionnaires requires that each respondent recall past behaviors and answer honestly and accurately. As there is no way to determine if every respondent did so, this is something that should be taken into

consideration when interpreting the results of this study. Because the construct of psychopathy and the separate, though correlated, construct of antisocial personality were both measured via self-report using the same five-point Likert scale, it should be mentioned that the relationship between the two constructs is likely inflated because the measurements are based on the same source (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future research should consider using independent measures for these constructs, obtain measures of different variables from various sources (e.g., institutional files, collateral information), or separate measurements temporally, proximally, psychologically, or methodologically to avoid this error.

Further, as the study was nine pages long, including a two-page introduction, some respondents may have become tired of completing the survey or may not have taken the study seriously. Another aspect of the study that must be taken into consideration was the use of more than one scale in the survey. Although the researcher warned participants to take notice of the scales, it is possible that some respondents did not answer according to the scale being used for that particular section. It should also be noted that some items in the survey were ultimately not used in the study. Although some items were not assessed, these items may be useful in future research concerning psychopathy, personality, and behavior in student samples.

Finally, a potential bias in behavioral research involves common method variance, or variance that is caused by the methods of measurement rather than the constructs that are of interest to the study (i.e., psychopathy, antisocial personality; Podsakoff et al., 2003). Because the measure used to assess psychopathy shared a common method of assessment with the measure used to assess antisocial personality, the observed

correlation between the measures could have been systematically affected. In other words, some of the variance found between measures of the two constructs might be due to common method biases. While it is important to consider the potential for this bias in the current study, it should also be understood that this bias is present in most studies involving personality and/or behavior. Additionally, because multicollinearity was found to not be an issue in the current study, it is likely that common method variance is not a significant problem in the study either. However, some of the possible sources of common method variance in the current study and recommended methods for avoiding this bias in future research will thus be discussed.

First, the *consistency motif* refers to the possibility of respondents attempting to answer the items in a consistent manner, with the desire to appear rational and reliable. When this occurs, participants in the study look for similarities in items and create relationships that do not necessarily exist. Similarly, respondents may also create *illusionary correlations* if they assume that items in the questionnaire are related (even though they may not be; Podsakoff et al., 2003). Although this bias is difficult to avoid, carefully constructing the items in the survey may help in reducing the possibility of respondents fabricating relationships between items.

Another concern in behavioral research is referred to as *social desirability*, which involves the attempt of respondents to appear in a favorable light (Podsakoff et al., 2003). It is the opinion of the researcher, however, that this likely does not present a significant problem in the current study for three reasons: (1) the method of assessment is an anonymous and confidential self-report survey and not a face-to-face interview; (2) psychopathic individuals lack remorse and guilt, most often not being ashamed of their

personalities and behaviors; and (3) psychopathic individuals are notorious for their lack of insight into their own problems; thus, they may also lack insight into their own personalities and not have the desire or see a need for responding in a manner that makes them appear in a more positive light. In other words, psychopaths likely do not view their personalities and behavior in a negative manner, so they likely would not feel the need to lie. Further, because psychopaths tend to follow their own rules rather than those created by society, it is unlikely that these individuals would respond in a way that their personalities and behaviors would be viewed as culturally acceptable or appropriate.

While a separate scale was used on items measuring behavior, the standardized scale used for measuring both psychopathy and antisocial personality may present a possible increase in covariation among the constructs because of the consistency in the scale properties instead of item content (Podsakoff et al., 2003). Using separate scales for each construct being assessed may reduce this. In addition, because some items were negatively worded (reverse coded) to decrease the possibility of response pattern biases, another potential source of common method variance exists. Research has shown that negatively-worded items may disrupt the cognitive pattern of the respondent, leading the respondent to fail to recognize the negative wording (Podsakoff et al.). Instead, it may be suggested that researchers avoid including reverse-coded items in their studies.

Although the questionnaire used in the current study provided a separate section for behavioral assessment, items pertaining to psychopathy and antisocial personality were intermixed throughout multiple sections in the survey. Because these constructs are similar, the practice of intermixing items from these constructs may have resulted in an increase in the inter-construct correlations and a decrease in the intra-construct

correlations (Podsakoff et al., 2003). Podsakoff et al. contend, however, that this is likely a complex issue. While these effects seem to suggest grouping items of the same construct together, it is difficult to determine what the countervailing effects may be, and it appears that more research needs to be done before a definitive solution can be made.

To reduce common method variance in research Podsakoff et al. (2003; p. 897) recommend considering four questions: (1) Can the predictor and criterion variables be obtained from different sources? (2) Can the predictor and criterion variables be measured in different contexts? (3) Can the source of the method bias be identified? and (4) Can the method bias be validly measured? While common method variance is likely to be present in most, if not all, behavioral research, it is important to consider the limitations of this bias. Future research on psychopathy and personality may benefit further from identifying and reducing these sources of bias.

Findings

Descriptive statistics of the sample revealed a mean of approximately 113 for the psychopathy scale. With a possible range from 29 to 145, and a lower score meaning a higher presence of psychopathic traits, the mean shows that the sample possesses psychopathic characteristics. This demonstrates, however, a negatively skewed distribution, which indicates a greater number of scores occurring above the mean on the psychopathy scale than below it. A mean score of nearly 64 was found for the antisocial personality scale. While the scores could range from 16-80, a mean of 64 also demonstrated a negatively skewed distribution, demonstrating that while antisocial personality traits were present in the sample, more respondents exhibited higher scores on this scale (i.e., lower levels of antisocial personality). In other words, the sample, on

average, did not exhibit a mostly antisocial personality. A mean score of 28 on the behavior scale revealed a positively skewed distribution. Because this scale differed from the others in the survey, this mean indicates that the average participation of all behaviors on the behavior scale was rather low, with a possible range of 19-95.

The correlation matrix, though, showed statistically significant relationships between the three scales ($p \leq .01$). Psychopathy was found to be positively related to antisocial personality ($r = .601$) and negatively related to behavior ($r = -.516$). These relationships indicate that as psychopathic characteristics increase in an individual, so do antisocial personality traits. Further, because the behavior scale was coded in the opposite manner from the other scales, this negative relationship also indicates that more psychopathic characteristics are associated with the commission of more of the deviant behaviors assessed. Additionally, a negative relationship was found between antisocial personality and behavior ($r = -.389$), indicating that an increase in antisocial personality traits is indicative of an increase in the commission of the deviant behaviors, though it is important to note the weaker relationship. Assessment of multicollinearity using tolerance values and VIF determined that while psychopathy and antisocial personality are related, they are not so highly correlated that they are measuring the same construct. Thus, the model remains valid and noncollinearity is assumed.

Because of the multitude of psychopathy, antisocial personality, and behavior items, the researcher was interested in examining relationships between the factors of each scale as well. As many significant relationships were found in the current study, it is important to consider implications of these findings. Furthermore, these findings support the association between psychopathy and an antisocial personality and deviant

behaviors found in previous literature, particularly as Factor 2 on the PCL-R pertains specifically to an antisocial lifestyle.

An Independent-Samples t-Test revealed a significant difference in means of psychopathy by gender. Again, as low scores indicate a higher degree of psychopathy, the t-Test demonstrated that males in the sample possess more psychopathic characteristics than females. While this result supports Hypothesis 3, the lack in literature on female psychopathy made it difficult to make hypotheses concerning psychopathy and gender. Then again, as it has been suggested that the context in which psychopaths exhibit certain traits may differ by gender, the researcher speculated that a difference in psychopathic characteristics by gender would be found (Verona & Vitale, 2006). The findings of the current study provide support for a difference in psychopathic characteristics by gender. It remains possible that females may be just as likely to be psychopathic as males, but simply express the characteristics differently. It is important to understand that while these bivariate statistical analyses can determine relationships, they do not show causality.

Independent-Samples t-Tests also found significant differences in means of antisocial personality and behavior by gender. Males were also found to have more antisocial personality traits, as well as to perpetrate more of the behaviors assessed in this study. Again, these findings are in support of the hypotheses of the study.

One-way ANOVA tests were used to determine whether current living situation, marital status, and relationship status are a function of psychopathic characteristics, antisocial personality traits, or behaviors. Results from the ANOVAs indicated that an individual's current living situation (e.g., lives alone, lives with relatives, lives with

roommates, etc.) has a significant effect on psychopathy. While a relationship was found between psychopathy and living situation, directionality cannot be determined from the ANOVA. Thus, Independent-Samples t-Tests were subsequently run to identify the specific difference in means when the variables were re-coded into dichotomous variables (i.e., lives alone or lives with others). The results for living situation were not, however, significant in the t-Test. The means, however, indicate that those who live with others have a greater mean of psychopathic characteristics. As previous research has indicated that psychopaths tend to lead a parasitic lifestyle, depending on others for means of support, it can be suggested that a psychopathic individual would be more likely to live with others (Hare, 1993). Living with others would perhaps provide the psychopathic individual with means to sustain his or her lifestyle of depending on others for financial and social support. There were no statistically significant relationships found between living arrangements and antisocial personality or behavior, so t-Tests were not run for those variables.

Interestingly, findings indicate that marital status (e.g., never married, currently married, divorced, re-married, widowed) does not have a significant effect on psychopathy, antisocial personality, or behavior. Therefore, subsequent Independent-Samples t-Tests were not run for marital status.

Significant mean differences were found, however, for relationship status (e.g., single, dating, married) on both psychopathy and behavior. Subsequent t-Tests were conducted after re-coding relationship status into a dichotomous variable (i.e., single, not single). Results demonstrated that those who are not involved in a relationship are more psychopathic, on average, than those who are in a relationship. This supports the

research that indicates that psychopathic individuals are frequently involved in multiple short-term relationships. Psychopaths are not likely capable of being involved in long-term relationships because of their proneness to boredom, irresponsibility, impulsivity, and promiscuous sexual behaviors. Additionally, t-Tests indicated at $p \leq .01$ that those who are single are generally involved in more antisocial and deviant behaviors. This also supports the literature that suggests that a socially deviant lifestyle is a prominent feature of psychopaths. As demonstrated in instruments such as the PCL-R, engaging in a “chronically unstable, antisocial, and socially deviant lifestyle” is an essential element of psychopathy (Hare, 1991).

To investigate the primary focus of this study, OLS regression analyses were used to determine if behavior could be predicted from psychopathic and antisocial personality traits in this nonforensic sample of male and female students. Using each of the behavior factors as dependent variables, multiple regression analyses were run using demographic variables (e.g., age, gender, race, relationships status) and the psychopathy and antisocial personality factors as the independent, or predictor, variables. Using criminal or deviant lifestyle as the dependent variable, the regression model showed relationship status and deception and manipulation to be significant predictors, with the model accounting for approximately 11% of the total variance ($R^2_{adj} = .113$).

With suicidal ideation as the dependent variable, gender, impulsivity, alienation from others, and hopelessness or despair were determined to be significant predictors of writing material that reflects anger and frustration, considering suicide, and attempting suicide. As gender showed a positive relationship, the model demonstrates that being female is a greater predictor of these behaviors. The psychopathic and antisocial

personality traits displayed a negative relationship with suicidal ideation, indicating that as an individual exhibits more of these traits, he or she is more predictive of suicidal ideation. Additionally, the model shows to explain almost 15% of the overall variance ($R^2_{adj} = .148$).

When assessing the behaviors associated with a college lifestyle (e.g., smoking, frequently consuming alcohol, skipping numerous classes), risky behavior, impulsivity, charming and convincing, and low tolerance of frustration were determined to forecast involvement in these behaviors. More than one third of the total variance was accounted for by this model ($R^2_{adj} = .336$). Interestingly, deception and manipulation resulted in a positive relationship. In other words, the less deceptive or manipulative one is, the more likely he or she is to be involved in these behaviors. The other factors exhibited negative relationships, implying that as individuals increase in these characteristics, they have a greater predictability of being involved in the behaviors associated with a college lifestyle.

Gender, race, a tendency towards anger and violence, and alienation from others showed to be predictors of seeking revenge on persecutors. Gender displayed a negative relationship, indicating that males are more likely than females to seek revenge. A negative relationship with the other factors suggests that being White, having a greater tendency towards anger and violence, and an increase in alienation from others are better predictors of seeking revenge on persecutors than are their counterparts. This model explains approximately 19% of the variance in this behavior ($R^2_{adj} = .186$).

Finally, a regression model was produced to evaluate demographic variables, and the psychopathy and antisocial personality scales as predictors of the entire behavior

scale. This model revealed that it explains nearly 28% of the total variance ($R^2_{\text{adj}} = .278$) and that race and relationship status are significant predictors of behavior ($p \leq .05$). Moreover, psychopathy and antisocial personality are also significant predictors of behavior ($p \leq .01$).

These findings, as a whole, support the hypothesis that behavior can be predicted from psychopathic and other personality (antisocial) traits. Because these results reveal these characteristics to be predictive of behavior, implications can be made as to how these findings can be used to develop policies to aid in the prevention and intervention of antisocial, deviant, and even criminal, behaviors.

Implications

While the findings of this study provide evidence that behavior can be predicted from psychopathic and antisocial personality traits, it is important to understand that possessing some, or even all, of these characteristics does not make it certain that an individual will ultimately be involved in these behaviors. The results, however, do allow implications to be made as to how identifying and recognizing these traits in certain individuals, particularly students, may allow for intervention of certain behaviors when it seems possible or likely they will occur. An important proposition that can arise from these findings is a better understanding of perpetrators of school-associated violent killings. As many of the characteristics assessed in the current study have been found in prior school shooters, it may be suggested that recognizing students with certain characteristics may allow for intervening in a potential plan or situation and preventing the act from occurring. This could be extremely beneficial, as the recent school shootings have led to mass amounts of media attention and fear in our schools. If a plan can be

developed to recognize troubled individuals before an attack occurs, a substantial number of violent acts could potentially be stopped before they take place. While it may be said that investigating prior school shooters has been beneficial to better understanding their motives, the potential for predicting these behaviors could prove to be quite valuable in preventing others from succeeding in carrying out massacres of such magnitude on what should be considered a safe haven—America's schools.

The Personality of School Shootings

Politicians and other prominent figures in society have made a variety of recommendations in light of the panic that has resulted from the latest school shootings and the mass amounts of media attention that these events have received.

The country was convulsed into fits of self-reflection and finger-pointing. Debates on bullying, access to guns, violent videogames and television shows, rock-and-roll music, parenting, and school security were renewed. Blame for the assaults focused on gun culture and the ease by which weaponry could be obtained, the so-called goth youth subculture, lack of parental supervision, and of course a general lack of values. (Larkin, 2007, p. 9)

Some policy suggestions have included increasing the presence of police officers on campuses, doing away with a minimum age for which a juvenile may be tried in adult court, and including the possibility of the death penalty for juveniles who commit such crimes. Similarly, several zero tolerance policies have since been implemented, many due in part to these school-associated violent killings. Consequences of these policies, however, have resulted in students being suspended or expelled for what may have

previously been considered a minor threat or infraction (Donohue et al., 1998). While many schools have begun to take a zero tolerance approach, this may not be the most effective approach to preventing future violence from occurring. It may be suggested, however, that a valid solution to preventing further attacks and increasing the safety of schools lies instead in identifying particular traits that can help authorities intervene before a student reaches the point where effective intervention is no longer possible.

While it is important to understand that there is no profile that can reliably identify a student that will, without question, become a "school shooter," insight into characteristics that have been found to be highly associated with individuals involved in prior school shootings may be helpful in preventing another extreme incident of school violence from occurring. Analyses from this study and other similar studies may provide implications for more appropriate intervention strategies and policies.

The case that perhaps brought the real possibility of mass killings at school to the forefront was the Columbine High School massacre. Researchers have vigorously studied the Columbine shooting perpetrators Eric Harris and Dylan Klebold in attempts to grasp what could lead students to commit such a horrific act of violence.

The Columbine High School massacre has formally been classified as a "school shooting" because of the location in which it took place. Some researchers, however, have suggested that this incident, and in particular these perpetrators, differs immensely from the other mass shootings that have taken place on school campuses. It is argued that the primary targets of Eric Harris and Dylan Klebold were not necessarily the students, staff, and faculty of Columbine High School, but rather that the two simply chose the school setting as a means to increase the potential number of victims. Had their original

plans been successful (i.e., had the large propane bombs in the cafeteria successfully detonated), the death toll could have ultimately reached more than 500 (Cullen, 2004; Larkin, 2007). To many of their classmates, Harris and Klebold were simply two teenagers, though a little unusual, trying to fit in with their peers. What occurred behind closed doors, however, was a different story. “They put on the appearance that everyone wanted to see, but in their private space, they were creating a nightmare. In fact, after the anger management sessions, Harris wrote, ‘I learned that the thousands of suggestions are worthless if you still believe in violence’” (Bardsley, 2007).

Many school shooters have been found to act impulsively and specifically target students and faculty members. Harris and Klebold, on the other hand, planned their rampage for more than a year before acting and likely only chose the school to serve “as means to a grander end, to terrorize the entire nation by attacking a symbol of American life” (Cullen, 2004). The goal of Harris and Klebold was to kill as many people as possible and, in fact, they criticized the petty outcomes of other school shooters. If their explosive devises had successfully detonated, they had planned to shoot fleeing survivors and ultimately die in a blaze of glory in their bomb-packed cars, simultaneously killing even more survivors, rescue workers, and media correspondents in the final explosion.

Although the Columbine perpetrators had planned their attack for more than a year, their inadequate improvisation and lack of a backup plan once their initial plan went amiss made their attack substandard compared to what the two had anticipated (Cullen, 1999). Harris and Klebold did not wish to carry out the worst school shooting in history, they sought to make the entire world tremble by engaging in a catastrophic mass murder of the greatest proportions. Because the media failed to see beyond their choice of venue,

however, research on the perpetrators of the Columbine High School mass killing has been largely misguided.

Despite the salience of the story, the vast media presence, the large number of local, state, and national investigators, at the close of the investigation, nobody could offer a coherent explanation as to why Eric Harris and Dylan Klebold set out to kill their peers and destroy their school. (Larkin, 2007, p. 2)

In July of 1999, the FBI summoned a group of mental health experts and organized a critical summit to investigate the school shootings that had taken place, including Columbine High School. Their conclusions have helped the nation understand and supported the contention that unlike previously reported, Harris and Klebold were not members of the “Trench Coat Mafia” seeking revenge on those who had bullied them, nor was it impossible to understand why the two committed such an unspeakable act of violence (Cullen, 2004).

The FBI summit investigated the characteristics of both Harris and Klebold and determined that not only were they fundamentally different from other school shooters, but they differed radically from each other as well. Klebold, it appears, was more typical than Harris and easier to understand. While Klebold was awkward, dejected, and suicidal, he appeared to have blamed himself for his tribulations, internalizing his problems. Harris, on the contrary, was callously manipulative, homicidal, and full of hatred. It was his vast degree of hatred that appears to have led researchers and the media to believe that Harris’s motive was revenge, a result of his immense hatred for others. According to the FBI, however, while others were unable to see past this hate, it was

actually contempt that Harris was experiencing. It seems that Harris was simply sickened by the substandard people around him and felt that he should “punish the entire human race for its appalling inferiority” (Cullen, 2004).

Additionally, the mental health experts were given exclusive access to private journals written by the suspects to review and assess:

The psychologists conclude[d] that Eric Harris and Dylan Klebold were radically different individuals, with vastly different motives and opposite mental conditions. Klebold was easier to comprehend, a more familiar type. He was hotheaded, but depressive and suicidal. He blamed himself for his problems. Harris was different. He was sweet-faced and well-spoken. Adults, and even some other kids, described him as "nice." But Harris was cold, calculating, and homicidal. "Klebold was hurting inside while Harris wanted to hurt people." Harris was not merely a troubled kid, the psychologists say, he was a psychopath. (“Teenage terrorists”)

While the FBI summit regarded Harris as psychopathic and Klebold as more of a follower full of aggression and rage, it may be suggested that the two displayed complementing psychopathic and antisocial characteristics that allowed them to carry out their act of mass destruction. Harris quite obviously demonstrated an existence complete with deception, manipulation, and charm, while also appearing to be more impulsive and shortsighted than his counterpart. Klebold, on the other hand, seemed to have a shorter temper and was more irritable but was able to look ahead and make realistic long-term goals involving college. Both enjoyed engaging in risky behavior, demonstrated by their sneaking out at night to set off pipe bombs and their fascination with shooting high-

powered weapons. Perhaps these two presented a perfect balance of psychopathy between the two of them that allowed them to succeed in their grandiose scheme of violence.

Many of Harris's journal entries revealed his feelings of grandiosity and superiority over his classmates and the human race in general. His writings blatantly told of his willingness to lie and deceive others to merely get what he wanted and to avoid culpability. Harris made several admissions in his journal writings regarding the pleasure he took in frequently deceiving others (Cullen, 2004). He appeared to enjoy the fact that he could deceive and manipulate others into believing that he felt remorse for his wrongdoings. Results from the current study support the qualities of deception and manipulation as a statistically significant predictor of a criminal or deviant lifestyle.

Additionally, Harris exposed his lack of empathy for the feelings and lives of others; he had described in gruesome detail his plans to slowly torture his victims, many of which he did on the day of the massacre as he taunted several of the students before shooting them at close range ("Teenage terrorists"). According to forensic psychologists involved in the FBI summit, "the prime evidence of Eric's [Harris] psychopathology was his ability to use the language of emotion in a manipulative fashion" (Larkin, 2007, p. 149).

Videotaping themselves, Harris and Klebold joyously expressed their ease in manipulating others. They believed themselves to be above human and arrogantly bragged that they had been planning their attack since before any other school shootings had occurred. While the two appeared normal to most of those around them, some did describe the two as social outcasts. Harris and Klebold, however, acknowledged that no

one was safe and even their friends could become victims of their mass murder. They further established that their families would be shocked and distraught, but they neutralized these concepts by saying, “war is war” (“Columbine Shooting Report”).

Their lack of empathy was further displayed by their plans to target fleeing students and their decision to hunt down any students attempting to hide in classrooms. It was also reported after the incident that Harris and Klebold were laughing and smiling throughout their rampage. In the end, the two students killed 13 individuals and injured more than 20 others before they both ultimately committed suicide (Newman, Fox, Harding, Mehta, & Roth, 2004; Steel, 2007).

With the conclusion that Harris was likely a psychopath, the FBI investigators contend that Harris was the primary instigator and mastermind behind the Columbine mass shooting. While Klebold was likely more of a follower to Harris’s manipulative guidance, the collaboration between the two probably led Harris to drift from typical psychopathic behavior in one way—it caused him to restrain himself (Cullen, 2004). Psychopaths often need stimulation and commonly find this in violent behaviors. Other than his arrest for theft, however, Harris was able to avoid getting into trouble, or at least avoid detection, for the duration of the time that he and Klebold planned their attack on Columbine. It has been suggested that the conflicting characteristics and behaviors of Harris and Klebold created a balance between the two. Accordingly, psychologists say, “cool, calculating Harris calmed down Klebold when he got hot-tempered. At the same time, Klebold’s fits of rage served as the stimulation Harris needed” (Cullen, 2004).

Those involved in the FBI summit agree that Klebold, the shy, suicidal follower, would not have been involved in a rampage of this magnitude if he had not partnered up

with the callous, manipulating Harris. It is believed that had the Columbine incident never occurred, Klebold likely could have gone on to lead a normal life. The investigators, in contrast, view Harris, differently. He, they say, “was a brilliant killer without a conscience, searching for the most diabolical scheme imaginable” (Cullen, 2004). As Harris almost certainly used his psychopathic personality as a means of manipulating Klebold into helping him develop, plan, and carry out the massacre in which the two ultimately ended their own lives, it can be hypothesized that if Harris and Klebold’s lives had never crossed, Harris simply would have found other ways to con his way through life. The possibility remains that had the Columbine killings not taken place, Harris may have gone on to devastate and destroy even more lives through his cruel, callous, and calculating behaviors.

Similarly, the Columbine High School shooters appear to have displayed the antisocial personality traits found in this study to be predictive of such behaviors as suicidal ideation, analogous behaviors associated with a college lifestyle, and the inclination to seek revenge on persecutors. If those who had contact with Harris and Klebold (e.g., teachers, family, peers) had recognized these characteristics and were able to associate them with the propensity for these behaviors, it may be suggested that their ultimate act of violence could have been prevented.

Common Themes in Writings. Similar to the findings of some students in the current study, Harris and Klebold displayed a number of violent themes throughout their journal writings and in school writing assignments (Steel, 2007). Common themes included in the writings of Harris and Klebold were feelings of superiority, self-awareness, natural selection, lack of self-esteem, not being accepted, and not fitting in

with others. The writings also revealed that the acts of the Columbine shooters were not impulsive; they had, in fact, been planning their massacre for over a year before finally completing their plans. One particular story that Klebold turned in as a class assignment led the teacher to contact his parents and school counselors; school officials, however, never looked into the matter any further (“Columbine”). In addition, Harris and Klebold incorporated diagrams, timelines, itineraries, and even performed dress rehearsals for the final event (“Teenage terrorists”).

Rejection. A theme of rejection was seen throughout both of the Columbine shooters’ lives. Eric Harris had been rejected by all of the colleges he had applied to, was rejected by the girl he asked to prom, and his final rejection occurred only days before the rampage took place. On April 15, 1999, Harris received word that his application to the Marine Corp was denied because they had learned that he was currently prescribed the drug Luvox, a drug used to treat obsessive-compulsive disorder and depression. Dylan Klebold, though more socially proficient and the one with more control over his life, had felt rejected by his peers and classmates (The Disaster Center). Although he did have friends belonging to various cliques at the school, he did not have a close circle of friends other than Harris (Bartels & Crowder, 1999; “Eric Harris/Dylan Klebold: Biography).

Involvement in a Criminal or Deviant Lifestyle. In January of 1998, Harris and Klebold broke into an unoccupied vehicle and stole various items from within. A sheriff’s deputy caught the two only minutes later. While Klebold declared that it was a mutual idea to break into the vehicle, Harris contended that it was Klebold’s idea. The two were entered into a diversionary program that included community service and counseling. Both impressed their counselors to the extent that they were released from

the program early and even praised on the final reports. It was at this same time, however, that Harris's personal website disappeared and they began writing in their journals about violent plans for the future and continued to sneak out at night to test their homemade bombs (Bartels & Crowder, 1999).

Preventing Similar Incidents

The school district that included Columbine High School has since stated that Columbine failed to adhere to a security plan implemented 8 months before the attack on the school occurred. The plan "required school officials to notify and meet with parents and law enforcement officers as soon as they learned of 'a threat by any student' to 'commit any act of violence'" ("Columbine," n.d.). According to reports, law enforcement officials had been contacted a full year before the attack because of death threats that Harris had posted on his personal website. Although Columbine administrators were notified that Harris was making threats and potentially making pipe bombs, the school took no further action. Moreover, the police never visited or searched the Harris home, even though a search warrant had been drafted after authorities discovered a pipe bomb in a local park ("Columbine"; Kenworthy & O'Driscoll, 2004). Had the authorities taken this opportunity to search his home, they may have discovered the arsenal of weapons, including knives, guns, gun powder, coils of bomb fuse, and the more than 100 pipe bombs, propane bombs, and homemade grenades that Harris and Klebold had been concealing in their bedrooms ("Columbine"). The lack of communication between the juvenile authorities, school officials, and their parents enabled Eric Harris and Dylan Klebold to maintain the appearance of normalcy to those

closest to them, while secretly planning the fulfillment of their angry, violent fantasies (Steel, 2007).

Treating a Psychopath

While many mental health experts maintain that psychopathy is not a disorder that can be remedied, it is likely that this is actually an especially complex issue. It appears that psychopaths are typically not acquiescent to treatment, and that some treatment may actually generate an effect contrary to the goal of treatment (Hare, 1993; Millon et al., 1998). Researchers have found that therapy often gives psychopaths new ways to manipulate others and new rationalizations for their behavior. These individuals often take over therapy sessions, forcing their ideas on others, while showing little attempt at changing their own behaviors and no understanding for the need to consider the feelings of others. In addition, studies have found that psychopaths were four times more likely to be violent after completing a therapy program than psychopaths who did not (Hare, 1993). Further, therapy programs may simply provide psychopaths with a greater vocabulary, making them able to appear more intelligent or even rehabilitated, but as has been found, the psychopath may be able to speak the words but is still unable to feel the emotional depth of what they are saying. Attempts at rehabilitating psychopaths through incarceration have also proven to be futile. Several studies have found that psychopaths frequently commit institutional infractions during incarceration and are at a greater risk for recidivating upon release (Lynam et al., 2007).

In order for psychotherapy to be successful, it assumes that the patient wants or understands that he or she needs help. Psychopaths do not recognize there is a problem and, therefore, are likely to not be willing to participate in any type of treatment (Hare,

1993). Moreover, because psychopaths do not feel any guilt for their actions, they typically do not feel the need to seek therapy for or management of their behavior; if they do seek treatment, it is typically for their own benefit (e.g., to receive a sentence reduction; Millon et al., 1998). It is important to note, however, that most of the studies that have been done to investigate treatment outcomes have not used sound methodological standards. Because treatment has thus far been found to not usually be effective, psychopaths rarely seek treatment, and many psychopaths are not confined within the criminal justice system, researchers have questioned what society can do, then, to lessen the impact that psychopaths have on others in society.

One notion has been to identify the behaviors that are revealed in early childhood and aim to intervene with potential psychopaths at the earliest age possible (Lynam et al., 2007; Murrie et al., 1999). “Recently, the construct of psychopathy has been borrowed from the adult literature in an attempt to discriminate those children with conduct problems who will become chronic offenders, specifically psychopathic offenders, from those whose antisocial behavior will subside over time” (Lynam et al., 2007, p. 155). While conduct problems in childhood are a risk factor for antisocial behavior in adulthood, it must be noted that symptoms of oppositional-defiant disorder (ODD) and conduct disorder (CD) are quite ordinary in childhood (Lynam, 1996; Murrie et al.). The ability to identify those children who will proceed into an antisocial lifestyle in adulthood remains difficult but may help in further understanding adult psychopathy and antisocial behavior, as they rarely develop instantaneously in adulthood. Thus, while chronic offenders typically present a history of antisocial behavior in childhood, antisocial

behavior in childhood is universal and likely cannot be used independently to predict chronic offending (Lynam, 1996).

Furthermore, research has shown that psychopathy in children and adolescents resembles that of adult psychopathy. Multiple studies have also shown that psychopathy in children and adolescents has a predictive value much higher than other factors, including attention problems, previous offending, aggression, impulsivity, IQ, and conduct problems (Lynam et al., 2007). A study conducted by Lynam et al. (2007) found “moderate stability” between psychopathy scores measured at age 13 and those measured at age 24. The findings of this study strengthen the view that adolescent psychopathy is a developmental precursor to psychopathy in adulthood (Lynam et al., 2007). If this is the case, research concerning psychopathy in children and adolescents is important to better understanding adult psychopathy and may hold the solution to treatment. Few studies, however, have examined the stability of childhood and adolescent psychopathy over a period of time and it, therefore, must be noted that it continues to be unknown how much child and adolescent psychopathy is associated with psychopathy in adulthood.

There have been both individual and family psychotherapy programs developed that have been shown to modify the behavioral patterns in children. These programs may be successful at changing the behaviors of “budding psychopaths” by teaching them to satisfy their needs in ways that are not antisocial and follow society’s rules. There are two components of intervention that need to be considered. The first involves identifying those who need to be to be intervened; this component necessitates identifying the chronic offender at an early age. The second component involves knowledge of the disorder with the intention of development and implementation of successful

interventions. Additionally, there are three strategies for intervention of disorders such as psychopathy. First, primary prevention involves the attempt to completely prevent the onset of the disorder. Secondary prevention involves creating and implementing intervention strategies so that the disorder can be detected and intervention can take place soon after onset. Finally, tertiary strategies involve the process of minimizing the consequences of the disorder (e.g., incarceration, rehabilitation). Effective intervention, whether it is through primary or secondary prevention, must involve identification at an early age and understanding the disorder so that effective strategies can be employed (Lynam, 1996).

Another setback concerning the treatment of psychopaths is that only a minority of programs focuses specifically on the treatment of psychopaths. Those programs that do exist have been found to be programs in which the treatment has resulted in a program that differs from its original intentions because of the number of public policy, government, economic, and administrative issues that they have been challenged with. Thus, there has been no reliable program exclusively for the treatment of psychopaths that has been created, performed, and assessed (Hare, 1993). Further, researchers contend that attempts to treat psychopaths may be fruitlessly aimed. As treatment suggests that there is something (e.g., illness) to treat, psychopathy is not classified as a mental illness. Although it is considered a personality disorder, psychopaths do not believe that there is anything wrong with their behavior, thus presenting no reason for treatment. Because of this, it is unlikely that psychopaths would be willing to undergo any type of treatment program or, as may be more likely, willing to change their behaviors (Hare, 1993). It has been suggested that the best potential treatment of

psychopathy may involve an integration of cognitive-behavioral therapy programs with attempts to convince these individuals that they are indeed responsible for their behavior and there are socially acceptable ways that they can satisfy their needs.

Finally, as treatment of psychopaths may remain modest at best, Hare (1993) presents a “survival guide” with recommendations of how one can protect oneself and reduce the potential harm experienced from a psychopath. As psychopaths are capable of manipulating and using anyone, the first important defense to protect oneself is to understand how psychopathic individuals think and operate. Understanding their common traits and behaviors can aid in allowing a person to really pay attention to others and detect what their true intentions may be. Do not simply take what someone is saying for granted; one should keep his or her eyes open and use extra caution when entering new relationships. Additionally, as the stories of psychopaths tend to contain inconsistencies, one should be suspicious of, ask questions about, and verify the narratives of an individual who appears to possess psychopathic traits (Hare, 1993).

Because of the complexity associated with the treatment of those with psychopathic personalities, it may be suggested that the best method to avoid the negative effects of a psychopath’s behavior is prevention. It appears that the most successful management of psychopaths occurs when the characteristics are identified in childhood. As this often does not occur, perhaps the findings from this study, and future research on similar issues, will aid in recognizing these characteristics as early as possible. Moreover, if these characteristics can be identified, it becomes possible for professionals to better understand how to manage these individuals and, in turn, prevent them from using these traits to engage in antisocial and/or criminal behaviors.

Identifying Traits and Using Them to Intervene

Following the incident at Columbine High School, a new term developed in society. This term, *the Columbine effect*, represents the improvement of students' eagerness to come forward and report to school officials any threat or planned act of violence by their peers (Larkin, 2007). It can be hypothesized that with a greater likelihood of students reporting suspicious activities or threats among their peers, it may be possible to stop future incidents before they occur. By educating those within the school system (e.g., faculty, staff, students, school officials, etc.), the more aware people will become regarding things to look for that may identify a troubled student.

A non-profit organization, The Search Institute, which helps encourage thriving children and sound communities, recommends five resources in helping prevent future incidents like the one at Columbine. According to The Search Institute, individuals are 93% less likely to drop out of school, 10 times less likely to do drugs, and 15 times less likely to commit crimes if they have constant access to the following: (1) ongoing relationships with caring adults, (2) safe places with structured activities outside of school, (3) a healthy start in life and a future, (4) an effective education that teaches marketable skills, and (5) opportunities to help others through community service (Sallee, 2005). With access to these resources, as well as the greater understanding that society can gain through studies like the current one, it may be possible for valuable intervention strategies to emerge. Additionally, identifying psychopathic and antisocial personality traits before acts of violence occur may aid in preventing a variety of antisocial, violent, and criminal behaviors.

Future Research

The current study revealed that deriving questions from the PCL-R and including them in a self-report questionnaire is not an especially reliable method to assess psychopathic characteristics in a nonforensic, student sample. This does not, however, invalidate the findings of the current study, nor should it lead researchers to abandon further attempts at understanding subcriminal psychopathy. Future studies on similar populations should perhaps attempt to use a more reliable assessment instrument for psychopathy. While it may remain unfeasible for many researchers to conduct interviews, assess files, and obtain collateral information on large samples, perhaps the first aim of researchers should be to use a reliable and valid self-report instrument for assessing psychopathy in nonforensic samples. The psychopathy, antisocial personality, and behavior scales developed through factor analysis in the current study are more reliable dimensions than the original use of items derived directly from the PCL-R. It can be suggested that future studies use these scales, or revised versions, to assess these constructs in nonforensic, student samples.

Additionally, researchers should attempt to conduct similar studies on a variety of other nonforensic samples, including student samples in other regions, so that findings can be better generalized to the nonforensic population. Further, more complex analyses on the data from the current study could reveal additional findings. Moreover, as some of the items in the self-report survey were not analyzed in the current study, future research could lead to identifying other predictors of behavior. Finally, the researcher is optimistic that the current study will lead to a better understanding of psychopathy, antisocial personality, and how the two constructs can be used to predict behavior.

Likewise, knowledge of these topics may help in identifying the characteristics and personality traits of individuals capable of involvement in dangerous behaviors, allowing professionals to better understand how to manage these individuals and, in turn, prevent them from using these traits to engage in antisocial or criminal behaviors.

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APPENDIX

DATA COLLECTION INSTRUMENT

Introduction

I would like to thank you for taking the time to participate in this research. The name of my research study is “Predicting behavior from psychopathic and antisocial personality traits in a student sample.” You must know, first and foremost, that completing this survey is completely voluntary. If for any reason you feel uncomfortable or simply wish not to, you may elect to not participate without consequence or quit at any time. There are no alternative procedures to this study except to elect to not participate. It should take approximately 30 minutes to complete the survey. You may refuse to participate. You may quit at any time. If you quit or refuse to participate, the benefits and treatments to which you are otherwise entitled will not be affected.

You will be asked questions about personality traits and behaviors. Since some questions concern suicidal ideation and criminal behavior, it may cause some minor stress to participate. However, you may also feel better after having had the opportunity to express your feelings and behaviors. Additionally, this study may offer benefit by providing more information about the relationship between personality and behavior.

Additionally, you are being provided with a blank sheet of green paper to be used as a cover sheet. Please use this cover sheet so that only you are able to view your answers. If for any reason you feel your privacy may be compromised by completing the survey at this time, you may request to complete the survey at your own convenience and be provided with an envelope to return the survey to me via campus mail.

If you decide to voluntarily complete the survey, please do not put your name or any other identifying marks anywhere on the survey. Answers to all questions are completely anonymous and will be kept confidential. In no way will any answers that you submit be connected to you specifically. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the ETSU IRB, and personnel in the Criminal Justice Department particular to this research will have access to the study records.

This study is investigating personality characteristics and associated behaviors. Please answer each question as honestly and accurately as possible. For privacy protection and because this survey is being taken in a group setting, please refrain from looking at any other person’s survey and answer each question on your own.

Results of the survey will be used in my thesis as partial fulfillment for my Master of Arts degree in Criminal Justice and Criminology at East Tennessee State University, and perhaps be presented to the scientific community.

Below you will find contact information to local resources. If you think that any of these may be helpful to you or someone you know, please take this page of information with you.

If you have any questions regarding the survey or research study, please feel free to contact myself via e-mail at zmrs29@imail.etsu.edu or call (423) 439-6453. Also, Dr. Wayne Gillespie will be overseeing this study and may be contacted at (423) 439-4324. The chairperson of the Institutional Review Board at East Tennessee State University is available at (423) 439-6055 if you have any questions about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you cannot reach the study staff, you may call an IRB coordinator at (423) 439-6055 or (423) 439-6002.

**Thank you,
Maryann Stone**

Resources:

Johnson City Police Department: (423) 434-6000

24-Hour Crisis Intervention Hotline: (423) 926-0144

ETSU Department of Public Safety (non-emergency): (423) 439-6900

ETSU Counseling Center: (423) 439-4841

The National Suicide Prevention Lifeline: 1-800-273-TALK (8255) (Toll-Free / 24-Hours)

Part I

Please answer the following questions regarding yourself and your background. Check the box in front of the appropriate answer.

1. What is your gender? <input type="checkbox"/> Male <input type="checkbox"/> Female	
2. What is your age (in years)? _____	
3a. What is your classification in school?	<input type="checkbox"/> Freshman <input type="checkbox"/> Junior
	<input type="checkbox"/> Sophomore <input type="checkbox"/> Senior
	<input type="checkbox"/> Graduate <input type="checkbox"/> Other
b. What is your major?	_____
4. Which best describes your race?	<input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> Asian
	<input type="checkbox"/> Other (please specify): _____
5. What is your current relationship status?	<input type="checkbox"/> Single <input type="checkbox"/> Dating <input type="checkbox"/> Married
	<input type="checkbox"/> Other: _____

<p>6. What is your current marital status?</p>	<p><input type="checkbox"/> Single, never married <input type="checkbox"/> Widowed</p> <p><input type="checkbox"/> Married <input type="checkbox"/> Re-married</p> <p><input type="checkbox"/> Separated <input type="checkbox"/> Divorced</p>
<p>7. What is your current living arrangement?</p>	<p><input type="checkbox"/> Live alone <input type="checkbox"/> Live with other relatives</p> <p><input type="checkbox"/> Live with roommates <input type="checkbox"/> Live with significant other</p> <p><input type="checkbox"/> Live with parents <input type="checkbox"/> Live with spouse</p> <p><input type="checkbox"/> Live with children <input type="checkbox"/> Other: _____</p>
<p>8. What is your sexual orientation?</p>	<p><input type="checkbox"/> Bisexual</p> <p><input type="checkbox"/> Heterosexual</p> <p><input type="checkbox"/> Homosexual</p>
<p>9. What is your current income level?</p>	<p><input type="checkbox"/> \$0 – 10,000 <input type="checkbox"/> \$10,001 – 40,000</p> <p><input type="checkbox"/> \$40,001 – 60,000 <input type="checkbox"/> \$60,001 +</p>
<p>10. Do you have children?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>If yes,</p>	<p>a. How many? _____</p>

	b. Do they live with you?	<input type="checkbox"/> YES <input type="checkbox"/> NO
11. Have you used any of the following substances in the past 12 months?	a. Marijuana	<input type="checkbox"/> YES <input type="checkbox"/> NO
	b. Cocaine	<input type="checkbox"/> YES <input type="checkbox"/> NO
	c. Crystal Meth	<input type="checkbox"/> YES <input type="checkbox"/> NO
	d. Oxycontin (non-prescribed)	<input type="checkbox"/> YES <input type="checkbox"/> NO
	e. Xanax (non-prescribed)	<input type="checkbox"/> YES <input type="checkbox"/> NO
	f. Lortab (non-prescribed)	<input type="checkbox"/> YES <input type="checkbox"/> NO
	g. Other (non-prescribed) Drug	<input type="checkbox"/> YES <input type="checkbox"/> NO

Part II

The following questions pertain to emotional/interpersonal traits. Please circle the number that best fits how much you feel the statement describes you.

1=Strongly Agree	2=Agree	3=Neutral	4=Disagree	5=Strongly Disagree
1. I enjoy engaging in frequent conversation.	1	2	3	4 5
2. Any troubles I have experienced have been my own fault.	1	2	3	4 5
3. I often lie or am deceitful to others.	1	2	3	4 5
4. I have concern for the negative consequences that my actions may have on others.	1	2	3	4 5
5. My emotions are usually consistent with my actions or the current situation.	1	2	3	4 5
6. I do not hesitate to mock other people, including those who have experienced misfortune or who suffer from a mental or physical handicap.	1	2	3	4 5
7. I accept personal responsibility for my own actions or consequences of them.	1	2	3	4 5
8. I am always ready with a quick and clever comeback.	1	2	3	4 5
9. I have many abilities and am a very worthy person.	1	2	3	4 5
10. I often exaggerate when I am telling a story about something I have done.	1	2	3	4 5
11. I often use deceit and deception to cheat and manipulate others.	1	2	3	4 5
12. I feel that my actions have been unfairly judged and my punishments too severe.	1	2	3	4 5
13. I am cold and unemotional.	1	2	3	4 5
14. I experience empathy for the feelings, rights, and welfare of others.	1	2	3	4 5
15. I usually blame others for my own behavior.	1	2	3	4 5
16. I think that others are simply objects to be manipulated.	1	2	3	4 5
17. I tend to amuse and entertain others during conversation.	1	2	3	4 5
18. I am embarrassed about legal problems that I have had and/or crimes that I have been involved in.	1	2	3	4 5
19. I never make excuses or make up explanations for something.	1	2	3	4 5
20. I have used schemes or scams for personal gain (money, sex, status, power, etc.) and I don't care about the effects on others.	1	2	3	4 5
21. When caught in a lie or challenged with the truth, I am usually embarrassed and admit to lying.	1	2	3	4 5
22. I am easily frustrated.	1	2	3	4 5
23. I cannot / will not forget or forgive wrongs against me or those who are responsible for wronging me.	1	2	3	4 5
24. I have a bright outlook on life.	1	2	3	4 5
25. I feel different or estranged from others.	1	2	3	4 5
26. I do not like constant attention on myself.	1	2	3	4 5

27. I am suspicious of others' motives and intentions.	1	2	3	4	5
28. I am very outgoing and friendly.	1	2	3	4	5
29. I feel isolated and rejected by others.	1	2	3	4	5
30. I can easily deal with frustration, criticism, disappointment, failure, rejection, or humiliation.	1	2	3	4	5
31. I hate everyone.	1	2	3	4	5
32. I have strong opinions and tend to voice them to others.	1	2	3	4	5
33. I feel that I am popular among my peers.	1	2	3	4	5
34. I am easily insulted, angered, and hurt by injustices done to me by others.	1	2	3	4	5
35. I have unpredictable and uncontrolled outbursts of anger.	1	2	3	4	5
36. I fit in with my peers.	1	2	3	4	5

Part III

The following questions pertain to certain behaviors. Please circle the number that best fits how well the statement describes your behavior.

1=Strongly Agree	2=Agree	3=Neutral	4=Disagree	5=Strongly Disagree
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1. I am usually one that takes chances, lives life in the fast lane, and lives on the edge.	1	2	3	4	5
2. I do not depend on others for financial support.	1	2	3	4	5
3. I tend to respond to frustration, failure, discipline, and criticism with violent behavior or with threats and verbal abuse.	1	2	3	4	5
4. I have had many one-night stands.	1	2	3	4	5
5. I did not have serious behavior problems as a child (age 12 and below).	1	2	3	4	5
6. I do not worry much about the future.	1	2	3	4	5
7. I usually do things on the spur of the moment because I feel like it or because an opportunity presents itself.	1	2	3	4	5
8. I usually honor obligations and commitments to others.	1	2	3	4	5
9. I have had two (2) or more live-in and/or serious relationships where there was some degree of commitment from one or both partners.	1	2	3	4	5
10. I have a history of charges and convictions for criminal and/or statutory offenses as an adolescent (age 17 and below).	1	2	3	4	5
11. Even if I find a task to be routine, monotonous, or uninteresting, I will not quit or give up on it.	1	2	3	4	5
12. I avoid steady and gainful employment.	1	2	3	4	5
13. I take offense easily and become angry and aggressive over small things.	1	2	3	4	5
14. I often engage in multiple sexual relationships at the same time.	1	2	3	4	5

15. During my childhood I was involved in: persistent lying, cheating, theft, robbery, fire-setting, truancy, disruption of classroom activities, substance abuse, vandalism, violence, bullying, running away, and/or precocious sexual activities.	1	2	3	4	5
16. I have realistic long-term goals.	1	2	3	4	5
17. I never break off relationships, quit jobs, move, or change plans suddenly or without much thought.	1	2	3	4	5
18. I have a strong sense of duty and loyalty to family, friends, employers, society, and causes.	1	2	3	4	5
19. School, work, and long-term relationships are boring.	1	2	3	4	5
20. I continually rely on family, relatives, friends, or social assistance.	1	2	3	4	5
21. I am short-tempered / hotheaded.	1	2	3	4	5
22. It is important for me to be in a committed relationship before I have sex with that person.	1	2	3	4	5
23. I tend to live day by day and change plans frequently.	1	2	3	4	5
24. My parents are divorced, separated, and/or there are frequent episodes of intense friction between them.	1	2	3	4	5
25. I am familiar, even proficient, with the use of firearms.	1	2	3	4	5
26. At least one of my family members / relatives has a mental illness, personality disorder, or is a substance abuser.	1	2	3	4	5
27. I have a steady boyfriend/girlfriend.	1	2	3	4	5
28. As a child I had a history of tantrums and uncontrollable angry outbursts.	1	2	3	4	5
29. I have tried and/or used many types of drugs.	1	2	3	4	5
30. I am often less able to control my behavior when I consume alcohol.	1	2	3	4	5

Part IV

The next set of questions also pertain to behaviors, however, please answer the following questions only regarding the past 12 months.

1=Strongly Agree	2=Agree	3=Neutral	4=Disagree	5=Strongly Disagree
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1. I express interest in heavily publicized acts of violence.	1	2	3	4	5
2. I consistently burst out in “temper tantrums” or melodramatic displays.	1	2	3	4	5
3. I have intolerance for certain racial or religious groups or minorities.	1	2	3	4	5
4. I mainly have acquaintances rather than a close group of friends.	1	2	3	4	5
5. I watch a lot of movies, TV shows, or play computer or video games that focus on themes of violence, hatred, control, power, death, and/or destruction.	1	2	3	4	5
6. My relationship with my parents is particularly difficult or turbulent.	1	2	3	4	5
7. I tend to “skip” a lot of classes.	1	2	3	4	5
8. I am a procrastinator.	1	2	3	4	5
9. It is not characteristic of me to resort to name-calling, cursing, or abusive language.	1	2	3	4	5

10. I often fail to pay loans and/or bills.	1	2	3	4	5
11. I tend to make violent threats when I am angry.	1	2	3	4	5
12. I am no longer interested in activities that I once enjoyed.	1	2	3	4	5
13. When I am angry I tend to sulk in silence.	1	2	3	4	5
14. I make good grades in school.	1	2	3	4	5
15. I perform assignments in a careless manner.	1	2	3	4	5

Part V

Please answer the following questions by circling the number that best represents your answer, using the scale listed below. Again, please only refer to the past 12 months.

1 = Never (0 times)	2 = Occasionally (1 or 2 times)	3 = Regularly (3-6 times)	4 = Almost all of the time (6-12 times)	5 = Always (12+ times)
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1. I am a smoker (tobacco).	1	2	3	4	5
2. I have committed theft/shoplifted.	1	2	3	4	5
3. I have committed a homicide.	1	2	3	4	5
4. I have committed rape / sexual assault.	1	2	3	4	5
5. I have committed arson.	1	2	3	4	5
6. I have “skipped” numerous classes.	1	2	3	4	5
7. I have been involved in physical fights.	1	2	3	4	5
8. I have attempted suicide.	1	2	3	4	5
9. I seem to be prone to accidents.	1	2	3	4	5
10. I often consume alcohol.	1	2	3	4	5
11. I have considered ending my own life.	1	2	3	4	5
12. I have written material (for school or personal) that reflects the anger and frustration I feel.	1	2	3	4	5
13. I am currently prescribed and taking medication such as antipsychotics, antidepressants, anti-obsessive agents, anti-anxiety agents, mood stabilizers, anti-panic agents, or ADHD treatments.	1	2	3	4	5
14. I have brought a weapon to school.	1	2	3	4	5
15. I have received an academic or public service award, or a scholarship.	1	2	3	4	5

16. I have made plans to hurt someone at school / on campus.	1	2	3	4	5
17. I have made a threatening statement to someone at school/ on campus.	1	2	3	4	5

1 = Never (0 times)	2 = Occasionally (1 or 2 times)	3 = Regularly (3-6 times)	4 = Almost all of the time (6-12 times)	5 = Always (12+ times)
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18. I have kept a list of people who have wronged me.	1	2	3	4	5
19. I have access to / could obtain firearms.	1	2	3	4	5
20. I have bullied peers and/or those younger than me.	1	2	3	4	5
21. I have been bullied by peers.	1	2	3	4	5
22. I have burglarized a dwelling.	1	2	3	4	5
23. I have thought / fantasized about getting back at others through violent means.	1	2	3	4	5
24. I have vandalized property.	1	2	3	4	5
25. I have robbed or mugged a person.	1	2	3	4	5

VITA

MARYANN STONE

Personal Data:

Date of Birth: November 11, 1983

Place of Birth: Royal Oak, MI

Marital Status: Single

Education:

Southeast High School, Bradenton, FL, 2002

University of South Florida, Tampa, FL, 2006

B.A. Criminology, May 2006

Honors College

East Tennessee State University, Johnson City, TN

M.A. Criminal Justice and Criminology, May 2008

Professional Experience:

Graduate Assistant

Department of Criminal Justice/Criminology, 2006-2008

Research Presentations/Publications:

Paper presented at 2008 Academy of Criminal Justice Sciences annual meeting, Cincinnati, OH. *Predicting Behavior from Psychopathic and Antisocial Personality Traits in a Student Sample.*

Beauregard, E., Stone, M., Proulx, J., & Michaud, P. (2007). Sexual homicide of children: Developmental, pre-crime, crime, and post-

crime factors. *International Journal of Offender Therapy and Comparative Criminology*.

Study Guide, as part of Brown, S.E., Ebensen, F.-A., & Geis, G. (2007)

Criminology: Explaining crime and its context. 6th ed.

Poster presented at 2006 American Society of Criminology annual

meeting, Los Angeles, CA. *Sexual murderers of children: Pre-crime, crime, and post-crime factors*.