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# Juvenile Psychopathy: Instrumental versus Reactive Aggression in Male and Female Juvenile Offenders

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Running head: JUVENILE PSYCHOPATHY

Juvenile Psychopathy:  
Instrumental versus Reactive Aggression in Male and Female Juvenile Offenders

by

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DISSERTATION

Submitted in partial fulfillment of the requirements for the degree  
of Doctor of Psychology the Department of Clinical Psychology  
at Antioch University New England, 2014

Keene, New Hampshire



Department of Clinical Psychology

**DISSERTATION COMMITTEE PAGE**

The undersigned have examined the dissertation entitled:

**JUVENILE PSYCHOPATHY: INSTRUMENTAL VERSUS REACTIVE  
AGGRESSION IN MALE AND FEMALE JUVENILE OFFENDERS**

presented on January 16, 2014

by

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## Dedication

## For my Mom

My biggest fan, my rock, my support system.

Ma – If I emulate an ounce of your grace, class, strength, compassion, loyalty, and light, I have succeeded. You have guided me, challenged me, and above all allowed me to find my own way. You let me fail, but picked me up. You supported me through the natural consequences of my actions. You showed me how to open doors that I thought were closed, but didn't open them for me. You gave me options without telling me which one you thought was best, even when I wanted you too. You have given me a sense of agency, courage, and confidence. Thank you for not always agreeing with me, allowing me to get lost, and for shining a light to guide my path.

*“The height of your accomplishments will equal the depth of your convictions.”*

William F. Scolavino

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## Table of Contents

Dedication.....	ii
Acknowledgements.....	iii
List of Tables .....	viii
List of Figures.....	ix
Abstract.....	1
Chapter 1.....	2
Statement of the Problem.....	2
Stakeholders.....	5
Concepts Defined.....	6
Conceptual Framework.....	6
Chapter 2: Literature Review.....	8
Conceptualization of Psychopathy.....	8
Historical Perspective .....	10
Theory and Measurement .....	10
Two-Factor Model .....	11
PCL-R .....	14
Three-Factor Model .....	14
Four-Factor Model.....	15
The Downward Extension.....	17
Theory and Measurement in Juvenile Populations.....	17
PCL: YV .....	17
Brief Measures.....	19
Challenges of Psychopathy Specific Measures.....	20
MMPI-A.....	22
Violence and Aggression.....	25
Theoretical Perspectives on Aggression.....	25
Instrumental and Reactive Aggression .....	26
Psychopathy and Aggression.....	28
Psychopathy, Aggression, and Juveniles .....	30
Gender Differences .....	32

Criminality and Juveniles ..... 34

Purpose of the Current Study ..... 36

Research Questions ..... 37

Chapter 3: Method ..... 38

    Procedure ..... 38

    Materials ..... 39

    Sample ..... 39

    Measures ..... 40

        Evaluation Data Sheet ..... 40

            Modified Aggression Incidents Coding System ..... 41

            MMPI-A ..... 43

Chapter 4: Results ..... 45

    Preliminary Analysis ..... 45

        Aggression Coding ..... 45

    Descriptive Statistics ..... 46

    Relationship between Aggression and Psychopathy ..... 49

        Research Question 1: Is the relationship between aggression and psychopathy  
        in adult populations applicable to juveniles? ..... 49

    Gender Differences ..... 52

        Research Question 2: What are the gender differences between juvenile  
        offenders and psychopathic traits? ..... 52

    Criminal Activity and Frequency ..... 53

        Research Question 3: Does criminal activity and frequency predict  
        psychopathy in juvenile offenders? ..... 53

        Age of First Arrest ..... 53

        Legal Offenses ..... 55

Chapter 5: Discussion ..... 58

    Implications for Results ..... 58

    Limitations and Directions for Future Research ..... 59

    Implications for Practice and Policy ..... 62

    Personal Reflections ..... 63



References.....66

Appendix A: Aggression Coding Form ..... 85

Appendix B: Type of Legal Offense: Group Differences for Total Acts of Aggression  
                   Reported..... 86

Appendix C: Scale 4 Psychopathic Deviate (*Pd*) .....87

Appendix D: Antioch University Approval for Research.....88

Appendix E: Youth Opportunity Center Approval for Research.....89

Appendix F: Evaluation Data Sheet.....91

Appendix G: Aggression Coding Form .....94

Appendix H: Aggression Coding Training Form .....97

Appendix H: Answer Sheet .....98

## List of Tables

Table 1: <i>Comparison of ASPD and Cleckley's Psychopathy Criteria:</i> (APA, 2000; p. 706; Cleckley, 1941,1976) .....	9
Table 2: <i>Factor Structure of PCL-R compared to Cleckley's Criteria:</i> Hare (1991).....	13
Table 3: <i>Factor Solutions of Psychopathy:</i> Harpur, Hare, & Hatskin (1989), Cooke & Michie (2001); Hare (2003) .....	16
Table 4: <i>Means and Standard Deviations for Secondary Aggression Coding Criteria</i> .....	46
Table 5: <i>History of Mental Health Treatment: Group Differences</i> .....	49
Table 6: <i>Analysis of Co-Variance for Psychopathic Traits by Aggression Type</i> .....	51
Table 7: <i>Pairwise Comparisons and Effect Sizes of Psychopathic Traits by</i> <i>Aggression Group</i> .....	52
Table 8: <i>Group Differences for Age of First Arrest: Means and Standard Deviations</i> .....	54
Table 9: <i>Group Differences for Number of Legal Offenses: Means and</i> <i>Standard Deviations</i> .....	56
Table 10: <i>Type of Legal Offense: Means and Standard Deviations of Psychopathic Traits</i> <i>by Aggression Group</i> .....	57

List of Figures

Figure 1: *Group Differences for Age of First Arrest* ..... 55

## Abstract

Over the past decade, the profusion of literature examining the downward extension of psychopathy to juvenile populations has been met with much debate and controversy. The focus remains on the accuracy of assessment and the negative effects from the premature application of labeling a juvenile a *psychopath*. The current study investigated the relationship between psychopathy and aggression by exploring the relationship between types of aggression (instrumental and reactive) and psychopathic traits in juvenile offenders. This study examined archived file information for male and female ( $N = 134$ ) juvenile offenders (ages 13-17) referred for diagnostic and psychological evaluation services by the department of juvenile probation. A mixed gender sample was utilized to explore gender differences in the manifestation of psychopathy and aggression. Based on Cornell et al.'s (1996) aggression coding system, this study identified three groups: (a) instrumental offenders (IO), (b) reactive offenders (RO) and (c) combined offenders (CO; both instrumental and reactive aggression). These groups were compared on psychopathic traits utilizing the Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A; Butcher et al., 1992) scale 4, *Psychopathic deviate (Pd)* as a measure of psychopathic traits. Consistent with previous research on adult populations, results support the predictive utility of instrumental aggression in assessing psychopathic traits in juvenile offenders. Gender differences revealed that female offenders demonstrate higher rates of psychopathic traits regardless of aggression group.

*Keywords:* instrumental aggression, reactive aggression, psychopathy, juveniles

Juvenile Psychopathy: Instrumental versus Reactive Aggression in Male and Female  
Juvenile Offenders

*We believe strongly...that the term psychopathy should not be used in a damaging way, but rather that the concept be used in a constructive manner to understand better the various types of youth as well as to chart ways to help youth lead more prosocial, productive, and meaningful lives.*

—Salekin & Lynam (2010, p. 8)

## Chapter 1

### Statement of the Problem

Psychopaths are considered at the highest risk for violence (Cornell et al., 1996; Edens, Skeem, Cruise, & Cauffman, 2001; Falkenbach, 2004; Falkenbach, Poythress, & Heide, 2003; Flight & Forth, 2007; Fontaine, 2007; Hare, 1999; Patrick & Zempolich, 1998). This relationship has been well documented in the literature with a primary focus on the association between the construct of psychopathy and increased rates of aggression (e.g., Cornell et al., 1996; Falkenbach, 2004; Falkenbach et al., 2003; Hart, Watt, & Vincent, 2002; Patrick & Zempolich, 1998; Porter & Woodworth, 2006).

Previous research has identified types of aggression (*instrumental* and *reactive*) as useful determinants in assessing psychopathy (Patrick & Zempolich, 1998; Porter & Woodworth, 2006). There is a trend toward individuals scoring high on psychopathy and demonstrating more instances of instrumental aggression (Cornell et al., 1996). Ultimately, research suggests that psychopaths are more likely to display violent acts that are *instrumental* in nature (Falkenbach, 2004, Falkenbach et al., 2003; Fontaine, 2007; Levenson, 1992; Patrick & Zempolich, 1998). However, the majority of this research remains focused on adult male clinical and forensic

populations (Cornell et al., 1996; Horin & Carlton, 2001).

Over the past decade, the downward extension of psychopathy to juvenile populations has emerged as a dominant focus within the field of forensic psychology (e.g., Caldwell, Skeem, Salekin, & Van Rybrook, 2006; Dadds, Fraser, Frost, & Hawes, 2005; Edens et al., 2001; Frick, 2002; Gretton, Hare, & Catchpole, 2004; Hart, Watt, & Vincent, 2002; Loeber, Burke, & Pardini, 2009; Patrick, 2010; Petrila & Skeem, 2003; Seagrave & Grisso, 2002; Skeem & Petrila, 2004). With psychopathy as one of the most reliable predictors of recidivism among criminal offenders (Hare, 1996/2007), a goal of the research is to identify pathways to psychopathy during childhood and adolescence and identify tomorrow's psychopathic adults (Gretton et al., 2004; Seagrave & Grisso, 2002). Despite the ever-increasing literature on psychopathy in children and adolescents, research on juvenile populations remains controversial.

A major aspect of the debate involves attaching the label *psychopath* to a juvenile (Murrie et al., 2007) and the potential negative effects of this premature application may have in the forensic evaluation of juvenile offenders (Forth, Kossen, & Hare, 2003; Frick, 2002; Murrie, Boccaccini, McCoy, & Cornell, 2007; Rockett, Murrie, & Boccaccini, 2007; Seagrave & Grisso, 2002). First, questions remain about the utility of psychopathy specific assessments, and whether or not the measures identify a subgroup of adolescents whose antisocial behaviors will persist or continue throughout the lifespan (Edens et al., 2001). Second, there are potential implications for psychopathy assessments to aid in sentencing for juvenile offenders (i.e., length, security level, and treatment) and/or weigh on the transfer to adult court system (Edens et al., 2001). The utilization of psychopathy specific measures for juveniles generates presumptions associated with violent offenders such as Jeffery Dahmer and Ted Bundy. This classification has serious and significant ramifications for juveniles, particularly if inaccurate.

Hart et al. (2002) draw attention to another issue and highlight the obstacles toward identifying psychopathy in the adolescent stage of development. The accuracy of assessing juvenile psychopathy presents the daunting task of deciphering normal adolescent behavior from the latent characteristics of psychopathy (Edens et al., 2001; Farrington, 2005; Forth et al., 2003; Seagrave & Grisso, 2002). According to Erik Erikson's (1982) psychosocial stages of development, adolescence is the period of *identity vs. role confusion*. This phase of the life cycle centers on one's experimentation and exploration in the struggle for personal and sexual identity (Erikson, 1982). In this realm, Seagrave and Grisso addressed concerns that the construct may be overrepresented in youth. The idea that many juveniles would meet the symptomatic definition of psychopathy even though they were not truly psychopathic stems from the significant developmental change that occurs during this stage of development (Edens et al., 2001; Seagrave & Grisso, 2002).

Hart et al. (2002) also draw attention to the construct validity and stability of child and adolescent psychopathy with an analogy to an impressionist painting. They indicate that the psychopathy construct in juvenile populations may seem obvious from a distance, but "the closer you get, the messier it looks" (Salekin & Lynam, 2010, p. 241). Therefore, not only is it important to consider an individual's chronological age, it is critical to consider one's developmental age. With this in mind, developmental psychopathology extends a word of caution that the manifestation of psychopathy may not be the same across the lifespan (Farrington, 2005; Hart et al., 2002).

Despite these controversies, the downward extension of psychopathy has been justified in the literature, and supports the notion that psychopathic tendencies are not only present in adolescence, but also that adolescents manifest psychopathy in much the same way as adults

(Edens et al., 200; Forth et al., 2003; Salekin & Frick, 2005). Research shows that psychopathic adults typically exhibit significant antisocial behavior during childhood (Seagrave & Grisso, 2002). The literature also suggests that psychopathic traits are fairly stable across adolescence and into adulthood (Frick, Kimonis, Dandreaux, & Farell, 2003; Lynam, Loeber, & Stouthamer Loeber, 2008; Lynam, 1997; Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007).

### **Stakeholders**

There is consensus in the literature that the examination of psychopathic traits in juveniles will provide valuable information for crime prevention, early intervention, and the development of effective treatment for budding psychopaths (Frick, 2002; Salekin & Frick, 2005; Seagrave & Grisso, 2002; Skeem & Petrilla, 2004; Vincent & Hart, 2002). According to Lynam et al., (2008), several studies have shown that juvenile psychopathy provides predictive utility beyond relevant constructs, including previous offending, aggression, conduct problems, impulsivity, and attention problems. Research suggests that adolescents with high levels of psychopathic traits may be amenable to treatment if placed in a treatment program specifically designed to minimize or prevent further development of psychopathy and antisocial behavior (Caldwell et al., 2006; Vitacco, Salekin, & Rogers, 2010). According to Caldwell, et al., (2006 as cited in Vitacco et al., 2010), “treatment is actually cost-effective when compared with the long-term effects of continued violence and incarceration” (p. 389). A more precise approach to assessing psychopathic traits in juvenile populations will provide predictive utility for the identification of violent offenders, while increasing the construct validity of juvenile psychopathy.

The present research not only extends the current understanding of psychopathy and aggression in adult males to a juvenile sample, but also offers multi-disciplinary benefits for the



future of juvenile justice and forensic psychology. The potential benefits include assisting mental health professionals and the juvenile justice system target youth on the path toward criminal careers, aids forensic evaluators in formulating appropriate treatment recommendations, and prevents unnecessary financial spending on court fees, continued residential placement, incarceration, and costs related to continued violence. Ultimately, early detection of psychopaths will provide safer communities, while providing psychological intervention toward remedial change (Seagrave & Grisso, 2002).

### **Concepts Defined**

A few conceptual definitions that are important to this review are offered to help differentiate the terms *psychopathy*, *psychopathic traits*, *psychopathic personality*, *antisocial behavior*, and *antisocial personality disorder*. Psychopathy is often referred to as a *construct* or syndrome comprised of extreme interpersonal, affective, and behavioral traits and behaviors (Salekin & Lynam, 2010). This constellation of symptoms constitutes the psychopathic personality, which, although similar, is different from antisocial personality disorder (see *Conceptualization of Psychopathy* section of this paper for distinction). Psychopathic traits or antisocial behaviors are sub-factors of psychopathy and refer to the individual traits/symptoms and behaviors that make up the construct of psychopathy (i.e. callousness, superficial charm, lack of empathy). The presence of psychopathic traits alone, do not constitute the psychopathic personality. For the purpose of this study, psychopathic traits will be used synonymously with the term antisocial behaviors.

### **Conceptual Framework**

The purpose of this study was to add to the body of research that investigates the downward extension of psychopathy to adolescent populations. In light of the questions and

controversies, it is important to determine if the findings of previous research with adult male populations is broadly generalizable to juvenile offender populations. A major goal of this study was to expand the previous research toward a better understanding of the relationship between aggression and psychopathy in juvenile offenders. This study was not geared toward the classification or labeling of juveniles as psychopaths, but rather aimed toward examining the downward extension of psychopathy and its applicability to juvenile populations utilizing the instrumental and reactive aggression dichotomy as indicators for future violence and predictors of antisocial behavior. In order to examine the interrelationship of these constructs in juvenile offenders, one must first understand the background of psychopathy and aggression, and their relationship to one another.

## **Chapter 2: Literature Review**

### **Conceptualization of Psychopathy**

Psychopathy is not characterized as a disorder according to the *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition – Text Revision (DSM-IV-TR*; American Psychological Association, 2000) or the more recent *DSM-5* (APA, 2013), and until the past few decades was considered compatible with a diagnosis of Antisocial Personality Disorder (ASPD). More specifically, psychopathy was often thought of as an extension of the ASPD diagnosis (Hare, Hart, & Harpur, 1991). In fact, the diagnostic labeling of antisocial behavior has historically included interchangeable terms such as psychopath, sociopath, and dissocial personality disorder (Falkenbach, 2004; Lykken, 1995; Rogers & Dion, 1991). However, researchers have attempted to understand the traits and behaviors that differentiate ASPD and constitute the construct that is defined as the psychopathic personality (see Table 1).

Similarly, both constructs refer to individuals who display narcissistic traits, impulsivity, and a lack of empathy toward others (Hare et al., 1991). According to the *DSM-IV-TR*, the essential feature of ASPD is “a pervasive pattern of disregard for and violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood” (APA, 2000, p. 701). For ASPD, there is no clear path toward the manifestation of these personality traits. Individuals with the diagnosis often share common risk factors during early childhood, such as low socioeconomic status, and are considered a heterogeneous group with regard to their etiology (APA, 2000), but demonstrate indistinguishable motivations for committing antisocial behavior. In contrast, psychopaths are a homogeneous group with specific motivations for antisocial behaviors. Psychopathy emphasizes affective and interpersonal characteristics that ASPD neglects. J. Blair, Mitchell, and K. Blair (2005) referred to this homogeneous feature as “a

Table 1:

*Comparison of ASPD and Cleckley’s Psychopathy Criteria:  
(APA, 2000; p. 706; Cleckley, 1941,1976)*

Diagnostic Criteria for 301.7 Antisocial Personality Disorder (ASPD)	Cleckley’s Psychopathy Criteria
<p>A. There is 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:</p> <ul style="list-style-type: none"> <li>(1) failure to conform to social norm with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest.</li> <li>(2) deceitfulness, as indicated</li> <li>(3) impulsivity or failure to plan ahead</li> <li>(4) irritability and aggressiveness, as indicated by repeated physical fights or assaults</li> <li>(5) reckless disregard for safety of self or others</li> <li>(6) consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations</li> <li>(7) lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another</li> </ul> <p>B. The individual is at least 18 years.</p> <p>C. There is evidence of Conduct Disorder (CD) with onset before age 15 years</p> <p>D. The occurrence of antisocial behavior is not exclusively during the course of Schizophrenia or a Manic Episode</p>	<ul style="list-style-type: none"> <li>1. Superficial charm and good intelligence</li> <li>2. Absence of delusions and other signs of irrational thinking</li> <li>3. Absence of nervousness or psychoneurotic manifestations</li> <li>4. Unreliability</li> <li>5. Untruthfulness and insincerity</li> <li>6. Lack of remorse or shame</li> <li>7. Inadequately motivated antisocial behavior</li> <li>8. Poor judgment and failure to learn by experience</li> <li>9. Pathological egocentricity and incapacity for love</li> <li>10. General poverty in affective reactions</li> <li>11. Specific loss of insight</li> <li>12. Unresponsiveness in general</li> <li>13. Fantastic and uninviting behavior with or without drink</li> <li>14. Suicide rarely carried out</li> <li>15. Sex life impersonal, trivial, and poorly integrated</li> <li>16. Failure to follow any life plan</li> </ul>

dysfunction in specific forms of emotional processing” (p. 12).

### **Historical Perspective**

The theoretical model for psychopathy consists of multiple components (emotional, interpersonal, behavioral), thus a factor analysis examines the diagnostic criteria and groups together those that correlate with each other to form a cluster of traits, or a factor, of the disorder (Blair et al., 2005). The following description incorporates the theoretical model and the factor structure as the two are intertwined within the construct of psychopathy. The goal is to provide a thorough description of the construct through the evolution of its theory and measurement.

### **Theory and Measurement**

The construct of psychopathy was introduced approximately 200 years ago by Pinel (1806/1962) who described psychopaths as persons with a deficit in affect and increased impulsivity (Bodholt, Richards, & Gacano, 2000). Explosive violence was at the center of this early conceptualization (Patrick, 2010). Kraepelin (1904/1915) coined the term *swindlers* to identify the glib and socially charming *con artists* who often engage in fraudulent behaviors and lack basic morals (Patrick, 2010). Another historical emphasis of psychopathy encompassed the deep-rooted vicious, callous, unemotional, and antisocial traits (Schneider, 1934 in Patrick, 2010). McCord and McCord (1964) emphasized these characteristics in their volume *The Psychopath: An essay on the Criminal Mind*. Similar to other theories, the McCord's acknowledged impairments in emotionality; however, they considered the absence of conscience and social inhibitions resulted in a rage, rather than a response to frustration or threat.

The modern conceptualization emerged from Hervey Cleckley (1941/1976) who described the psychopathy construct as an aggregate of interpersonal and affective traits including superficial charm, lack of remorse or guilt, and a deficit in affective response. In his

book *The Mask of Sanity* (1941/1976), Cleckley portrayed psychopathy as a “masked” pathology. He did not view psychopaths as brutally aggressive, predatory, or deliberately cruel. Rather, Cleckley viewed the harm conveyed to others as a product of the psychopath’s shallow nature (Patrick, 2010).

Based on Cleckley’s (1941/1976) theory, psychopathy became a diagnosable mental disorder characterized by constellation of behavioral and personality-based traits. Cleckley described psychopaths as people with deficits of conscience who act in ways unacceptable to society and show no concern for the consequences of their behavior (Lykken, 1995). The prototypical psychopath was defined by a clinical profile containing 16 characteristics (see Table 2) that identified an individual that was charismatic, intelligent, and charming, but also insincere, untruthful, and lacking remorse and shame (Edens et al., 2001). Psychopaths are prone to having impersonal sex lives, superficial relationships, and limited plans for the future. According to Lykken (1995), psychopaths exhibit “persistent antisocial behavior (that) cannot be understood in terms of mental or emotional disorder, neurotic motivations, or incompetent parenting” (p. 113).

**Two-factor model.** Harpur, Hare, and Hatskin (1989) proposed a two-factor model of psychopathy (Hare, 1991). *Factor 1* consists of the interpersonal and affective traits that are similar to Cleckley's (1941) criteria. These personality characteristics are often considered the core attributes of psychopathy. *Factor 2* comprises behavior-based character traits, such as chronically antisocial or socially deviant behavior, juvenile delinquency, impulsivity, and lack of realistic long-term goals. These traits are more closely associated with the *DSM-IV-TR* (APA, 2000) diagnosis for Antisocial Personality Disorder (ASPD; see table 2 for Hare’s factor solution). Based on this model, both factors are required to yield a comprehensive assessment of

psychopathy (Hare, 1991; J. Blair et al., 2005).

Previous research suggests that there may be subtypes of psychopathy (Falkenbach et al., 2003; Karpman, 1948). The first distinct subtype known as the *primary psychopath* is characterized by a lack of emotional responses, and correlated to Factor 1 of Hare's (1991) model. The second subtype, or *secondary psychopath*, is characterized by more impulsive, irresponsible, reactive, and antisocial traits loading on Factor 2 of Hare's model (Karpman 1948; Falkenbach et al., 2003). Research further suggests that the secondary psychopath may experience other emotions such as guilt and love (Hare, 1991; Karpman, 1948; Lykken, 1995).

Table 2:

*Factor Structure of PCL-R compared to Cleckley's (1941) criteria; Hare (1991)*

Cleckley's Psychopathy Criteria	PCL-R Items
<ol style="list-style-type: none"> <li>1. Superficial charm and good intelligence</li> <li>2. Absence of delusions and other signs of irrational thinking</li> <li>3. Absence of nervousness or psychoneurotic manifestations</li> <li>4. Unreliability</li> <li>5. Untruthfulness and insincerity</li> <li>6. Lack of remorse or shame</li> <li>7. Inadequately motivated antisocial behavior</li> <li>8. Poor judgment and failure to learn by experience</li> <li>9. Pathological egocentricity and incapacity for love</li> <li>10. General poverty in affective reactions</li> <li>11. Specific loss of insight</li> <li>12. Unresponsiveness in general</li> <li>13. Fantastic and uninviting behavior with or without drink</li> <li>14. Suicide rarely carried out</li> <li>15. Sex life impersonal, trivial, and poorly integrated</li> <li>16. Failure to follow any life plan</li> </ol>	<p><b><u>Factor 1 (interpersonal/affective)</u></b></p> <ol style="list-style-type: none"> <li>1. Glibness/superficial charm</li> <li>2. Grandiose sense of self-worth</li> <li>4. Pathological lying</li> <li>5. Conning/manipulative</li> <li>6. Lack of remorse/guilt</li> <li>7. Shallow affect</li> <li>8. Callous/lack of empathy</li> <li>16. Failure to accept responsibility for own actions</li> </ol> <p><b><u>Factor 2 (Behavioral/Lifestyle)</u></b></p> <ol style="list-style-type: none"> <li>3. Need for stimulation/proneness to boredom</li> <li>9. Parasitic lifestyle</li> <li>10. Poor behavioral controls</li> <li>12. Early behavioral problems</li> <li>13. Lack of realistic, long-term plans</li> <li>14. Impulsivity</li> <li>15. Irresponsibility</li> <li>18. Juvenile delinquency</li> <li>19. Revocation of conditional release</li> </ol> <p><b><u>Other Items**</u></b></p> <ol style="list-style-type: none"> <li>11. Promiscuous sexual behavior</li> <li>17. Many short-term marital relationships</li> <li>20. Criminal versatility</li> </ol>

*Note.* Items that load on both Factor 1 and Factor 2; Bolded items represent differences in item loading when compared to Hare (1991)



**PCL-R.** The gold standard for the measurement of psychopathy in adult male forensic populations is the Psychopathy Checklist-Revised (PCL-R; Hare, 1991). Hare (1991) developed the PCL-R and its predecessor the Psychopathy Checklist (PCL) to assess psychopathy in terms of Cleckley's (1941) original criteria. As shown in Table 2, the PCL-R possesses an internal structure comprised of Hare's two-factor model (Hare et al., 1991). The measure has been shown to be reliable and valid (Hare, 1991, 2003; Hare et al., 1991). *Factor 1*, the personality-based items or primary psychopathy (Lilienfeld & Andrews, 1996), describes affective and interpersonal traits, and includes items such as; superficial charm, grandiosity, manipulation, callousness, lack of empathy and guilt, and lack of respect or care for others. *Factor 2*, or secondary psychopathy, of the PCL-R is composed of behavior-based items such as chronically antisocial or socially deviant behavior, juvenile delinquency, impulsivity, and criminal versatility (Hare 1991, 2003; Hare et al., 1991; Lilienfeld & Andrews, 1996).

Psychopathy is traditionally defined as a PCL-R score  $\geq 30$  (Hare, 1991). In general, for someone to score high enough to be diagnosed with psychopathy they must demonstrate both the behavioral and personality features of psychopathy (Harpur et al, 1989). The basis of these findings is on adult male forensic and correctional populations.

**Three-factor model.** Although the factor solution set forth by Hare (1991) is historically the most widely accepted, other researchers have looked at different factor structures for psychopathy (Cooke & Michie, 2001; Hare, 2003; Salekin, Rogers, & Sewell, 1997). Cooke and Michie proposed a three-factor solution consisting of 13 items (see Table 3). Factor 1 identifies Arrogance and Deceitful Interpersonal style (ADI), Factor 2, focuses on the Deficient Affective Experience (DAE), and Factor 3, focuses on Impulsive and Irresponsible Behavioral Lifestyle (IIB). In this solution, six testlets, or item pairs, load on three correlated second-order factors,

and in turn load on a subordinate third-order or DAE, are based on the eight (Factor 1) items from Hare's PCL-R factor solution, which are considered fundamental to the construct of psychopathy (Forth et al., 2003). Four of these items loaded on the ADI factor, and the other four loaded on DAE. Lastly, five of the same nine items from Hare's two-factor model (Factor 2) have been reported to load on the IIB factor (Cooke & Michie, 2001; Forth et al., 2003). In essence, Cooke and Michie separated the traditional interpersonal/affective (Factor 1) items two components (ADI & DAE), and in order for an individual to meet criteria for diagnosis must possess traits from all three factors.

**Four-factor model.** A major criticism of Cooke and Michie's (2001) three-factor solution is the exclusion of the original PCL items reflecting antisocial traits, traditionally thought to be core features of the psychopathic personality (Farrington, 2005; Hare, 2003). Hare (2003) proposed a four-factor model of which the first three factors are identical to Cooke and Michie's three-factor solution (Forth et al., 2003). The fourth factor is comprised of five items excluded by Cooke and Michie, and assesses antisocial behavior (Forth et al., 2003). The identified factors and their items are shown in Table 3.

Table 3:

*Factor Solutions of Psychopathy: Harpur, Hare, & Hatskin (1989); Cooke & Michie (2001); Hare (2003)*

Two-Factor Solution Harpur, Hare, & Hatskin (1989)	Three-Factor Solution Cooke & Michie (2001)	Four-Factor Solution Hare, (2003)
<p><b><u>Factor 1 (Interpersonal/Affective)</u></b>                      1. Glibness/superficial charm                      2. Grandiose sense of self-worth                      4. Pathological lying                      5. Conning/manipulative                      6. Lack of remorse/guilt                      7. Shallow affect                      8. Callous/lack of empathy                      16. Failure to accept responsibility for actions</p> <p><b><u>Factor 2 (Behavioral/Lifestyle)</u></b>                      3. Need for stimulation/proneness to boredom                      9. Parasitic lifestyle                      10. Poor behavioral controls                      12. Early behavioral problems                      13. Lack of realistic, long-term plans                      14. Impulsivity                      15. Irresponsibility                      18. Juvenile delinquency                      19. Revocation of conditional release</p> <p><b><u>Other Items</u></b>                      11. Promiscuous sexual behavior                      17. Many short-term marital relationships                      20. Criminal versatility</p>	<p><b><u>Factor 1 (Arrogance &amp; Deceitful Interpersonal Style)</u></b>                      1. Glibness/superficial charm                      2. Grandiose sense of self-worth                      4. Pathological lying                      5. Conning/manipulative.</p> <p><b><u>Factor 2 (Deficient Affective Experience)</u></b>                      6. Lack of remorse/guilt                      7. Shallow affect                      8. Callous/lack of empathy                      16. Failure to accept responsibility for actions</p> <p><b><u>Factor 3 (Impulsive &amp; Irresponsible Behavioral Style)</u></b>                      3. Need for stimulation/proneness to boredom                      9. Parasitic lifestyle                      13. Lack of realistic, long term goals                      14. Impulsivity                      15. Irresponsibility</p> <p><b><u>Items not loading on any of the factors</u></b>                      10. Poor behavioral controls                      11. Promiscuous sexual behavior                      12. Early behavioral problems                      17. Many short-term marital relationships                      18. Juvenile delinquency                      19. Revocation of conditional release                      20. Criminal versatility</p>	<p><b><u>Factor 1 (Interpersonal)</u></b>                      1. Glibness/superficial charm                      2. Grandiose sense of self-worth                      4. Pathological lying                      5. Conning/manipulative</p> <p><b><u>Factor 2 (Affective)</u></b>                      6. Lack of remorse/guilt                      7. Shallow affect                      8. Callous/lack of empathy                      16. Failure to accept responsibility for actions</p> <p><b><u>Factor 3 (Lifestyle)</u></b>                      3. Need for stimulation/proneness to boredom                      9. Parasitic lifestyle                      13. Lack of realistic, long term goals                      14. Impulsivity                      15. Irresponsibility</p> <p><b><u>Factor 4 (Antisocial)</u></b>                      10. Poor behavioral controls                      12. Early behavioral problems                      18. Juvenile delinquency                      19. Revocation of conditional release                      20. Criminal versatility</p> <p><b><u>Other Items</u></b>                      11. Promiscuous sexual behavior                      17. Many short-term marital relationships</p>

## The Downward Extension

### Theory and Measurement with Juvenile Populations

The predictive validity of the two-factor model of the PCL-R and its application to adolescent populations remains in question (Edens et al., 2001). Research suggests that a number of items on the PCL-R are inappropriate for juvenile populations (Edens et al., 2001). Initially excluded from juvenile assessments were the *parasitic lifestyle* and *many short-term marital relationships* items. These items were viewed as developmentally inappropriate due to adolescents presumed lack of experiences upon which to accurately score these items (Edens et al., 2001). Other research eliminated *revocation of conditional release* and *criminal versatility* items for similar reasons (Edens et al., 2001). Additionally, PCL-R items deemed inappropriate for adolescents are from the Socially Deviant Lifestyle (Factor 2; *need for stimulation/proneness to boredom, impulsivity, and poor behavior controls*) factor. Also excluded as definitive markers of psychopathy for adolescence are items such as *lack of goals* and *irresponsibility* (Edens et al., 2001). Evidence suggests that these items may be stable from childhood to mid-adolescence, and increase from mid-late adolescence into emerging adulthood making it problematic to distinguish normal adolescent behavior from psychopathic tendencies (Edens et al., 2001).

**PCL: YV.** Since the establishment of the PCL-R (Hare, 1991) as an empirically supported instrument for the prediction of future violence and antisocial behavior in adults (Edens et al., 2001; Hare, 1998; Vaughn & Howard, 2005a, Vincent, 2006), there has been a significant effort to also provide developmentally appropriate assessment and measurement of psychopathy in children and adolescents (Edens et al., 2001). The Psychopathy Checklist: Youth Version (PCL: YV, Forth et al., 2003) is a downward extension and adaptation of the PCL-R (Hare, 1991, 2003). Like the PCL-R, the PCL: YV is a 20-item rating scale and utilizes a

semi-structured interview and collateral information to measure interpersonal, affective, antisocial, and behavioral dimensions of psychopathy (Forth et al., 2003). The expert-rater format emphasizes the multi-domain and multisource information necessary for adequate assessment. Results generate a dimensional score that represents the number and severity of psychopathic traits exhibited by youth (Forth et al., 2003). In contrast to the PCL-R, the PCL: YV does not warrant a cut off score for the clinical diagnosis of psychopathy. The absence of specific cut-off scores may prevent the premature labeling of psychopaths (Hare et al., 2003).

Factor analytic studies have shown that both the three and four factor solutions provide a good fit with adolescent populations and the PCL: YV (Corrado et al., 1996; Farrington, 2005; Forth et al., 2003; Neumann, Kosson, Forth, & Hare, 2006). The four-factor solution appears to have incremental validity in predicting correlates to the psychopathy construct (Forth et al., 2003). Research suggests that the three-factor solution may provide a more clear representation of the construct of psychopathy in juvenile populations, but may be less informative regarding negative outcomes associated with psychopathy, including violence, more specifically antisociality (Forth et al., 2003; Hare & Neumann, 2010; Salekin et al., 2005).

Corrado, Vincent, Hart, and Cohen (2004) reported that two-factor PCL: YV scores were predictive of general and violent recidivism among adolescent boys. The youth high in psychopathic traits committed violent offenses five months sooner than those exhibiting fewer traits. Results also suggested that the predicative power for general recidivism was accounted for by the behavioral traits (Factor 3, Factor 4), while the prediction of violent recidivism was suggestive of the underlying personality disorder.

Similarly, Vincent and Kinscherff (2008) explored the predictive validity of the PCL: YV and factor solutions. However, this study focused on female adolescent offenders. Results

suggested that while the three and four factor models of the PCL: YV were predictive of recidivism for males, they were not predictive for females. In fact, a statistical trend was reported that females scoring high on the PCL: YV had a decreased likelihood of offending, while similar to Corrado et al. (2004), boys were primarily accounted for by the lifestyle and antisocial factors (Factor 3, Factor 4).

**Brief measures.** The complex and labor-intensive PCL: YV led to the development of several brief instruments designed to quantify psychopathic traits in juvenile offenders (PCL: YV, Forth, et al., 2003b; APSD; Frick & Hare, 2001; Hare & Hervé, 1999; P-SCAN RV2, YLS/CMI; PCL-SV, Hart et al., 1995). These measures incorporate self-report, informant rating, and expert rating methodologies (Salekin & Frick, 2005; Vincent, 2006).

Frick and Hare (2001) adapted the Antisocial Process Screening Device (APSD) from Hare's PCL-R as a brief measure of psychopathy traits in juveniles (Forth et al., 2003; Murrie & Cornell, 2002). The APSD is a 20-item rating scale designed to screen for the precursors of psychopathy in children (6-13 years). The measure was designed for completion by parents and/or teachers; however, previous research has allowed members of a youth's treatment team (i.e., psychologist, caseworker) to complete the ratings for juveniles who are wards of the state (Murrie & Cornell, 2002). Scores on the APSD are divided into three categories: callous and unemotional traits, narcissism, and impulsivity (Forth et al., 2003; Frick & Hare, 2002).

The Hare Psychopathy Checklist: Screening Version (PCL: SV; Hart et al., 1995) is a 12-item brief assessment designed for use with forensic populations. The PCL: SV is notably inexpensive and a relatively quick screening tool to assess psychopathic traits in forensic and civil psychiatric patients. Additionally, the PCL: SV has been used as a stand alone research tool as a risk factor indicator for institutional and post-release aggression and violence in forensic and

civil psychiatric patients (Forth et al, 2003). It is highly recommended that individuals who score high on the PCL: SV should be administered the PCL-R or PCL: YV to obtain a more complete and thorough assessment of psychopathy (Forth et al., 2003).

### **Challenges of Psychopathy Specific Measures**

Murrie and Cornell (2002) compared brief psychopathy screening devices to a full-scale assessment of psychopathy among juvenile offenders. The research explored the correspondence of the APSD and a Psychopathy Content scale on the Millon Adolescent Clinical Inventory (MACI; Millon, 1993; Murrie & Cornell, 2002) to the PCL: YV. With a sample of 113 male juvenile offenders, the results indicated that neither of the brief instruments were found to be successful screening measures to identify youths who scored high on the PCL: YV. However, the study did provide evidence to support the construct validity of juvenile psychopathy.

Although there are brief measures to assess the construct validity of juvenile psychopathy, these measures have limitations. For instance, the PCL: YV encompasses the challenge of overcoming reporter bias, particularly when used in forensic settings (Kotler & McMahon, 2010). While a majority of the PCL: YV is based on a record review of previous history, not all juveniles will have an extensive history of documented behavior (Kotler & McMahon, 2010). This adds to the difficulty utilizing this measure with community samples or first offenders, which significantly decreases the measure's generalizability. Another criticism involves the downward extension of the PCL: YV from its predecessor the PCL-R. As previously mentioned, efforts were made to modify the PCL-R items to establish a more developmentally appropriate measure; however, the applicability of the remaining items continues to be a concern with younger populations (Kotler & McMahon, 2010).

A major issue with psychopathy specific measures examining child and adolescent populations lies in the multiple factor structures. Several measures identify the utility of multiple possible factor structures for different samples, and even some within the same data sample (Kotler & McMahon, 2010). Though the factor structures provide clinical utility for legal and mental health professionals to understand the psychopathic personality, the inconsistencies within assessment measures significantly impact the reliability and validity of their use (Salekin et al., 2006, Kotler & McMahon, 2010). Lastly, it is not clear that the current measures are generalizable to all youth. Research findings suggest the malleability of the factor models. With that in mind, factor models may not be consistent across gender and ethnic minorities (Kotler & McMahon, 2010). These challenges impede the ability to establish and implement appropriate treatment interventions for psychopathic youth.

Overall, the psychopathy specific measures for youth highlight the importance of exploring the construct in juvenile populations, while shedding light on the complex process of targeting youth at risk for criminal careers. Research provides significant evidence toward the existence of psychopathic traits in juveniles, and the stability of antisocial traits from adolescence to adulthood (i.e., Frick, Kimonis et al., 2003; Lynam, 1997; Lynam et al., 2008; Lynam et al., 2007; Salekin & Lynam, 2010). However, the utility of psychopathy specific measures to assess juveniles is complex and unreliable.

As mentioned, previous research is largely based on the PCL: YV, which, as described, includes items consistent with the theoretical model that psychopathy, like other personality disorders, is characterized by extreme representations of common behavioral and personality based traits (Edens et al., 2001; Frick, 2002; Gretton et al., 2004; Hart et al., 2002; Petrila & Skeem, 2003; Seagrave & Grisso, 2002; Vaughn & Howard, 2005b). This approach requires



lengthy interviews and extensive file review—a labor intensive and time-consuming method. In addition, utilizing psychopathy-specific measures requires specialized training in administrative procedures and licensure according to regulatory standards for professional practice in one’s jurisdiction (Forth et al., 2003).

Although not listed as a requirement to meet technical standards for administration, evaluators are recommended to attend a workshop in order to practice using the PCL: YV (Forth et al., 2003). The Darkstone Program (more specifically, *The Hare PCL-R Training Program*) offers basic and advanced workshops, and optional post-workshops ([www.hare.org](http://www.hare.org)). Trainings of this nature are sporadic and predominately held in Europe and other foreign countries, which can be additionally costly and time consuming. According to Forth et al. (2003), clinicians “should be familiar with relevant research literature and be prepared to have their assessments subjected to scrutiny and examination” (p. 15).

### **MMPI-A**

Although typically the primary approach to research on the topic, psychopathy-specific measures (i.e., PCL-R, PCL: YV) are one of two approaches of assessing psychopathy among adolescents (Vaughn & Howard, 2005b). The administration of existing personality inventories lends to the second approach to assessing psychopathic traits in juveniles. The Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A, Butcher et al., 1992) is a downward extension of the MMPI (Hathaway & McKinley, 1943), and its successor, the MMPI-2 (Butcher et al., 2001). These are the most widely used instruments to detect psychopathology in forensic assessments (Borum & Grisso, 2005; Melton, Petrila, Poythress, & Stobogin, 1997; Ryba, Cooper, & Zapf, 2003). With this in mind, it is no surprise that the MMPI-A is the most widely researched and utilized objective personality measure in evaluating

children's psychological functioning in forensic evaluations than any other objective test (Archer, Buffington-Vollum, Stredny, & Handel, 2006).

The MMPI-A is a self-report personality inventory that was developed for adolescents between the ages of 14 and 18 with a sixth grade reading level (Butcher et al., 1992). It is comprised of 478 true/false items, the majority of which were derived from the original MMPI (Butcher et al., 1992). It is possible that the technician administering the MMPI-A is not someone who routinely administers or scores the inventory. Butler et al. specify that whomever is responsible supervise the technician and provide important ethical implications for conditions under which it is administered and scored, the privacy of the item responses, test protocols, and final reports. The MMPI-A administration can take approximately 45–120 minutes. The MMPI-A consists of validity scales ( $F_1$ , L, and K), validity indicators (VRIN, TRIN, and  $F_2$ ), adolescent-specific Content scales, and Supplementary scales. Adjustments were made to account for the differences between adolescent and adult populations. For example, new validity scales, content scales, and supplementary scales were created to evaluate issues specific to this group, such as *Immaturity*, *Conduct Problems*, and *School Problems* (Butcher et al., 1992). The normative sample for the MMPI-A ( $n = 1,620$ ) was designed to ensure agreement of the samples demographics with the 1980 U.S. census, and is considered representative of the U.S. population in terms of ethnicity and socioeconomic status (Butcher et al., 1992).

Hicks, Rogers, and Cashel (2000) evaluated the usefulness of the PCL-SV and the MMPI-A for predicting violent, non-violent, self-injuries, and total infractions in incarcerated male adolescent offenders. The MMPI-A proved more effective than the PCL-SV in predicting total infractions during incarceration. Previous research assessing the correlations between the MMPI/MMPI-A and the PCL-R or PCL: YV revealed moderate correlations with theoretically

related MMPI scale 4 Psychopathic Deviate (*Pd*), and scale 9, Hypomania (*Hy*; Brandt, Kennedy, Patrick, & Curtin, 1997; Hume et al., 1996). More specifically, these studies compared psychopaths and non-psychopath groups. In Brandt et al. and Hume et al., psychopathic groups were made up of chronic offenders. Sample sizes ranged from low to high ( $n = 95$ ,  $n = 130$ ). No significant differences were found between measures.

Despite only moderate support of the MMPI-A as a useful tool assessing psychopathy in juveniles, research exploring the forensic use of clinical assessment instruments identifies the MMPI-2 and/or MMPI-A as one of the most widely used self-report measures in forensic evaluations (Archer et al., 2006; Borum & Grisso, 1995). Viljeon, McLaughlon, and Vincent (2012) surveyed 215 psychologists involved in violence risk and psychopathy evaluations for both juvenile and adult populations. Results indicated that 66% of psychologists used the MMPI-2 or the MMPI-A compared to 26% who reported using the PCL-R or the PCL: YV (Archer, 2006). Borum and Grisso's (1995) survey of highly experienced forensic psychologists and psychiatrists reported 94% use the MMPI-2 or MMPI-A for criminal responsibility evaluations.

Research supports the utility of traditional assessments, particularly the MMPI self-report measures, by clinical and forensic psychologists alike. With research to support its reliability and validity, the MMPI-A proves a useful tool in assessing juvenile offenders. Like most clinical and forensic assessments, the MMPI-A is not a stand-alone measure, but it is more commonly utilized in forensic settings. Also, when compared to the PCL: YV, the MMPI-A avoids the time-consuming administration, extensive training procedures for examiners, and complex methodology. More importantly, the MMPI-A provides clinical utility without the stigma attached to the psychopath label. Research is necessary to determine the validity of its

use as a screening tool to assess psychopathic traits in juvenile offenders; in fact, research highlights the need for additional studies of this nature (Vaughn & Howard, 2005b).

### **Violence and Aggression**

Patterns of aggressive behavior during early stages of social development are associated with negative outcomes such as criminality, later in life (Lancoletta & Vaughn, 1989). This understanding leads the trend among the literature to tailor the definition of aggression toward empirically supported research focused primarily on records of violent criminal offenses, such as murder, assault, and robbery (Patrick & Zempolich, 1998). The major concern with this limited focus is the failure to recognize the subtypes of aggressive behavior.

### **Theoretical Perspectives on Aggression**

Over the past century, psychologists have proposed theoretical conceptualizations for the presence and persistence of violence and aggression. Dollard et al. (1939) theorized that aggression was a consequence of frustration. This is referred to as the *Frustration-Aggression Hypothesis*. Several researchers have criticized the frustration-aggression hypothesis because of its sole focus on *reactive aggression*, which is aggression as a response to provocation or threat. Some researchers have posited that there are other types of aggressive behavior. Buss (1961), for example, explained that the concentration on reactive aggression in Dollard et al.'s theory fails to account for *instrumental aggression* (also referred to as proactive aggression in the literature), which is aimed at the attainment of some goal, such as money, sex, social status, or territory. Buss also disagreed with the core focus on "intent" to cause harm as a criteria for aggression.

Berkowitz (1989/1993) believed that frustration does not always precede aggression, but that aggression may also be the result of a perceived threat or provocation. In fact, Berkowitz

believed in the existence of categorical subtypes of aggression, particularly reactive and instrumental. While reactive aggression, as described, results in a reaction to provocation or threat, instrumental aggression incorporates the idea that aggression does not need to be preceded by frustration, but could be motivated by focus on an ultimate goal (Berkowitz, 1989, 1993; Miller & Lynam, 2006; Ramirez, 2009). These distinctions were based on Berkowitz's theory that violence can result from an emotional arousal (reactive) or not (instrumental).

Buss and Perry (1992) suggested that anger precipitates aggression as a driving force to an emotional response to provocation or threat. This research suggests that people are more likely to commit acts of aggression when anger is present. Bandura's (1973) *social learning theory* considered hostility an important precursor to aggressive behavior (Ramirez, 2009). This construct involves the feeling of resentment and ill will (Buss, 1961; Buss & Perry, 1992). Research suggests that these two components of aggression may be related to the construct of psychopathy (Cornell et al., 1996; McCord & McCord, 1964).

### **Instrumental and Reactive Aggression**

Aggression is a complex phenomenon. The term itself encompasses several types and classifications of behavior (i.e., physical, verbal, direct, indirect, and relational). Though clarification is necessary on some level, the goal here is not to provide a historical perspective on the multitude of aggression types or labels (see Ramirez, 2009 for clarification). While other theories of aggression exist, the current study focuses on aggression as defined by the instrumental and reactive dichotomy, which in and of itself presents confusion. Research suggests that although both types of aggression can coexist in the same individual, they are distinct phenomena (Polman et al., 2007, as cited in Koolen, Poorthuis, & van Aken, 2012). Authors have utilized the terms *instrumental/proactive* and *reactive/hostile* interchangeably. For

the purpose of the present study, only the terms *instrumental* and *reactive* are utilized and defined according to the following descriptions.

Cornell et al. (1996) theoretically and empirically supported the reactive versus instrumental aggression dichotomy. They defined *instrumental aggression* (IA) as acts that are typically planned and not primarily directed at harming another person. More specifically, IA is rooted in Bandura's (1976) social learning theory "in that aggressive behavior is regulated by learned reinforcement contingencies" (Scarpa, Haden, & Tanka, 2010, p. 489). For instance, if a person attacks someone to achieve the goal of stealing a wallet, the reason for the attack was not to injure the person, but to obtain the wallet, ultimately for the gain of money. These types of aggressive acts are not always committed with the absence of harmful intent, but are aimed at an ultimate goal despite any harm that may result as a consequence. Furthermore, instrumental acts are considered goal-directed, and involve prior planning or premeditation (Cornell et al., 1996, Falkenbach, 2004; Scarpa et al., 2010). Due to the lack of emotional arousal, IA is not typically in response to a provocation or threat (Card & Little, 2006; Cornell et al., 1996; Crick and Dodge, 1996; Dodge et al., 1997; Raine et al., 2006); however, in some cases IA can involve relatively little planning.

Instrumental aggression is initiated as a means to an end rather than as an act of self-defense (Card & Little, 2006; Cornell et al., 1996; Crick and Dodge, 1996; Dodge et al., 1997; Raine et al., 2006). Examples of IA are: (a) verbally abusing or physically hurting someone to impress your friends; and (b) in a basketball game, punching or hurting someone to gain control of the ball. An individual engages in acts of IA to obtain a readily apparent goal such as power, money, sexual gratification, or some other objective beyond inflicting injury on the victim.

*Reactive aggression* (RA) has its roots in the frustration-aggression hypothesis (Dollard

et al., 1939). Unlike IA, RA is an angry reaction in response to a provocation or threat, and has been described as “hot-tempered” (Scarpa et al., 2010). The provocation may include insults, threats of aggression, or other acts that cause frustration or anger (Cornell et al., 1996; Scarpa et al., 2010). Typically an interpersonal conflict exists (i.e., argument, dispute prior to the aggression) between the aggressor and the victim; therefore, RA is often committed toward someone with whom a prior relationship exists (Cornell et al., 1996). Although RA is committed in response to feelings of anger, resentment, fear or other distress aroused by the victim’s actions, the intention to cause harm may or may not be present. For example, damaging a person’s personal belongings without directly injuring the particular person; or the act of slamming a door after fighting with someone.

Dodge et al. (1987) attempted to distinguish instrumental and reactive (hostile) aggression in children by conducting four studies that looked at teacher observations and peer relationships. The goal of this research was to consider the types of aggression used and to determine which group of boys (instrumental or reactive) was more or less rejected by their own peers. Results indicated that the reactive boys were viewed as significantly more bothersome than the boys in the non-aggressive and average groups. The instrumental boys were seen as leaders and having a good sense of humor. Although they were also seen as bothersome to children during work, the instrumental group was not as bothersome as the boys in the reactive group (Dodge et al., 1987).

### **Psychopathy and Aggression**

Cornell et al. (1996) suggested that one possible way to distinguish the types of aggressors is through the construct of psychopathy. Research has consistently found a relationship between aggression and psychopathy (Cornell et al., 1996; Harris, Rice, & Cormier,

1991; Miller & Lynam, 2003; Reidy, Zeichner, Miller, & Martinez, 2007). Cornell et al. proposed, “instead of attempting to predict ‘violence’ as a unitary mode of behavior, efforts should be directed at differentiating meaningful sub-types of violent individuals” (p. 783). Cornell and colleagues were the first to empirically consider the relationship between *types* of aggression and the construct of psychopathy. The research examined the role of aggression types (reactive and instrumental) among inmates in a medium-security state institution, and criminal defendants undergoing a pretrial forensic evaluation. Cornell et al. developed an *Aggression Coding Guide* to help determine instrumentality and reactivity utilizing different dimensions of aggression (planning, goal-directedness, provocation, arousal, and relationship to the victim; see Appendix F). Results of two studies provided evidence that those categorized as instrumental offenders exhibited more psychopathic traits than did the reactive or nonviolent offenders with a sample of adult male forensic patients.

In response to these findings, Falkenbach (2004) suggests that the two subtypes of psychopathy (primary and secondary, based on Factor 1 and Factor 2, Hare, 1991) display aggression differently. More specifically, the primary psychopath, who scores higher on Factor 1, is less likely to be emotionally reactive or personally involved when behaving aggressively. This suggests that the primary psychopath may be more likely to engage in instrumental aggression (Falkenbach, 2004; McCord & McCord, 1964), while the secondary psychopath, who is more reactive, impulsive, and might possess underlying emotionality, and is more likely to engage in reactive aggression (Falkenbach, 2004; McCord & McCord, 1964).

Falkenbach, Poythress, and Creevy (2008) modified Cornell et al.’s (1996) aggression coding system to classify participants as either reactive aggressors, or combined (instrumental) aggressors with a community sample ( $M$  age = 21.46,  $SD$  = 4.56). The rationale provided for



utilizing a combined (demonstrating both reactive and instrumental aggression) group rather than distinctly instrumental group, indicated that participants who reported IA also reported a history of RA. Furthermore, the study classified individuals as exhibiting primary or secondary psychopathic traits. Results indicated 51.2% of participants in the primary psychopathic traits group reported incidents of instrumental aggression, whereas only 18.8% of participants in the secondary psychopathic traits group reported incidents that were instrumental in nature. These results suggest a positive relationship between emotional/interpersonal (Factor 1) traits of psychopathy. This supports the relationship between psychopathy and instrumental aggression in adult forensic and community samples.

### **Psychopathy, Aggression, and Juveniles**

Several studies have examined the link between aggression and psychopathic traits in children and suggest that children and youth with psychopathic traits are more likely to be aggressive, and even more so are more likely to use instrumental (proactive) aggression (Forth & Book, 2010; Frick, Cornell, Barry, Bodin, & Dane, 2003; Frick & Forth 2007). In 2003, Stafford and Cornell studied 72 adolescents in an inpatient facility and found similar results to Cornell et al. (1996) study. Total PCL-R scores ( $r = .47$ ) were related to instrumental aggression using the two-factor model with inpatient adolescents.

Utilizing child specific psychopathy measures, Frick et al., (2003a) studied a community sample of 98 children (mean age = 12.43). The participants were measured on callous unemotional (CU) traits and conduct problems. After a one-year follow-up, the children previously identified with a combination of CU traits and conduct problems reported more incidents of aggression and delinquent behavior. More specifically, this group not only displayed higher aggression, but instrumental (termed proactive in the study) aggression.

In a mixed gender sample ( $n = 50$ ), Kimonis, Frick, Fazekas, and Loney (2006) provided further evidence to support the psychopathy aggression relationship. Results indicated a significant relationship between total psychopathy scores (utilizing the APSD) and proactive, reactive, and total aggression in both boys and girls (Forth & Book, 2010). Kimonis, Frik, Boris, et al., (2006) evaluated 49 preschool aged children. Their findings suggest CU traits significantly predicted overall aggression and instrumental aggression, but not reactive aggression (Brown et al., 1996, as cited in Forth & Book, 2010).

Although these findings correspond to previous research on adult populations that instrumental offenders are more likely to display psychopathic traits and vice versa, the research tends to focus on aggression in general rather than the specific types of aggression, and also on children ages 6-13 (Forth & Book, 2010). Forth and Book (2010) suggest that additional research must focus on what “factors enable the transformation of psychopathic characteristics into violent or aggressive behavior” (p. 274). The aggression coding system developed by Cornell et al. (1996) assesses types of aggression based on different dimensions (i.e., planning, goal-directedness, provocation, arousal, and relationship to the victim, see Appendix A). These dimensions offer considerable utility in this realm. Only three studies to date have utilized an aggression coding system similar to Cornell and colleagues (1996) to assess psychopathic traits in an adolescent population (Flight & Forth, 2007; Murrie, Cornell, Kaplan, McConville, & Levy-Elkon, 2004; Vitacco, Neumann, Caldwell, Leistico, & Van Rybroek, 2006).

Murrie et al. (2004) reported only moderate correlations between PCL: YV scores and instrumental motives for prior violence ( $r = .36$ ) and victim injury ( $r = .30$ ) in a sample of 131 incarcerated youth. Vitacco et al. (2006) examined the facture structure of Cornell et al.’s (1996) multi-dimensional coding system in a sample of 122 incarcerated male adolescents. Results

indicated instrumental aggression was most strongly related to goal directedness, low provocation, and limited relationship with the victim. This research also examined the fit between factor models of psychopathy, with the four-factor model resulting in an “excellent” fit, while the three-factor model was described as a “good” fit.

Flight and Forth (2007) used a modified aggression coding system similar to Cornell et al. (1996) to classify youthful offenders. Based on the assessment of 51 incarcerated male adolescents ( $M$  age = 17.10,  $SD$  = 0.88), findings suggested that total psychopathy scores, as well as Factor 1 and Factor 2 scores, were positively and significantly associated with both instrumental violence ( $r = .59$ ) and reactive violence ( $r = .55$ ).

**Gender differences.** While considerable research exists on the relationship between psychopathy and violence in males, particularly in criminal populations, there is limited research on these constructs and their relationship in female populations. The areas of aggression and psychopathy, separately, are understudied in females.

The literature does suggest that women convey anger and aggression in different ways (Buss & Perry, 1992). With this in mind, the major focus of study with child and adolescent populations has been on gender differences in physical, verbal, and indirect forms of aggression in school settings with regard to peer acceptance or rejection (Dodge & Coie, 1987; Dodge, Price, Bachorowski, & Newman, 1990; Dodge, Harnish, Lochman, Bates, & Petit, 1997; Salmivalli, & Kaukiainen, 2004; Salmivalli, Kaukiainen, & Lagerspetz, 2000). Verbal and physical aggression are considered *direct* forms of aggression that are aimed at a specific organism (Buss, 1961), and are *reactive* in nature. Indirect aggression may be played out in a way that the aggressor is not easily identifiable. Instrumental aggression is an *indirect* form of aggression.

Salmivalli, Kaukiainen, and Lagerspetz (2000) focused on aggression among ninth-grade adolescents. The 209 participants (89 boys and 120 girls; aged 15-16 years) were studied to assess gender differences in forms of aggression, and the relationship between aggression and peer acceptance or rejection (Salmivalli et al., 2000). Salmivalli and colleagues used the Direct Indirect Aggression Scales (DIAS) to measure the use of physical, verbal, and indirect aggression. Results showed that girls used significantly more indirect aggression than boys, while boys used more physical and verbal aggression.

Overall, the findings indicated that the two direct forms of aggression (verbal, physical) were associated with peer rejection, whereas indirect aggression had a positive correlation with peer acceptance. When gender was analyzed, the direct forms of aggression were highly correlated with the peer rejection of girls by both boys and girls. Girls were also found to display more acts of indirect rather than direct aggression and were more accepted by peers. For boys, verbal aggression was positively correlated with peer rejection, but the same is not true for physical aggression in boys. If a boy was physically aggressive he was less likely to be rejected by boys or girls (Salmivalli et al., 2000).

Salmivalli and Kaukiainen (2004) revisited this topic in an attempt to validate their finding that females displayed more indirect aggression than males. Again, they used both male and female participants (274 girls and 252 boys;  $n = 526$ ) ranging between ages 10-14 years, from 22 schools in two different towns in Finland. Results reflected that boys were more aggressive than girls; however, girls exhibited more indirect aggression than direct aggression (Salmivalli et al., 2004). This research indicates that females are found to use significantly more indirect aggression, displacing the aggressive response so that the aggression is taken out on an object rather than a person or target. Boys are found to use more verbal and physical aggression

(Salmivalli et al., 2000). It is the outward expression of aggressive emotion that differs across genders.

Psychopathy, and its relation to aggression, has been studied even less in the female population. The results of a study by Salekin et al. (1997) focused on developing a more accurate conceptualization of the construct of psychopathy in women. The researchers found a substantial difference in the structure of psychopathy for women than has traditionally been found for men. Psychopathy factors were found to have more overlapping characteristics than has been found in male samples. Several items were found to load on both factors for females including poor behavioral controls, lack of realistic goals, and impulsivity (Salekin et al., 1997). Since both poor behavioral controls and impulsivity may be related to aggression, it is likely that the relationship between aggression and psychopathy may be different in women than men.

Researchers have found that levels of psychopathy, as measured by the PCL-R, are substantially lower among female offenders than male offenders (Jackson, Rogers, Neuman, & Lambert, 2002). This finding is significant since most women do not meet the suggested cut-off score of  $\geq 30$ . Research not only indicates that women display lower levels of violent and aggressive behavior, but also that females express aggression differently (Salmivalli et al., 2000), which may help to explain why women score lower on the PCL-R. Since aggression is manifested differently in females, the characteristics of psychopathy may also be displayed differently. When exploring psychopathy and aggression in juvenile populations, these gender differences present another obstacle in need of further examination (Jackson et al., 2002; Vitale, Smith, Brinkley, & Newman, 2002).

**Criminality and juveniles.** As described, theoretical perspectives regarding the psychopathic personality typically include specific traits and characteristics linked to violent and

aggressive behaviors (Flight & Forth, 2007; Gretton, Hare, & Catchpole, 2004; Raine et al., 2006). When assessing aggression in psychopaths, research supports a general relationship, that psychopaths are more violent than non-psychopathic criminals. Research indicates that psychopaths display a higher degree of violence toward strangers, while non-psychopaths are more likely to victimize someone with whom they have had a prior relationship (Williamson et al., 1987). Other research indicates that psychopaths are more likely to use weapons than non-psychopaths (Patrick & Zempolich, 1998). Though typically examined within forensic samples, some research has explored the construct in community samples (Falkenbach et al., 2008).

There are differences among juvenile justice systems statewide for classifying juvenile offenses. Generally, crimes are categorized by *severity* based on the *type* of crime committed. Severity is described in terms of a *felony* or *misdemeanor*. This classification often determines the length of sentencing and outcome. With regard to type of crime, each state, and sometimes jurisdiction, has different ways of classifying juvenile crimes. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) document three categories for juvenile crime: violent crimes, property crimes, and drug related crimes (retrieved from [www.ojjdp.gov](http://www.ojjdp.gov), Nov. 2013). Violent crimes include acts that cause bodily, such as rape, assault, or homicide. Crimes against property are when juveniles use force or threat of force to destroy or obtain the property of another, while drug related crimes involve possession or intent to distribute illegal narcotics. The OJJDP does not specifically index *status offenses* such as truancy, runaway, or incorrigibility.

This study utilized the classification system according to the Indiana Department of Juvenile Justice: violent offenses, serious offenses, less serious offenses, and minor offenses. Similar to the OJJDP, violent offenses include incidents resulting in bodily injury and crimes that

are sexual in nature. Serious offenses include burglary, arson, serious drug related crimes, and crimes of sexual nature that do not involve rape or bodily injury. Less serious offenses include auto theft, vandalism, shoplifting, stolen property offenses, and other drug related incidents such as possession of marijuana. The minor offense category includes status offenses (Appendix B classifies the 49 crimes reported from the participants into these categories, sub-categories were added to provide further detail as to the types of crimes committed by offenders in each group).

### **Purpose of the Current Study**

The current study examined the downward extension of psychopathy and its applicability to juvenile populations utilizing Cornell et al.'s (1996) instrumental and reactive aggression dichotomy in relation to psychopathic traits. In order to consider the relationship between the aggression types and psychopathy, sample participants were classified according to type of aggression; groups (instrumental offenders, reactive offenders, and combined offenders) were compared on the Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A, Butler et al., 1992) scale 4, *Psychopathic Deviate (Pd)*, as a measure of psychopathic traits.

First, an aggression coding system modified from the original by Cornell et al. (1996) was used to determine reactivity and instrumentality of juvenile offenders. Next, offender groups were compared *Pd* scale scores (see Appendix C for a description of the *Pd*) as a measure of psychopathic traits. A mixed gender sample was used to explore gender differences in the manifestation of psychopathy and aggression in juvenile offenders.

There were three hypotheses for this study. First, it was hypothesized that similar trends found with adult offenders would be found in juvenile offenders. As mentioned, Cornell et al.'s (1996) theory posits that individuals scoring high on psychopathy demonstrate more instances of aggression that are instrumental in nature (Falkenbach et al., 2003). Therefore, it was expected

that once participants were placed in aggression groups, there would be differences in their level of psychopathic traits. Instrumental offenders (IO) were expected to have higher psychopathy scores than the reactive offenders (RO) and combined offenders (CO). Since gender differences were expected, sex (M, F) was tested as a covariate to determine the variance between groups. The second hypothesis examined the gender differences within and between groups; however, no specific outcomes were predicted.

In juveniles, research suggests that psychopathic traits are “associated with earlier onset of criminal activity, frequency, and versatility of crime, including violent and non-violent offenses” (Forth & Book, 2010, p. 263). This lends to the third hypothesis that a juvenile’s record (age of first arrest, number of charges, and type of charges) can predict type of aggression and psychopathy in juvenile offenders. Therefore it was predicted that participants in the IO group would have a younger age of first arrest, more charges, and more serious offense history than participants in the RO and CO groups.

**Research Questions:**

1. Is the relationship between aggression and psychopathy in adult populations applicable to juveniles?
2. What are the gender differences between juvenile offenders and psychopathic traits?
3. Can a juvenile’s delinquency record predict psychopathy in juvenile offenders?



### **Chapter 3: Method**

#### **Procedure**

This study strictly followed the American Psychological Association (APA) ethical guidelines and received approval from the Antioch University New England Institutional Review Board (IRB) prior to data collection (Appendix D). Permission to conduct this study was also obtained through the management team at the Youth Opportunity Center (YOC) in Muncie, IN (Appendix E). The Chief Executive Officer (CEO) of the YOC and senior administrative and clinical staff were present during a review of this study's purpose and intent. Based on information provided, this team approved access to archived paper files for data collection.

The YOC is a large residential treatment facility (166 beds) for children and adolescents. Youth at the YOC are placed by the court via court order through the Indiana Department of Child Services (DCS) and/or the Indiana Juvenile Probation Department (JPD) through their respective counties. Children and adolescents placed at the YOC typically display serious aggressive and disruptive behaviors toward others and are usually considered too unmanageable to be placed in a less restrictive environment. Accordingly, the majority of families involved have high levels of stress and dysfunction, which often includes poverty, drug addiction, legal problems, family violence, and mental illness.

Court ordered psychological assessment is a substantial part of the program as the clients are referred for various delinquency and/or issues of abuse and neglect. The diagnostic and evaluation services began in 2001 through the present and completed approximately 1750 assessment batteries, of which approximately 80% were for juveniles referred from the JPD. The evaluations completed as part of this service were comprehensive and extensive.

**Materials**

The statistical package for Social Sciences (SPSS/graduate Pack 11.0 for Windows) was used for all preliminary and follow-up analyses.

Data was collected solely from diagnostic reports and case file information from YOC archived psychological and diagnostic assessment files. Assessment files included a full review of available records (i.e., academic, health, and mental health), consultations with collateral contacts (i.e., probation officer, counselor), a baseline psychological evaluation or a full psychological evaluation, and clinical interviews with the juvenile and at least one parent. A baseline assessment battery included the client's psychosocial background, projective and objective measures of development, personality, and behaviors including, but not limited to trauma, psychosis, and autism spectrum disorders. A full psychological assessment included all of the baseline components and additional psychoeducational testing comprised of both cognitive and achievement measures. Additional assessments may include psychoeducational assessments, substance abuse assessments, psychosexual risk assessments, and personality assessments.

Pre-doctoral and postdoctoral level psychologists, who are unaware of the current research, conducted evaluations. Evaluations were reviewed and supervised by a doctoral-level psychologist, licensed in Indiana, who possesses an HSPP (Health Service Provider in Psychology designation by the State Board of Indiana).

**Sample**

The sample for this study consisted of juveniles referred by the Indiana JPD for psychological and diagnostic evaluation services at the YOC between 2005 and 2010. The identities of the sample used in this study were kept confidential. No attempt to contact the

offenders was made. There was no inclusion or reporting of names or other identifying information about any offender in this study.

The sample was composed of male ( $n = 83$ ) and female ( $n = 51$ ) offenders ( $N = 134$ ) referred for evaluation services by the Indiana JPD. The participants in the sample ranged in age from 13 years 8 months to 17 years ( $M = 15.26$ ,  $SD = 1.07$ ) and consisted of 76.1% Caucasians ( $n = 102$ ), 8.2% African Americans ( $n = 11$ ), 13.4% ( $n = 18$ ) biracial and 2.2% ( $n = 3$ ) from other racial backgrounds.

## Measures

**Evaluation data sheet.** Basic information on each subject was obtained from a demographic form (Appendix F) filled out according to documented information in client files. The study measure tapped five domains: demographic characteristics, psychosocial history, clinical data and risk factors, educational history, and juvenile history.

Each diagnostic evaluation included a specified section of the report for background and psychosocial history. The psychosocial history included information about the client's mental status at the time of the interview, family dynamics, physical and mental health history, behavioral and substance abuse history, interpersonal relationships, and academic and future goals. This information was gathered through parent and client interviews, interviews with collateral contacts, and available medical, mental health, and legal records. Collectively, diagnostic reports and records were used to record *demographic variables* (e.g., age, gender, race) and *referral information* (e.g., reason for referral, type of evaluation, recommendations made, and diagnoses), *psychosocial history* (developmental milestones, prior psychological treatment), *clinical data and risk factors* (history of attachment, abuse, type of abuse, witness to domestic violence, substance abuse history), *educational history* (academic achievement, IQ if

available), and *juvenile history* (age at first arrest, number of charges, number of arrests, and list of prior delinquency adjudication).

**Modified aggressive incidents coding system.** (Adapted from Cornell et al., 1996; see Appendices A, G, H and I). Aggression coding utilized a systemic process and required a three person team. First, the primary investigator extracted incidents of aggression from file information using the following systematic process and procedure until at 2-5 incidents of aggression were recorded. In some instances, a file did not contain at least 2-3 incidents that met the following criteria; therefore, the file was not included in the participant sample. Incidents were chosen according to the following criteria, if there was no available information meeting the first criteria, incidents were coded using the next criteria in sequence to ensure quantifiable data was gathered.

1. Incidents described in the words of the individual as indicated by a quoted reference or transcribed during the initial interview process.
2. Incidents that relate to assessment referral question.
3. Incidents related to most recent adjudicated offense.
4. Incidents recorded during placement via documented incident reports.
5. Incidents related to school suspensions or expulsions.

The aggression coding was performed by two independent raters (graduate research assistants in psychology at Ball State University in Muncie, IN) who were trained by the primary investigator on the modified aggression coding system according to Cornell et al. (1996). Raters were trained for one day over a four-hour period. The systemic process described above helped to maintain the neutrality of the raters who were blind to the original file data.

Six pilot cases were chosen for training the raters. The training cases were chosen from assessment files that did not meet inclusion criteria for this study (i.e., referred by the Indiana DCS). First, raters were provided a summary of the current research and operational definitions of aggression, instrumental aggression, and reactive aggression (Appendix H). Next, raters were asked to code three incidents of aggression according to these definitions, and classify incidents according to a three-point rating scale (3 = instrumental, 2 = both, and 1 = reactive). The purpose was to determine raters' understanding of the constructs, and ability to distinguish instrumentality versus reactivity.

The coding scheme that was established for this study was based on Cornell et al.'s (1996) Aggression Coding Guide and had independent raters code each act on five dimensions of aggression, which were used to help inform the decision of reactivity versus instrumentality. The characteristics were (a) planning, (b) goal-directedness, (c) provocation, (d) arousal, and (e) relationship to the victim. The rating system included a Likert-type scale (1-4, 1-5, 1-6; see Appendices F, H). Overall, 96% reliability was established for training samples. Once 100% interrater reliability was established for training cases, raters were asked to apply the coding system to the data sample.

Criteria for aggression coding underwent several revisions. Cornell et al. (1996) considered a categorical and dimensional classification of aggression when developing their coding system. They found that more specific violent incidents could be readily and reliably classified categorically as reactive or instrumental. For the aggressive incidents that were more difficult to classify as instrumental or reactive, Cornell and colleagues established and relied on *secondary scales for violent incidents* (i.e., planning, goal-directedness, provocation, arousal, relationship with the victim). In fact, they gave more weight to the nature of *goal-directedness*

and *planning* of an incident. Similarly, Falkenbach et al. (2008) developed a formula as a validation check for ratings. A score of greater or equal to two for goal-directedness coupled with a score of one on provocation, the incident was rated instrumental. An act was considered reactive if goal-directedness was equal to one, and provocation was equal to or greater than two. An act was considered a combination of instrumental and reactive if goal-directedness was equal or greater than two, and provocation was equal or greater than two.

When analyzing rater coding for the current study, this formula proved unreliable. Regardless of dimensional coding for these secondary scales, raters considered all scores and incident specific variables (i.e., severity of violence, injury to the victim, type of violence) to determine instrumentality and reactivity. For instance, the presence of fire setting or cruelty to animals played a role in classification, despite extensive or little planning involved. As a result, this study utilized Cornell et al.'s (1996) categorical determination.

Due to the less frequent occurrence of instrumental violence, other studies have placed an offender in the instrumental (proactive) group if one act was rated as instrumental (Falkenbach et al., 2008). In accordance with Cornell et al.'s (1996) categorical determination and taking into consideration the difficulties with dimensional classification, this study utilized a third category, *combined offender* (CO) group, for incidents reported with prominent qualities of both reactive and instrumental aggression. This third category was considered to account for aggressive incidents that were not clearly defined as instrumental or reactive. For cases where the raters did not agree, the primary investigator acted as a tiebreaker. All three raters would discuss each incident and come to a unanimous decision.

**MMPI-A.** Scores on the MMPI-A Clinical, Supplementary, Harris-Lingos, and Content scales were collected from the raw data in the archived paper files of individuals evaluated at the

YOC. The test was administered under the conditions suggested by Butcher et al. (1992; e.g., quiet environment, monitored administration) as part of diagnostic and evaluation services provided at the YOC. The administrators were pre- and post-doctoral level psychologists who are unaware of the current research. MMPI-A responses were scored by a computer program obtained from the Pearson Assessments. The criteria for classifying a profile as possibly invalid include (a) VRIN or TRIN with  $T$ -scores = 70-74; (b) Scales L or K,  $T \geq 65$ ; (c) Scale F,  $T$ -score = 80-109. An invalid profile consists of (a) VRIN or TRIN,  $T > 75$ ; (b) Scale F,  $T \geq 110$ . A profile considered invalid based on these criteria was not included in the set of data analysis.

## Chapter 4: Results

In order to assess the relationship between aggression and psychopathy in juvenile offenders, participants were placed into one of three groups, *instrumental offender (IO) group*, *reactive offender (RO) group*, or the *combined offender (CO) group* according to the preliminary analysis. These groups were compared on the psychopathic traits they exhibit as measured by MMPI-A *Pd* scale scores. More specifically, psychopathic traits (*Pd*) were designated as the dependent variable, while group membership determined by the type of aggression exhibited (IO, RO, CO) as the independent variables. Additionally, gender was used as a covariate to determine gender differences between groups.

### Preliminary Analysis

**Aggression coding.** The primary investigator transcribed acts of aggression from archived files of the participant sample. A total of 521 acts of aggression were transcribed, at least two acts of aggression were reported for all participants ( $N = 134$ ), 70% ( $n = 94$ ) had three recorded incidents, and 20% ( $n = 27$ ) had four incidents. Aggression coding was performed by independent raters, who were trained on the modified aggression coding system designed by Cornell et al., (1996) (Appendix E). The raters coded each act of aggression based on the five characteristics previously mentioned to determine reactivity and instrumentality. Table 4 reflects the means and standard deviations for each of these dimensions.



Table 4:

*Means and Standard Deviations for Secondary Aggression Coding Criteria*

	<i>M</i>	<i>SD</i>
Planning	1.83	.765
Goal Directedness	2.56	1.26
Provocation	1.72	.935
Arousal	2.03	.971
Relationship to the Victim	3.50	1.34

*Note.* The five scales presented are based on Corell et al.'s (1996) Aggression Coding Guide.

When the aggressive acts were coded as instrumental, reactive, or combined, 56% ( $n = 75$ ) were classified as instrumental offenders (IO), 31% ( $n = 41$ ) were classified as reactive offenders (RO), and 13% ( $n = 18$ ) were classified as combined offenders (CO). Total scores were analyzed to ensure 85% agreement of dichotomous variables between raters (instrumental, reactive, combined). The Kappa measure of agreement for aggression scale coding was .876.

### **Descriptive Statistics**

All participants were diagnosed according the *DSM-IV-TR* (APA, 2004) with at least one Axis I disorder ( $N = 134$ ), 98.5% ( $n = 132$ ) were given at least two primary diagnoses, 85% ( $n = 114$ ) were diagnosed with three Axis I disorders, 66% ( $n = 88$ ) were diagnosed with four, 41% ( $n = 55$ ) with five, and 21% ( $n = 28$ ) were given six or more Axis I diagnoses. The most frequent Axis I diagnoses for the participants were Conduct Disorder (68%), a substance related disorder (67%, e.g. alcohol abuse, cannabis abuse, and polysubstance dependence), and Attention Deficit (Hyperactivity) Disorder (ADHD, 41%).<sup>1</sup> The most frequent Axis II diagnoses for this sample

<sup>1</sup> *Note some of these were co-occurring disorders.*

were Antisocial Personality Traits (48.5%), Narcissistic Personality Traits (23%), and Borderline Personality Traits (23%).<sup>2</sup>

Similarly, the most frequent diagnoses for the RO group were substance related disorders (73%), Conduct Disorder (66%), and ADHD (32%). The Axis II traits most frequently reported for this group was antisocial personality traits (34%). Of the participants in the RO group, 65.9% ( $n = 27$ ) have a documented history of child abuse or neglect, and 31.7% ( $n = 13$ ) witnessed domestic violence.

The most frequent diagnoses for the CO group were substance related disorders (83%), Conduct Disorder (61%), and Oppositional Defiant Disorder (ODD, 28%). The Axis II traits most commonly found for the CO group were antisocial and narcissistic personality traits (both 39%). Of the participants in this group, 72.2% ( $n = 13$ ) have a documented history of child abuse or neglect, and 38.9% ( $n = 7$ ) have witnessed domestic violence.

For the IO group, the most frequent diagnoses were also Conduct Disorder (80%), substance related disorders (69%), and ADHD (61%). Additionally, only members of the IO group warranted a diagnosis of Post-Traumatic Stress Disorder (PTSD, 25%). The Axis II traits most frequently noted for this group was antisocial personality traits (56%). Of the participants in this group, 73.3% ( $n = 55$ ) have a documented history of child abuse or neglect, and 41.3% ( $n = 31$ ) have witnessed domestic violence.

Although not all participants had information with regard to their history of participation in mental health services, 128 records had documented information in this regard. The majority of participants had a significant history of psychological treatment and involvement with juvenile justice system. Data from participant files provided information for the following six treatment modalities: (a) outpatient counseling, (b) inpatient psychiatric, (c) medication management, (d)

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<sup>2</sup> Note some of these Axis II traits were also co-occurring.

residential treatment, (e) juvenile detention center, (f) foster care, and (g) prior psychological testing (see Table 5).

Table 5:

*History of Mental Health Treatment: Group Differences*

Mental Health Service	RO Group	CO Group	IO Group	Total Participants
Outpatient Counseling	36	13	59	108 (84%)
Inpatient Psychiatric	10	3	24	37 (29%)
Residential Placement	10	5	31	46 (36%)
Medication Management	19	9	49	77 (60%)
Juvenile Detention Center	12	6	23	41 (32%)
Psychological Testing	3	2	7	12 (9%)
Foster Care	-	-	3	3 (2%)
Total	90	38	196	-

*Note.* Percentages were calculated from the participants that had documented information regarding their treatment history ( $n = 128$ ).

*Note.* Some participants engaged in multiple treatments; therefore, the group *totals* reflect the total number of services utilized, not the total number of participants.

**Relationship between Aggression and Psychopathy**

**Research Question 1. Is the relationship between aggression and psychopathy in adult populations applicable to juveniles?** *Hypothesis 1: Instrumental offenders will have higher rates of psychopathic traits than those identified as reactive or combined offenders.*

The primary purpose of this study was to determine the predictive relationship between aggression and psychopathy in a juvenile offender population. Based on Cornell et al.’s (1996) theory that psychopathy is theoretically associated with aggression, instrumental offenders were expected to exhibit more psychopathic traits than reactive offenders. Therefore it was expected that once participants were classified into aggression groups (IO, RO, CO) there would be differences in their scores on the *Pd* scale. More specifically, the IO group was expected to have higher scores than the RO and CO groups.

Since gender differences were expected, a one-way analysis of covariance (ANCOVA) was conducted to control for the potential effect of gender. The independent variable (IV), type of aggression, included three levels: reactive, combined, and instrumental. The dependent variable (DV) was psychopathic traits, as measured by the *Pd* scale scores and the covariate was gender. A preliminary analysis evaluating the homogeneity-of-regression (slopes) assumption indicated that the relationship between the covariate and the DV did not differ significantly as a function of the IV,  $F(2, 128) = .87, p = .423, p > .01$ . The ANCOVA was significant,  $F(2, 130) = 19.19, p < .001$  (see Table 6), thus rejecting the null hypothesis, and suggesting that *there are differences between groups (reactive, instrumental, and combined) and for rates of psychopathic traits*. The three levels of aggression accounted for approximately 21% of the total variance in psychopathy scores, controlling for the effect of gender.

Table 6:

*Analysis of Co-Variance for Psychopathic Traits by Aggression Type*

Source	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
Gender	430.81	1	430.81	3.65	.058
Aggression Type	4526.10	2	2263.50	19.19	.000
Error	15,336.12	130	117.98		
Total	500,696.00	134			

*Note.* Psychopathic traits measured by the MMPI-A scale 4 *Pd*

Follow-up tests were conducted to evaluate pairwise differences among the adjusted means for offender groups. There were no differences between the CO and RO groups, but there were significant differences between IO and RO groups, and IO and CO groups. Results showed that IO ( $M = 65.03$ ) had significantly higher scores on the *Pd* scale, controlling for the effect of gender, than RO ( $M = 52.30$ ) and CO ( $M = 55.84$ ). The effect sizes for these significant adjusted mean differences were 1.13 and .76 respectively (see Table 7).

Table 7:

*Pairwise Comparisons and Effect Sizes of Psychopathic Traits by Aggression Group*

Group	Mean Differences (Effect Sizes are indicated in parentheses)				
	<i>M (SD)</i>	Adjusted Mean	RO	CO	IO
Reactive Offender (RO)	52.51 (9.09)	52.30	—		
Combined Offender (CO)	56.50 (13.23)	55.84	3.55 (.37)	—	
Instrumental Offender (IO)	64.75 (11.34)	65.03	12.73* (1.13)	9.18* (.76)	—

*Note.* \*The mean difference is significant at the .05 level

**Gender Differences**

**Research Question 2. What are the gender differences between juvenile offenders and psychopathic traits?** *Hypothesis 2: There will be differences in type of aggression and psychopathic traits (Pd scores) between male and female juvenile offenders.*

Since aggression and psychopathy may be displayed differently in men and women, the relationships of these constructs are likely to be different in male and female juvenile offenders; however, no predicted outcomes were expected. When the aggressive acts were coded as instrumental, reactive, or combined, 56.1% (*n* = 23) in the RO group were males, while 43.9% (*n* = 18) were female. In the CO group, 44.4% were male (*n* = 8) while 55.6% (*n* = 10) were female, and in the IO group, 69.3% (*n* = 52) were male, while 30.7% (*n* = 23) were female.

A Chi-square test for independence did not indicate a significant association between gender and offender group membership,  $\chi^2(2, n = 134) = .18, p = .097, phi = .19$ . For within group design, no statistical difference between genders was found. Overall, results indicated that being female was associated with psychopathic traits ( $r = .528, n = 51, p > .01$ ), but being male was not ( $r = .433, n = 83, p > .01$ ).

### **Criminal Activity and Frequency**

**Research Question 3. Can a juvenile's delinquency record predict psychopathy in juvenile offenders?** *Hypothesis: Instrumental offenders will have earlier onset of criminal history, more criminal charges, and will have engaged in more serious crimes than reactive and combined offenders.*

**Age of first arrest.** In previous research, PCL-R scores reported a significant correlation with age of first arrest (Brandt, Kennedy, Patrick, & Curtin, 1997). For the current research the age of first arrest was reported for 95.5% ( $n = 128$ ) of the sample. 94.6% ( $n = 71$ ) of the IO group reported age of first arrest, 100% ( $n = 41$ ) of the RO group reported age of first arrest, while 88.8% of the CO group ( $n = 16$ ) reported age of first arrest. Overall, correlations did not reveal significant relationship between age of first arrest and psychopathic traits ( $r = .04$ ,  $n = 128$ ,  $p < .05$ ). Means, standard deviations, and age of first arrest by type of offender group are presented in Table 8; a histogram of age of first arrest by offender group is in Figure 1.



Table 8:

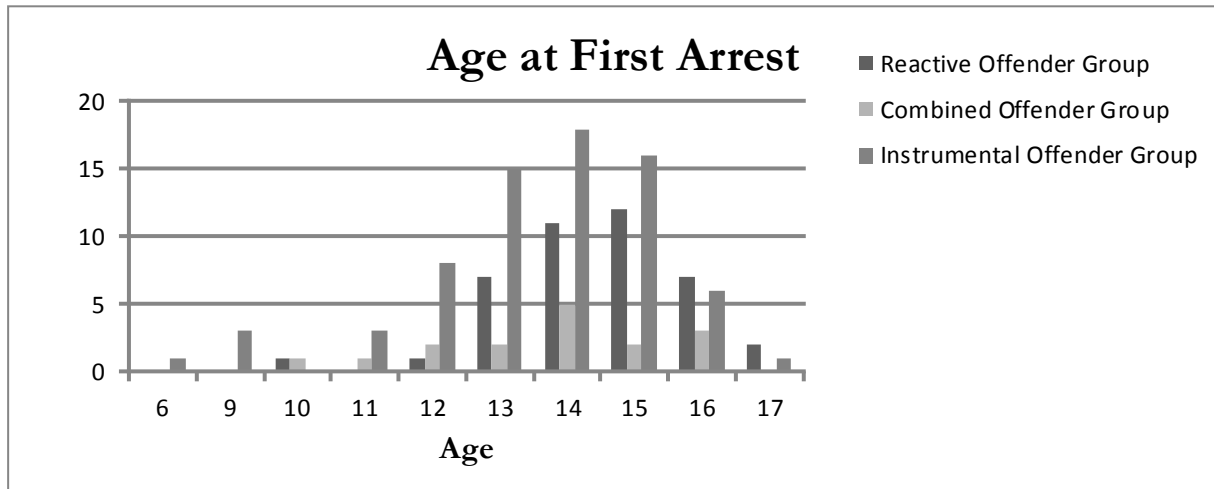
*Group Differences for Age of First Arrest: Means and Standard Deviations*

	Age of First Arrest		
	<i>N</i>	<i>M (SD)</i>	Age Range
RO Group	41	14.46 (1.38)	10 – 17
CO Group	16	13.69 (1.78)	10 – 16
IO Group	71	13.55 (1.89)	6 – 17

*Note.* The total participants reported for each group (n) reflects the total number of participants that reported age of first arrest.

Figure 1:

*Group Differences for Age of First Arrest*



**Legal offenses.** According to Forth and Book (2010) “adolescents with psychopathic traits tend to engage in more frequent offenses and are more versatile in their offending” (p. 264). Overall, 11.9% ( $n = 16$ ) reported one prior charge on their juvenile record, 80.6% ( $n = 108$ ) reported 2 prior charges, 55.2% ( $n = 74$ ) reported 3 prior charges, 28.4% ( $n = 38$ ) reported 4 prior charges, 16.4% ( $n = 22$ ) reported 5 prior charges, and 8.2% ( $n = 11$ ) reported 6 or more prior charges on their juvenile record. There was a positive correlation between the number of charges and psychopathic traits,  $r = .210, n = 134, p > .05$ .

Similar to *Hypothesis 1*, a preliminary analysis evaluating the homogeneity-of-regression (slopes) assumption indicated that the relationship between the covariate (*gender*) and the DV (*number of charges*) did not differ significantly as a function of the IV (*type of aggression*),  $F(2, 128) = 2.83, p = .023, p > .01$ . However with *number of charges* as the DV, the ANCOVA was not significant  $F(2, 125) = 1.59, p > .001$ , thus accepting the null hypothesis that there are no differences between groups and number of charges reported. Means, standard deviations, and number of charges reported are presented in Table 9.

Table 9:

*Group Differences for Number of Legal Offenses: Means and Standard Deviations*

	Number of Legal Offenses							
	<i>N</i>	<i>M (SD)</i>	Number of Charges Reported					
			1	2	3	4	5	6+
RO Group	40	2.95 (1.38)	7	7	15	5	4	2
CO Group	18	3.11 (1.37)	2	4	6	3	2	1
IO Group	73	3.45 (1.72)	7	17	18	9	5	16
Total	128	3.25 (1.58)						

*Note.* The total participants reported for each group (*n*) reflects the total number of participants that reported number of charges per group (1-6+ charges). For instance, 7 members of the RO group reported having only 1 charge, whereas, 15 members of the RO group reported having 3 prior charges.

Forty-nine different legal offenses were recorded for the sample population. Criminal charges were separated into four categories based on level of severity according to the OJJPD (Violent, Serious, Less Serious, and Minor; see Appendix B for sub-categories). Participants were identified according to the most severe offense committed. For example, if a participant reported five charges, 1 serious offense and 4 minor offenses, the participant was placed in the *serious* offense category. A One Way Analysis of Variance (ANOVA) was conducted to explore this relationship. With *psychopathic traits* as the DV, the IV, *type of offense*, included four levels: violent, serious, less serious, and minor. The ANOVA was not significant  $F(3, 126) = .591, p = .622, p > .001$ , thus accepting the null hypothesis that *there are no group differences between types of legal offenses and psychopathic traits* (See Table 10 for means and standard deviations). A Chi-square test for independence did not indicate a significant association between type of legal offenses and offender group membership,  $\chi^2(6, n = 134) = .223, p = .322, phi = .228$ . Overall, the number of legal charges was associated with psychopathic traits; however, the type of offenses did not have a significant relationship with psychopathic traits.

Table 10:

*Type of Legal Offense: Means and Standard Deviations of Psychopathic Traits by Aggression Group*

	Type of Legal Offense					
	Aggression Group					
	RO Group		CO Group		IO Group	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
Violent	15	52.80 (10.07)	10	60.50 (15.99)	30	65.87 (11.39)
Serious	7	51.71 (5.09)	4	50.50 (6.66)	19	64.53 (10.43)
Less Serious	6	50.33 (3.73)	3	53.33 (9.60)	13	65.69 (11.34)
Minor	13	53.62 (11.58)	1	50 (-)	13	61.54 (13.05)
Total	41	52.51 (9.09)	18	56.50 (13.23)	75	64.75 (11.33)

*Note:* Means and standard deviations for psychopathic traits (measured by MMPI-A scale 4Pd) are presented for type of legal offense in each group.

## Chapter 5: Discussion

### Implications for Results

The findings of this study have several interesting implications. First, this study provides evidence to support previous research on adult populations that types of aggression are useful determinants for predicting psychopathy (Cornell et al., 1996). Instrumental offenders were found to have higher rates of psychopathy than reactive and combined offenders in this sample. The findings of this study suggest that instrumental violence provides predictive utility for assessing psychopathic traits in juvenile offenders. This important finding offers significant implications for mental health professionals as well as the juvenile justice system. Forensic evaluators may benefit from identifying aggression types from a juvenile's history and comparing patterns of instrumental violence with self-report measures. These findings provide evidence to continue exploring this relationship with juvenile samples, while increasing the construct validity of juvenile psychopathy.

A second important finding from this study is that the prevalence of instrumental offenders was much higher among this population (56%) than has been found in other juvenile offender populations. The current findings indicate that instrumental motives are common incentives for violent behavior among juvenile offenders. As such, this study suggests that future research on juveniles and instrumental violence should focus on offender populations.

Lastly, this study highlights the importance of utilizing risk assessments coupled with collateral information to identify juveniles who are at risk for criminal careers. Again, instead of focusing solely on assessment measures, careful examination of a juvenile's history (age of first arrest, frequency of arrests, and type of charges) is critical to ascertain appropriate treatment recommendations and violence prevention.

### **Limitations and Directions for Future Research**

While this study included a number of important implications such as support of the downward extension of psychopathy to juveniles and its implications for future research, there were some drawbacks and limitations to the research design. The first limitation worthy of mention was the sample population, which was made up of predominately Caucasians (76.1%). According to National Council on Crime and Delinquency (2007, in Bell & Mariscal 2011), there is an overrepresentation of youth of color in secure confinement. Even though rates for serious and violent crimes have decreased by 45% over the past decade, the overrepresentation of youth of color increased 70%. According to Bell and Mariscal (2011), youth of African American backgrounds represent 28% of juvenile arrests, 37% of detained youth, and 58% of youth admitted to state adult prison. According to the OJJDP, minority youth accounted for 75% of juveniles held in custody for a violent offense in 2010 ([www.ojjdp.gov](http://www.ojjdp.gov), retrieved Nov. 2013). This minimizes the generalizability of the current research findings to juveniles involved in the justice system. Thus future research should extend efforts to incorporate ethnic minorities in their sample. This may involve recruiting samples from different states and or communities.

Second, the archival nature of the research design presented some disadvantages. As mentioned, the PCL: YV is the most utilized psychopathy specific measure to assess psychopathic traits in juveniles. Ideally, the PCL: YV and the MMPI-A measures would have been utilized in this study to determine predictive utility; however, of the 165 records that were reviewed, only one report utilized the PCL: YV as an assessment measure. Since that file did not meet inclusion criteria for the research design, it was not part of the sample. In an effort to make determinations about the predictive utility of the MMPI-A scale 4 *Pd*, future research should consider a research design that includes administration of both the PCL: YV and the MMPI-A.

As mentioned, the MMPI-A is the most widely used self-report measure in forensic assessments (Archer et al., 2006; Melton et al., 1997). If research empirically supports the predictive utility of the MMPI-A, legal professionals can benefit from a forensic evaluator assessment of aggression and psychopathy with measures currently valued in the legal system, while minimizing the potential effects of labeling a juvenile a psychopath.

Although the diagnostic and assessment files had detailed information for each offender, the ability to fill the gaps of missing information was unavailable. This lends to the third limitation, the aggression coding system. The primary researcher for this study extracted incidents of aggression based on file information. Again, although detailed, the ability to accurately assess the motivation for an individual's behavior was decreased significantly. In addition, the flexible design of categorical versus dimensional classification of aggression presents its own set of limitations, and ultimately minimizes the reliability of group membership. Future research should consider similar methodology with current and not archival data, while utilizing additional measures for aggression coding like the *Reactive-Proactive Aggression Questionnaire* (Raine et al., 2006) or a more systemic approach to aggression coding system.

This study did not account for mental health diagnoses or a history of childhood trauma as risk factors for aggression. Ramifications of early childhood trauma such as abuse or neglect can result in Post Traumatic Stress Disorder (PTSD) and other serious mental health disorders that closely resemble disruptive behavior disorders (i.e., Conduct Disorder and Oppositional Defiant Disorder). If left untreated, children are at risk for serious emotional disturbances and behavioral issues.

Lastly, despite the abundance of existing research to support its use, there is also research that provides evidence to suggest limitations for the use of the MMPI-A. Particular limitations

that have been subject to research regarding the accuracy and validity of the MMPI-A are overreporting/underreporting, and coaching. Due to the MMPI's predominate usage within forensic settings, the motivation to exaggerate or fabricate the truth is present. There is evidence to support the existence of overreporting and underreporting with the MMPI self-report measures (Graham, 2000). Overreporting is considered evident in those test-takers who are malingering or "faking bad," while underreporting is identified as "faking good." These particular test-takers fabricate or minimize personal characteristics or behaviors in order to be seen in a better light. For example, if an individual is asked to complete the MMPI-A as part of a psychological assessment to determine treatment recommendations or placement in a juvenile detention center, he or she may be likely to conceal, or "fake good," certain characteristics in order to present him/herself in the best possible manner.

Additionally, underreporting scales may inaccurately label test takers. By trying to conceal or "fake bad" possible symptoms of psychopathology, the test results may be skewed and misrepresent the test-taker. Although extensive research exists on the topic, there are limited reviews that specifically focus on the detection of underreporting which, according to the literature, is more difficult to detect (Baer & Miller, 2002). At times, underreporting is difficult to detect due to coaching. Lees-Haley (1997) suggests that coaching of clients in forensic settings by lawyers attempting to prepare them for psychological evaluations such as the MMPI measures is very common. This most often occurs when individuals are completing the MMPI as a result of legal proceedings. If an individual is coached, the degree of accuracy by which the client can be classified decreases (Less-Haley, 1997).

Another limitation to this study using the *Pd* scale was lack of consideration for scale elevations and well-defined code types. As mentioned a majority of previous research utilizes



psychopathy specific measures to assess the relationship between aggression and psychopathy. These measures utilize a cut-off score to identify the psychopaths and non-psychopaths. Similar to determining types of aggression, this study did not aim to identify the dimensional versus categorical question of psychopathy. However, it should be noted that the MMPI-A, similar to the PCL, incorporates specific “cut-off” scores to determine scale elevations and well-defined code types. A *T*-score greater than or equal to 65 is an elevated score, which is indicative of an individual presenting with features or traits of that scale. A clinical scale that is five points higher than the next two clinical scales is considered *well-defined*, which suggests the characteristics defined by that scale are likely prominent personality traits for that individual.

Future research should consider the *Pd* scale elevations as indicators for the presence of psychopathic traits. With this in mind, research should investigate the inverse relationship utilizing MMPI-A cut off scores to determine the presence of psychopathic traits, and an aggression specific measure to determine if the presence of psychopathic traits predicts the type of aggression.

### **Implications for Practice and Policy**

The U.S. juvenile justice system and the American Psychological Association (APA) alike recognize that adolescent offenders are inherently different from adult offenders; therefore, the application of adult psychopathy theory and assessment measures to juveniles seems impractical at best (Corrado et al., 2004; Edens, Guy, & Fernandez, 2003; Farrington, 2005; Forth et al., 2003; Gretton et al., 2004). However, a valid psychological method to assess the construct in juvenile offenders is highly anticipated for both its legal and psychological implications. Judges often rely on the results of psychological assessments to determine whether youth should be waived to adult courts. Consideration is also heavily weighed on the potential

for future violence and amenability to treatment (Grisso, 2000; Seagrave & Grisso, 2002). Similarly, psychologists utilize diagnostic and forensic assessments to determine treatment outcomes and predict future violence among criminal offenders.

This study offers several implications toward resolving this tension. As mentioned previously, psychopathy specific measures are available for diagnostic and evaluation purposes; however, the MMPI-A provides clinical utility beyond an individual diagnosis particularly when coupled with the presence of instrumental violence. These contextual factors can influence treatment recommendations and aid in accurate diagnoses for juvenile offenders. Scores on MMPI-A *Pd* scale and/or psychopathy measures alone should not be the only treatment considerations. Scores below the threshold for a psychopath label are still clinically relevant. Therefore, clinicians should pay closer attention to an individual's MMPI-A profile and history of violence and aggression.

As research continues to explore the relationship between aggression and psychopathy in juvenile populations and identify more accurate assessments and treatment approaches, a collaborative approach to treatment is necessary. It is important that researchers, mental health professionals, forensic evaluators, and members of the juvenile justice system communicate effectively on this topic. This will ensure forensic and legal professionals the ability to make appropriate treatment recommendations, more informed decisions with regard to sentencing and waivers to adult courts, thus providing opportunity for more positive outcomes for juvenile offenders, decrease in severe violence, and a more efficient juvenile justice system.

### **Personal Reflections**

The treatment of violent youthful offenders is challenging to say the least, but it is a personal frustration that fueled this research. Throughout my experience as a psychologist in

training, I have worked with juvenile offenders in different capacities—inpatient, outpatient, residential, and correctional. I also played a number of different roles – individual therapist, group counselor, family therapist, and diagnostician, and court-appointed evaluator. In every role, I experienced some level of tension and frustration. For me, the common thread is that professionals and nonprofessionals alike often make decisions based on the resources available, not the tools that are necessary.

In my opinion, this country does an incredible job dealing with the *response* to human behavior. Regrouping after the fallout of 9/11, coping with aftermath of Columbine, Virginia Tech, the Tuscon shooting that injured former Representative Gabrielle Giffords, the tragedy at Sandy Hook Elementary School in Newtown, CT, and the Boston Marathon Bombing, among others, makes the U.S. one of the most resilient countries in the world, but what about implementing preventative measures?

In the wake of these tragedies, though never surprised at people’s comments to “change laws on gun control,” I often wonder why no one questions the steady decrease in funding and accessibility for mental health treatment. Drugs are illegal, yet substance abuse continues to be a major problem in the U.S. In 2009, approximately 7.1 million adults (18-26) and 12 million (26 and over) reported being active drug users. Changing gun laws is only a portion of a larger systemic issue.

The acts of Columbine, Sandy Hook, and Ft. Collins took the lives of 49 men, women and children, while causing physical injuries to 304 others. The emotional impact of these tragedies bestowed upon the families of the perpetrators, the families of the victims, local communities, and on the nation are unprecedented. These acts were carried out by a single individual or pair of individuals; all of whom reportedly had a history of violence, aggression,

and/or mental illness. The acts committed, though extremely violent, were instrumental in nature (e.g., goal-directed, planned, and initiated as a means to an end) rather than an act of self-defense.

As humans, we have difficulty understanding what we cannot see. Mental illness varies in presentation and severity, but it is real. It cannot be assessed by the naked eye and plaster casts are not equipped to heal it, but that is no excuse to ignore it; yet every year, state officials nationwide cut funding for community mental health centers, inpatient mental health facilities, state hospitals, and juvenile detention centers. The cost for institutionalizing one who suffers from mental illness is far less than the legal costs, medical expenses, funeral costs, and treatments for drug addiction and complex trauma (to name a few) for the hundreds of thousands of those affected by one person's unpredictable, and often times uncontrollable actions. Preventative treatment exists; accessibility is limited.

This study suggests that coupled with psychological testing and clinical evaluation, the type of aggression and number of charges are useful determinants in assessing psychopathy in juvenile offenders. Failure to consider these contextual factors may result in a premature and often times inaccurate diagnoses accompanied by higher recidivism rates, additional charges (violation of probation), failed placement, and secure confinement. My hope is that research will continue to develop appropriate assessment formulas to differentiate juveniles with psychopathic traits who are on the path toward a criminal career from those without. Ultimately, this distinction will aid in the implementation of effective treatment interventions for juvenile offenders who will likely have more positive outcomes, and assist mental health professionals, forensic evaluators, and the juvenile justice system make appropriate diagnoses and sentencing for budding psychopaths, while decreasing crime and the global effect of trauma.

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## Appendix A

## Aggression Coding Criteria

**Planning**

How much did you plan or prepare for the aggressive action? Consider both the length of time involved in preparation and the amount of preparatory activity.

- 4 – Extensive Planning (detailed plan or preparation, rehearsal)
- 3 – Moderate planning (contemplation of action for more than 24 hours)
- 2 – Some planning (action within 24 hours, some plan or preparation)
- 1 – Very little or no planning (act during argument or fight, no preparation)

Assign a (1) to actions which are part of a contiguous event, such as a brief pause during an argument.

Assign a (2) if there is a break in the argument where you leave the scene of an argument and return later in the day.

**Goal-Directedness**

How much was the participant motivated by an external incentive, goal, or objective beyond just responding to provocation or threat? Readily apparent goals include money, power, sexual gratification, or some other external goal or benefit. Do not include such goals as self-defense, escaping harm, taking revenge for previous aggression, or acting out of frustration.

- 4 – Unequivocal goal-directedness
- 3 – Primary goal-directedness with presence of other motives
- 2 – Secondary goal-directedness, in presence of other primary motives
- 1 – No apparent goal-directedness (motive to injure victim, retaliate, defend)

**Provocation**

Did the victims' actions provoke the aggression? Include provocation that occurred prior to the incident (e.g. prior abusive treatment or confrontation)

- 6 – Exceptionally strong provocation (repeated assault, severe abuse)
- 5 – Very strong provocation (assault)
- 4 – Strong provocation (breakup of a romantic relationship, threat of major life change)
- 3 – Moderate Provocation (serious argument or dispute, threat of assault)
- 2 – Mild provocation (insult, minor argument, confrontation with others)
- 1 – No apparent provocation

**Arousal**

How much arousal, especially anger, did the participant experience at the time of the aggressive act? Just code mental state, not attitude towards the victim.

- 4 – Enraged, furious, described as “out of control” or “irrational”
- 3 – Angry, mad, extremely frightened
- 2 – Excited, very nervous, anxious
- 1 – Calm or tense at most

**Relationship with Victim**

Code the degree of contact or closeness between participant and the victim. Code based on duration and closeness of relationship.

- 5 – Very close relationship (immediate family member, romantic partner)
- 4 – Close relationship (friend, relative, dating partner, etc.)
- 3 – Specific relationship (co-worker, person in one of your classes, etc.)
- 2 – Acquaintance
- 1 – Stranger



Appendix B

Type of Legal Offense: Group Differences for Total Acts of Aggression Reported

	RO Group	CO Group	IO Group	TOTAL
<b>VIOLENT OFFENSES</b>				
Battery	12	7	22	41
Battery w/Bodily Injury	2	3	3	8
Battery w/Deadly Weapon		1	1	2
Assault			1	1
Sex Related Crimes		1	8	9
<b>TOTAL</b>	<b>14</b>	<b>12</b>	<b>35</b>	<b>61</b>
<b>SERIOUS OFFENSES</b>				
Arson			2	2
Burglary	4	2	7	13
B & E	2	1	9	12
Criminal Conversion	3	1	7	10
Possession of Weapon (deadly)	1		3	4
Grand Theft Auto			1	1
Criminal Recklessness	1	1	1	3
<b>TOTAL</b>	<b>11</b>	<b>5</b>	<b>30</b>	<b>46</b>
<b>LESS SERIOUS OFFENSES</b>				
Drug related Crimes	4	3	8	15
Receiving Stolen Property	1		2	3
Vandalism			6	6
Fraud/Forgery			3	3
Theft	7	3	18	28
Auto theft		1	7	6
Intimidation	1	3	7	11
<b>TOTAL</b>	<b>13</b>	<b>10</b>	<b>51</b>	<b>74</b>
<b>MINOR OFFENSES</b>				
Status offenses	47	18	88	153
Criminal Mischief	6	1	15	22
Escape			1	1
Disorderly Conduct	11	2	9	11
Leaving Scene of Accident	2			2
<b>TOTAL</b>	<b>66</b>	<b>21</b>	<b>111</b>	<b>187</b>

## Appendix C

Scale 4: Psychopathic Deviate (*Pd*)

- Measure of rebelliousness
- Difficulty incorporating values and standards of society
- Problems with authority
- May engage in antisocial acts
- Stormy interpersonal and family relationships
- Underachievers
- Poor planning and judgment
- Relationships are shallow and superficial
- Immature, childish
- Narcissistic, selfish, egocentric
- Extraverted and outgoing
- Can be hostile and aggressive
- Lying, cheating, stealing
- Sexually acting out
- Unlikely to report emotional turmoil, but will admit feelings of emptiness and boredom
- Poor prognosis for treatment

## Appendix D

This is a copy of Email (dated August 1, 2013) for approval of electronic submission of research study and design.

Dear Marielena P. Tecce,

As Chair of the Institutional Review Board (IRB) for 'Antioch University New England, I am letting you know that the committee has reviewed your Ethics Application. Based on the information presented in your Ethics Application, your study has been approved.

Your data collection is approved from 07/22/2013 to 08/30/2013. If your data collection should extend beyond this time period, you are required to submit a Request for Extension Application to the IRB. Any changes in the protocol(s) for this study must be formally requested by submitting a request for amendment from the IRB committee. Any adverse event, should one occur during this study, must be reported immediately to the IRB committee. Please review the IRB forms available for these exceptional circumstances.

Sincerely,

Katherine Clarke

## Appendix E

## Youth Opportunity Center (YOC) Approval for Research



July 8, 2013

Antioch University New England  
C/O George Trembley, PhD  
40 Avon Street  
Keene, NH 03142

Dear Professor Trembley:

Please note that Ms. Marielena P. Tecce, Antioch University New England Psy.D Student, has the permission granted by the Youth Opportunity Center to conduct research at our Muncie, Indiana facility for her study, "Normal Adolescent Behavior or Juvenile Psychopathy: Instrumental vs. Reactive Aggression." Ms. Tecce reviewed her research proposal with Management Team members on June 27, 2013 and approval was granted by all management team members.

Ms. Tecce will use a mixed- method design to determine the reliability and validity of identifying psychopathic traits in juvenile offenders. A modified aggression coding system (based on Cornel et al., 1996) will separate juveniles as instrumental offenders (IO) and reactive offenders (RO). These groups will then be compared to their scores on the MMPI-A scale 4, Psychopathic Deviate (4Pd) to assess for psychopathic traits among juvenile offenders. Ms. Tecce has agreed to use archived data from 2005-2010 for individuals that meet criteria. Ms. Tecce's on-site research activities will be finished by August 31, 2013.

Ms. Tecce has agreed to de-identify information and will adhere to the highest ethical standards with research and reporting. Ms. Tecce has also agreed to provide to my office a copy of the Antioch University New England IRB-approved and will also provide a copy of summary findings to the YOC.

If there are any questions, please contact my office.

Sincerely,



Rick Rowray  
Chief Executive Officer

3700 W. Kilgore Ave.  
Muncie, IN 47304  
765.289.5437  
fax 765.741.5269  
www.yocinc.org



Dr. Robyn N. Eubank  
Youth Opportunity Center  
3700 W. Kilgore Ave  
Muncie, IN 47304

December 19, 2013

To Whom It May Concern:

The Management team at the Youth Opportunity Center (YOC) met on December 19<sup>th</sup> to discuss the use of the agencies name in Ms. Tecce's dissertation. Previously, Ms. Tecce requested the privilege to collect data from the agency in order to complete her manuscript. At that time, Ms. Tecce presented to the management team the purpose of her research, intended use, and hypothesized outcome. As Ms. Tecce comes to the end of this process, the YOC is pleased to grant Ms. Tecce the right to use the agencies name in her dissertation.

The YOC's management team would graciously request a copy of the final manuscript along with a presentation of the findings.

The YOC management team looks forward to hearing the results of Ms. Tecce's research and wishes her well in all her future endeavors. Please do not hesitate to contact me by telephone if I can be of further assistance.

Sincerely,

Robyn N. Eubank, Psy.D., HSPP  
Director of Psychological Services

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Muncie, IN 47304  
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Appendix F

Evaluation Data Sheet

**1. Demographic Information:**

**Age** (at the time of testing): \_\_\_\_yrs \_\_\_\_mths    **Gender:**    Male – **1**    Female –**2**  
**DOB:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Race:** \_\_\_\_ African American \_\_\_\_ Caucasian \_\_\_\_ Biracial \_\_\_\_ Other (please specify)

**Reason for Referral:** (provide brief description)

**Type of evaluation:**            Baseline Assessment            Full Battery

**Additional Evaluations:**    Psychosexual            Substance Abuse            Autism

**Recommendation:**

<b>Diagnosis</b> (circle all that apply)	
<b>Axis I</b>	PTSD    ODD    Mood Disorder-NOS    Schizoaffective Disorder Dysthymic Disorder    Eating Disorder – NOS    CD (child onset)    CD (adolescent onset) ADHD (Combined)    ADHD (inattentive)    ADHD (hyperactive)    Polysubstance Abuse Polysubstance Dep.    Alcohol Abuse    Alcohol Dependence    Cannabis Abuse Cannabis Dependence    Neglect of Child    Sexual Abuse of Child (victim) Sexual abuse of child (perpetrator)    Physical Abuse of Child    Bipolar Disorder Psychotic Disorder NOS    Autism Spectrum Disorder    LD-NOS Other: _____
<b>Axis II</b>	____ Deferred    ____ Narcissistic    ____ Antisocial    ____ Schizoid    ____ Borderline ____ Schizotypal    ____ Dependent    ____ Avoidant    ____ Other
<b>Axis III</b>	
<b>Axis IV</b>	Involved with juvenile justice system ____    Problems with primary support ____ Academic problems ____    Parent/Child relational problems ____ Other _____
<b>Axis V</b>	

**2. Psychosocial History**

**Physical Health History**

**Met all developmental milestones:** Yes No

**If no, describe:**

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**Mental Health History:**

**Prior psychological treatment:** (circle all that apply)

Outpatient counseling    Inpatient/Psychiatric Hospitalization  
 Residential placement    Juvenile Detention    Medication Management

**3. Educational History**

**Academic Achievement:**    **Above Average**    **Average**    **Below Average**  
 Educational Testing: Yes No    If yes, IQ:

**4. Clinical Data/Risk Factors**

**History of abuse:**    Yes    No    Suspected    Unknown  
**Type of abuse:**    Physical    Emotional    Verbal    Neglect    Sexual  
**Witness Domestic Violence:**    Yes    No    Suspected    Unknown  
**Substance Abuse History:**    Yes    No  
**If yes, drug of choice:** (circle all that apply)

Marijuana    Crack/ Cocaine    Heroin    Cigarettes  
 Alcohol    Amphetamines    Barbiturates    Spice  
 Inhalants    Other \_\_\_\_\_

**5. Juvenile History**

**Age at first arrest or charge:** \_\_\_\_\_

**Number of charges:**    Unknown    1    2    3    4    5    6+  
**Number of arrests:**    Unknown    1    2    3    4    5    6+

**List of Prior Delinquency Adjudication and Legal Findings:**

**Charges:** (circle all that apply)

Runaway    Incurrigibility    Truancy    Auto Theft    Criminal Mischief    Battery  
 Battery with Deadly Weapon    Assault    Operating a Vehicle w/out License  
 Violation of ProbationTheft    Assault with a Deadly Weapon  
 Other \_\_\_\_\_

**List behavioral difficulties:** (i.e. fights, drug use, delinquent behavior, disrespectful to peers.)

---

MMPI-A Scales								
Write T-Score directly below the scale abbreviation								
VRIN	TRIN	F1	F2	F	L	K	1Hs	2D
3Hy	4Pd	5Mf	6Pa	7Pt	8Sc	9Ma	0Si	
MAC-R	ACK	PRO	IMM	A	R	A-anx	A-obs	A-dep
A-hea	A-aln	A-biz	A-ang	A-cyn	A-con	A-lse	A-las	A-sod
A-fam	A-sch	A-trt	AGGR	PSYC	DISC	NEGE	INTR	D1
D2	D3	D4	D5	Hy1	Hy2	Hy3	Hy4	Hy5
Pd1	Pd2	Pd3	Pd4	Pd5	Pa1	Pa2	Pa3	Sc1
Sc2	Sc3	Sc4	Sc5	Sc6	Ma1	Ma2	Ma3	Ma4
Si1	Si2	Si3	A-dep1	A-dep2	A-dep3	A-dep4	A-hea1	A-hea2
A-hea3	Aaln1	A-aln2	A-aln3	A-biz1	A-biz2	A-ang1	A-ang2	A-cyn1
A-cyn2	A-con1	A-con2	A-con3	A-lse1	A-lse2	A-las1	A-las2	A-sod1
A-sod2	A-fam1	A-fam2	A-sch1	A-sch2	A-trt1	Atrt2		

MMPI-A (circle)    VALID    VALID, however \_\_\_\_\_ (fill in)

Do not report scale scores if profile is INVALID



Appendix G

Aggressive Coding Form

Using the following definition for aggression, please describe at least two aggressive actions (more space is provided on the back of the page). For each act include a brief description of the behaviors, the motivation, who it was against, and age at the time of the incident.

**Aggression:** any physical (e.g. shoving, hitting) or verbal (e.g. arguing, shouting, screaming) behavior carried out with the intention of delivering an unpleasant action to someone else (e.g. Family members, significant other, friend, stranger, etc.). Aggressive acts can be in response to a provocation, including insults, threats, or other acts that cause frustration or anger, or aggression can be to obtain a goal such as power, money, sexual gratification, or some other objective beyond inflicting injury on the victim.

***Aggressive example #1***

Relationship: Stranger	Age: 19
------------------------	---------

**I wanted tickets to a concert so I waited in line for several hours. When they opened the ticket counter up it got a little chaotic. I was worried that I would not get the tickets so I shoved someone in line for concert tickets in order to get to the front of the line.**

**Please provide information, if available, in the following areas:**

- a. **What appeared to be the motivation for the individual to act aggressively? What happened just before that aggressive incident? Was the aggressive behavior in response to anything? Please explain.**
- b. **Was the aggressive incident premeditated or planned ahead of time, or was it more spontaneous? Please explain.**
- c. **Did the individual express an emotional reaction at the time of the aggressive act? What, if any emotions did the individual experience?**

***Aggressive example #2***

Relationship: Stranger	Age: 24
------------------------	---------

**I was driving on the highway and I was cut off by another car. I got angry and began to curse at the driver in the other car when they cut me off.**

**Please provide information, if available, in the following areas:**

- a. **What appeared to be the motivation for the individual to act aggressively? What happened just before that aggressive incident? Was the aggressive behavior in response to anything? Please explain.**
- b. **Was the aggressive incident premeditated or planned ahead of time, or was it more spontaneous? Please explain.**
- c. **Did the individual express an emotional reaction at the time of the aggressive act? What, if any emotions did the individual experience?**

**Aggressive example #3**

Relationship: Player on opposite team	Age: 15
---------------------------------------	---------

**I was playing in a team softball game and we were down by one run. I was on third base and I kept thinking that I had to score no matter what in order for us to tie up the game. When the batter hit the ball, I ran and the catcher was in the way of home plate. I ran right into her and knocked her over to get to home plate and score.**

**Please provide information, if available, in the following areas:**

- a. **What appeared to be the motivation for the individual to act aggressively? What happened just before that aggressive incident? Was the aggressive behavior in response to anything? Please explain.**
- b. **Was the aggressive incident premeditated or planned ahead of time, or was it more spontaneous? Please explain.**
- c. **Did the individual express an emotional reaction at the time of the aggressive act? What, if any emotions did the individual experience?**

***Aggressive example #4***

Relationship: girlfriend	Age: 22
--------------------------	---------

**I was arguing with m girlfriend and we were both saying some pretty mean things. She started calling me “stupid” and it really pissed me off. I grabbed her arm and she hit me with her other hand. I was so pissed that I hit her in the arm. Finally I just left and slammed the door.**

**Please provide information, if available, in the following areas:**

- a. What appeared to be the motivation for the individual to act aggressively? What happened just before that aggressive incident? Was the aggressive behavior in response to anything? Please explain.**
- b. Was the aggressive incident premeditated or planned ahead of time, or was it more spontaneous? Please explain.**
- c. Did the individual express an emotional reaction at the time of the aggressive act? What, if any emotions did the individual experience?**

## Appendix H

## Aggressive Coding Training Form

**Please read the following descriptions of Aggression, Instrumental, and Reactive aggression. After you read and complete the examples that follow, rate your aggressive act on the scale provided.**

**Aggression:** any physical (e.g. shoving, hitting) or verbal (e.g. arguing, shouting, screaming) behavior carried out with the intention of delivering an unpleasant action to someone else (e.g. Family members, significant other, friend, stranger, etc.). Aggressive acts can be in response to a provocation, including insults, threats, or other acts that cause frustration or anger, or aggression can be to obtain a goal such as power, money, sexual gratification, or some other objective beyond inflicting injury on the victim.

**Instrumental Aggression:** Someone who uses instrumental aggression acts to obtain a readily apparent goal such as power, money, sexual gratification, or some other objective beyond inflicting injury on the victim. Some examples of instrumental aggression include 1) verbally abusing a physically hurting someone to impress your friends; 2) in a basketball game, punching or hurting someone to gain control of the ball. Physical or verbal aggression during rape or date rape is almost always instrumental. Instrumental aggression is initiated as a means to an end rather than as an act of self-defense. It is usually unprovoked and is not delivered out of rage or anger. Instrumental aggression often involves planning or preparation. However, in some cases instrumental aggression can involve relatively little planning.

**Reactive Aggression:** In reactive aggression, on eagerness in response to provocation or threat. The provocation may include insults, threats of aggression, or other acts that cause frustration or anger. The objective of the aggressive act is to harm or injure the victim, in response to feelings of anger, resentment, fear or other distress aroused by the victim's actions. Typically there should be some form of interpersonal conflict (i.e. argument, dispute prior to the aggression) between the aggressor and the victim.

**Aggressive acts can be rated as:**

- 3 – Clearly Instrumental aggression**
- 2 – Both reactive and instrumental qualities are prominent**
- 1 – Clearly reactive aggression**

Appendix I

ID# \_\_\_\_\_

Rater \_\_\_\_\_

Group \_\_\_\_\_

ANSWER SHEET

Please complete the following ratings of your aggressive acts. Circle the most appropriate level of each aspect of aggression based on the descriptions listed below.

Aggressive Acts can be rated as:     **3 – Clearly instrumental aggression**  
   **2 – Both reactive and instrumental qualities are prominent**  
   **1 – Clearly reactive aggression**

Aggressive Act	Planning	Goal-Directedness	Provocation	Arousal	Relationship with Victim	Type of Aggression (1,2,3)
Act #1	4 3 2 1	4 3 2 1	6 5 4 3 2 1	4 3 2 1	5 4 3 2 1	
Act #2	4 3 2 1	4 3 2 1	6 5 4 3 2 1	4 3 2 1	5 4 3 2 1	
Act #3	4 3 2 1	4 3 2 1	6 5 4 3 2 1	4 3 2 1	5 4 3 2 1	
Act #4	4 3 2 1	4 3 2 1	6 5 4 3 2 1	4 3 2 1	5 4 3 2 1	
Act #5	4 3 2 1	4 3 2 1	6 5 4 3 2 1	4 3 2 1	5 4 3 2 1	

Total number of instrumental acts \_\_\_\_\_

Total number of reactive acts \_\_\_\_\_

Total number of acts with both reactive and instrumental aggression \_\_\_\_\_