IDENTIFYING PROFILES OF PSYCHOLOGICAL
CHARACTERISTICS OF JUVENILE OFFENDERS
AND ADOLESCENT PSYCHIATRIC INPATIENTS

A Dissertation
presented to
the Faculty of the Graduate School
at the University of Missouri-Columbia

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

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by
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MAY 2014

The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

IDENTIFYING PROFILES OF PSYCHOLOGICAL CHARACTERISTICS OF JUVENILE
OFFENDERS AND ADOLESCENT PSYCHIATRIC INPATIENTS

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DEDICATION

I would like to dedicate this dissertation and the resulting degree to my fiancée, Jodi Sprigg. Your commitment to me has been unwavering and your support has never faltered. Even during the year of separation brought about as a result of my internship, you have encouraged me to move forward in my academic endeavors. Also, your support and assistance throughout the course of my dissertation has been appreciated beyond words. Thanks for pushing me and believing in me. I love you so much and I am a better man for having met you. You are a wonderful mother to Tyler and Kaylee and my life has been enriched through joining our family.

I would also like to make a dedication to my mother, Dr. Jacqueline Ellis. You are the reason for my interest in psychology and your mentoring in the field has helped me tremendously. You have been a positive influence on me in so many ways and your sacrifices over the years do not go unrecognized. Thank you for being a positive role model both personally and professionally. I love you.

ACKNOWLEDGEMENTS

I would first like to thank Professor Craig Frisby for the personalized attention you have given me during the course of my graduate studies. I truly appreciate the way in which you have always been genuinely interested in my personal and professional life, as well as my academic endeavors. Your advice and guidance have been crucial, and your support has been unwavering.

I would also like to thank Dr. Andy Knoop. I have always felt particularly comfortable talking with you and seeking your advice. From my Level I Practicum experience to obtaining your assistance with my dissertation, you have been there for me throughout my doctoral training. Thank you so much for the way in which you welcome my questions and requests.

I would also like to extend gratitude to Drs. Borduin, Offutt, and Osterlind. The value of your assistance throughout the completion of my dissertation cannot be underestimated.

Finally, I would like to acknowledge Ms. Marcia Hazelhorst, Mr. Rick Gaines, and Dr. Leslie Luchene. Your openness to allowing me to work with the youth at the facilities you serve is truly appreciated. Your help in obtaining participants for this study and maximizing the cooperation of your staff has been invaluable.

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ABSTRACT

Research indicates that hopelessness levels are high among both young people in the mental health services population (MHSP) and youth in the juvenile detention population (JDP). The current research study assessed hopelessness levels in samples from these two populations. A general hypothesis was that, although the hopelessness levels within the two subgroups may be similar, the manner in which hopelessness levels related to other relevant variables may differ significantly between the two subgroups. Levels of internalizing, externalizing, delinquency, callous-unemotional traits, and sensation seeking were also assessed within the two subgroups, and two core profiles using the Profile Analysis via Principal Component Analysis (PAPCA) procedure (Kim, 2013; Stout Sosinky & Kim, 2013) were extracted from the entire group of participants (N = 40). While findings indicated that the MHSP has statistically higher levels of hopelessness, there were no significant differences between subgroups in the levels of other variables. The pattern of intercorrelations between hopelessness and the other five variables was significantly different between the two groups. Through use of logistical regression procedures, the measures utilized improved the ability to predict to which group a participant belonged. PAPCA revealed that mean weights representing each subject's relationship to each of the two core profiles differed significantly between each group. Also, participants' delinquency scores were significantly correlated with subject weights. Findings lend credence to the idea that hopelessness manifests itself differently within the two subgroups. Limitations of this study are discussed. The relationship between hopelessness and other variables within vulnerable adolescent groups appears to be very complex, and further study is warranted.

CHAPTER ONE

INTRODUCTION

There are two populations of adolescents who are linked to high rates of societal problems. These include juvenile delinquents and the mentally ill. The link between juvenile delinquency and crime rates is an obvious one. According to the U.S. Department of Justice (DOJ), juveniles accounted for 14% of all arrests in 2009 (Snyder, 2011). They committed 15% of forcible rapes, 25% of robberies, and 12% of aggravated assaults recorded during the year. Huizinga and Jakob-Chien (1998) report that juvenile offenders commit a sizable proportion of serious and violent crimes. Although there have been decreases in some types of juvenile arrests, the rate of other types of juvenile crimes has increased dramatically over time. For example, the DOJ reports that the juvenile arrest rate for simple assault increased 115% between 1980 and 2009. Juvenile arrest rates for drug and weapons charges also increased substantially during the period (Snyder, 2011)

Just as juvenile offenses contribute to crime rates within the U.S., mental illness involves costs to society. Many within the homeless population are mentally ill and it is not uncommon for mentally ill individuals to self-medicate by abusing substances when appropriate prescription medications cannot be obtained. Evidence suggests that mental health problems are also prevalent among the criminal population. For example, the DOJ reports that approximately half of incarcerated individuals with a history of violent offending and three quarters of those with substance abuse issues have a mental health problem (James & Glaze, 2006). Also, criminals with mental health problems have a higher recidivism rate than those who are not mentally ill and are twice as likely to have been homeless. Finally, incarcerated individuals with mental

health problems are more likely to violate correctional facility rules and are at least twice as likely to be injured in a fight within jails or prisons than those who are mentally healthy (James & Glaze, 2006). Clearly, both juvenile offending and mental illness contribute to the rates of crime and incarceration in the U.S., a significant cost to society.

While mental illness and juvenile delinquency contribute directly to the negative and often traumatic experiences of crime victims, the mentally ill and juvenile offending populations also contribute to increased monetary costs within a society. Court costs, law enforcement expenses, and the cost of the U.S. correctional system are likely higher due to crime's relationship to mental illness and juvenile delinquency. Similarly, as all children are entitled to an education within the U.S. and juvenile detainees and adolescent psychiatric inpatients are generally unable to attend regular public schools, the cost of educating these young people is increased. Finally, prisons within the U.S. are overcrowded and affordable inpatient mental health services for young people are limited. High rates of juvenile delinquency and mental illness contribute to the limited nature of these resources.

Hopelessness

The negative outcomes often associated with juvenile offending and mental health problems limit the opportunities for future success as perceived by the population of youths in juvenile detention, hereafter referred to as the Juvenile Detainee Population (JDP), and youths receiving mental health services, hereafter referred to as the Mental Health Services Population (MHSP). Not surprisingly, hopelessness levels are high among the JDP and the MHSP (Becker & Grilo, 2007; Duke, Borowsky, Pettingell, & McMorris, 2011; Milnes, Owens, & Blenkiron, 2002; Rohde, Seeley, Kaufman, Clarke, & Stice, 2006). Hopelessness is defined as negative

expectations for the future (Bowman, 1993; Chioqueta & Stiles, 2005; Grewal & Porter, 2007; Kashani, Reid, & Rosenberg, 1989; Petrie & Chamberlain, 1983). It is a variable worthy of further study due to its well-established link with suicidality (Asarnow & Guthrie; Chioqueta & Stiles; DeLisle & Holden, 2009; Grewal & Porter; Petrie & Chamberlain). Since hopelessness levels are elevated in adolescents within the MHSP and the JDP, it is unlikely that the variable will sufficiently distinguish between the two groups. However, it is likely that hopelessness manifests itself in different ways in the two groups. Therefore, the strength of the relationship between hopelessness and other related problems within each group are hypothesized to differ when MHSP and JDP groups are compared. Also, it is not unusual for individuals within the MHSP to spend time in juvenile detention facilities, and it is not uncommon for youth within the JDP to receive mental health services. This causes a certain amount of overlap between the two populations. For these reasons, it is important that researchers and professionals within the fields of juvenile justice and adolescent mental health have an understanding of how hopelessness fits within the full context of related variables that are also characteristic of each population.

The purpose of this study is to examine the levels of several variables, including hopelessness, within JDP and MHSP subgroups. Although hopelessness levels are not expected to be significantly different in the two subgroups, it is hypothesized that hopelessness is expressed in different ways by young people in the different populations. In this context, “expressed in different ways” means that the pattern of correlations between hopelessness and other variables are expected to differ within each subgroup. Profile Analysis via Principal Component Analysis (PAPCA) (Kim, 2013; Stout Sosinsky & Kim, 2013) will be used to examine the relationship between core profiles empirically extracted from the total group, and individuals within each subgroup. The determination and comparison of psychological

characteristics of JDP and MHSP subgroups will serve a number of functions. First, little research exists on the relationship between hopelessness and variables other than depression and suicide. This study will expand on this database. Such an endeavor will also facilitate improved methods of identification of typical members of each subgroup. For example, obtaining empirically derived profiles that are characteristic of adolescents within MHSP or JDP subgroups could lead to more efficient and parsimonious ways to compare individuals both within and across subgroups. Such a finding would then potentially allow appropriate mental health services to be delivered to vulnerable adolescents. Similarly, profiles of each population, in conjunction with an assessment of offense severity, will allow for prediction of future potential problems (e.g. - adult incarceration). Finally, profiles of the psychological characteristics of the JDP and MHSP might lead to better identification of children at highest risk of suicide, a goal the importance of which cannot be underestimated.

This study will involve the administration of several psychological instruments to adolescents within two subgroups: those who currently reside in juvenile detention facilities (the JDP) and those receiving mental health services (the MHSP). Data will be analyzed to determine the varying levels of six variables being studied: hopelessness levels, internalizing behavior, externalizing behavior, delinquency severity, callous-unemotional traits, and sensation seeking tendencies. The correlation levels between hopelessness and the other five variables will also be determined and the strengths and directions of these correlations will be examined within the context of each unique subgroup. Finally, PAPCA will be utilized to identify common “core” profiles that describe level relationships among variables within the total sample. This methodology also assigns a weight to each individual within a subgroup, the purpose of which is

to assign to each individual a numerical index of relative similarity or dissimilarity to the core profiles identified from the total group.

Through the identification of “core profiles,” this method of profile analysis would identify qualitatively different ways in which hopelessness covaries with internalizing and externalizing behaviors, delinquency severity, callous-unemotional traits, and sensation seeking tendencies. In addition, such an analysis will allow for a statistical comparison between JDP and MHSP subgroups to determine if a significant difference exists between subgroups in mean individual core profile weights. A finding of no significant differences between subgroups in mean individual profile weights would suggest a substantial degree of overlap in the types of adolescents who are involved with juvenile detention facilities and mental health treatment facilities. A finding of statistically significant differences between subgroups in mean individual profile weights would suggest that qualitatively different types of adolescents tend to be involved in juvenile detention facilities versus mental health facilities.

CHAPTER TWO

REVIEW OF EXISTING LITERATURE

Juvenile Delinquency

Delinquency is often defined through official measures of delinquent behavior, such as arrests or incarceration (Moffitt, 1988); however defining delinquency in such a way does not account for such variables as socioeconomic status, race, and IQ levels that contribute to disproportionality in arrests and incarceration. Therefore, some theorists studying delinquency have proposed defining delinquency based on self-report measures of delinquent behavior (Moffitt, 1988). Although such a measure was used in the present study, for the purposes of this study, juvenile delinquents will be defined as youth between 12 and 18 years of age who are currently held in juvenile detention. Youth included in the juvenile detainee population (JDP) in the present study were placed in custody due to arrests for a variety of crimes and status offenses. To address the identification bias that contributes to arrests and incarceration, a self-report measure of delinquency will also be utilized.

Family and Environmental Variables Related to Juvenile Delinquency. Some theorists relate family and environmental variables to a heightened risk of juvenile delinquency. For example, Frey and Epkins (2002) report that family stress, parental rejection, and parent-child conflict are salient family features of antisocial youth. A study by Wilson and Daly (2006) found that young offenders were less likely than their nonoffending peers to have lived with their fathers. Other studies have shown that young offenders have changed schools more frequently than their nonoffending peers and are particularly likely to have lived in foster homes (Wilson & Daly, 2006). Martin et al. (2008) report that juveniles with foster care experiences and other

poor home characteristics are more likely to engage in delinquent activities earlier than are juveniles without such background. Similarly, Lipsey and Derzon (1998) describe a lack of strong social ties as one of the best predictors of serious and violent delinquency. Hawkins et. al (1998) report that frequent changes in school is a valid predictor of youth violence. Pardini, Obradovic, and Loeber (2007) note that childhood conduct problems are more often related to environmental factors such as antisocial parents and family hostility than problems such as attention-deficit/hyperactivity disorder (ADHD).

Studies have shown that variables linked to delinquency such as social, economic, and educational risk factors like school problems, substance abuse, and family discord are also risk factors for psychiatric referral (Atkins et al., 1999). Shelton (2004) found a desire for caring and stable families to be a prominent theme among the JDP. In her research, the importance of family was the strongest theme voiced by the population, but disappointment in family was also indirectly expressed.

Subtypes of Juvenile Delinquency.

Adolescence-Limited Juvenile Delinquency. Research suggests that illegal behavior is common among adolescents (Moffitt, 1993). Moffitt distinguishes between adolescent-limited and life-course-persistent antisocial behavior. She proposes that some delinquency during adolescence is developmentally normal and quite common, but antisocial behavior that develops prior to adolescence and persists into adulthood is rare and of much more concern.

Lifecourse-Persistent Juvenile Delinquency. Some members of the Juvenile Detainee Population (JDP) are at risk of criminality and incarceration in adulthood. While research consistently shows that the incidence and prevalence of violent and serious delinquency peaks

during adolescence and early adulthood (Lipsey & Derzon, 1998), McMahon, Kotler, and Witkiewitz (2010) describe a particular subgroup of the JDP with stable and severe antisocial behavior who may differ from others involved in the population in their social/emotional, cognitive, and biological functioning. Pardini, Obradovic, and Loeber, (2006) also describe a subgroup of the JDP at particular risk of more persistent delinquent behavior. Scott and Steinberg (2008) also distinguish between some adolescent offending, which they describe as quite normal, and violent offending, which they propose should be a prerequisite for entrance into the adult justice system.

Adolescence-Limited versus Lifecourse-Persistent Juvenile Delinquency. According to Moffitt, there exists a maturity gap between the physical maturation associated with the transition into adolescence and the opportunity for independence and adult responsibility that comes with the transition into adulthood. She proposes that many adolescents seek what they consider to be experiences and material items characteristic of an exit from childhood and a transition into adulthood by associating with peers who have a history of antisocial behavior. These life-course-persistent offenders are often characterized by a fussy temperament as infants and behavior problems in very early childhood. The trend for adolescent-limited delinquents to mimic the life-course-persistent antisocial behavior exhibited by a small number of their peers causes delinquent behavior to peak in the adolescent population at the age of 17. Moffitt's assertion that association with delinquent peers is a valid predictor of adolescence-limited delinquent behavior is quite valid (Agnew, 1991; Elliott, Huizinga, & Ageton, 1985; Hawkins et. al, 1998; Lipsey & Derzon, 1998) and Tolan and Gorman-Smith (1998) confirm that a small portion of young offenders commits a large portion of crime, particularly the most serious and violent offenses.

While delinquent behavior is common during adolescence, almost 85% of adolescents cease engaging in delinquent behavior by the time they reach 28 years of age (Moffitt, 1993). Moffitt proposes that the dramatic decrease in the commonality of antisocial behavior during adolescence is associated with the onset of opportunity for more socially acceptable outlets for adult-like behavior, such as marriage and employment, and the potential costs that adolescents foresee if they continue their delinquency. While Moffitt maintains that evidence does not suggest a link between mental disorders and short-term adolescent delinquency, some studies (Sheidow et al., 2008; Washburn et al., 2007) have shown that psychological and behavioral problems in adolescence can predict future antisocial behavior in both the JDP youth receiving mental health services.

Despite Moffitt's proposal that adolescence-limited antisocial behavior is common and developmentally appropriate, she maintains that some family and environmental characteristics are linked to life-course-persistent antisocial behavior. These include family attachment bonds, child-rearing practices, parent and sibling deviance, and socioeconomic status. Sheidow, et al. (2008) also note the link between serious family conflict and chronic maladjustment. Carroll et al. (2006) also found that juveniles who maintain antisocial behavior throughout their lives as opposed to those who only engage in such behavior during adolescence are characterized by familial disadvantages.

Adolescent Mental Health Problems

Mental health problems are common among young people and their effects are significant. According to one study, 20% of youth under the age of 16 have a diagnosable mental health disorder (Leavey, Flexhaug, & Ehmann, 2008), while another study found rates as

high as 40% (Copeland, Shanahan, Costello, & Angold, 2011). Some studies have shown that nearly half of all mental disorders onset in childhood (Copeland, et al., 2011). Unfortunately, only one in six of those who would benefit from treatment ever receive it. (Leavey, et al., 2008). Disorders that often have an adolescent onset include attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), conduct disorder (CD), and substance use disorders (Kessler & Wang, 2008). Studies have shown that such disorders can interfere with a child's functioning with parents and peers, and in their education (Rapee, Bogels, van der Sluis, Craske, & Ollendick, 2012).

Overlap between JDP and Youth with Mental Health Problems

Psychopathology among Juvenile Delinquents. Members of the JDP are at risk of a number of difficulties and negative outcomes other than criminality. For example, there is much evidence that the JDP suffers from high rates of psychopathology. Shelton (2004) notes that rates of mental disorders in the JDP exceed those within the general population of children under 18 and reports that juvenile justice systems are becoming overpopulated with children in need of mental health services. Atkins et al. (1999) found that the JDP had a higher mean number of diagnoses and symptoms than a community mental health clinic.

Research indicates that the majority of the JDP meets criteria for psychiatric disorders that warrant mental health treatment (Abram, Paskar, Washburn, & Teplin, 2008). Many epidemiological studies estimate that between two thirds and three quarters of the JDP have one or more psychiatric disorders (Abram et al., 2004; Ford et al., 2008; Teplin, Abram, McClelland, Washburn, & Pikus, 2005; Washburn et al., 2007). Other studies have found a prevalence rate for at least one diagnosis within the JDP to be as high as 91% (Atkins et al., 1999) and

approximately half of the JDP has two or more disorders (Abram, Paskar, et al., 2008; Ford, Chapman, Pearson, Borum, & Meltzer Wolpaw, 2008). Nearly 75% of the JDP examined by Abram, Paskar, et al. (2008) had received services, including school services, before being detained. Although Duke et al. (2011) found that many young extreme perpetrators of violence had previously been identified as suffering from poor mental health, Huizinga and Jakob-Chien (1998) warn that it would be incorrect to utilize the criterion of the presence of psychological problems to distinguish between juvenile offenders engaging in minor delinquency and their serious and violent offending peers.

There is evidence that mental health problems in the JDP have an impact on the sentences received by the population. One study revealed three subgroups of the JDP: asymptomatic, psychiatrically impaired, and dual diagnosis (addictive and psychiatric disorders), with the latter two groups receiving longer, more restrictive punishments (Ford et al., 2008). Abram et al. (2004) describe the number of youth in the JDP with psychiatric disorders as a major public health problem. In fact, Shelton (2004) reports that some parents are complicit in their children becoming part of the population because mental health services are not available elsewhere. While Huizinga and Jakob-Chien (1998) report that parents of juveniles who engage in serious and violent offenses are more likely to seek mental health services for their children than are parents of juveniles who engage in minor offenses, they also state that mental health screening and treatment options are often unavailable to youth involved in the juvenile justice system.

Despite the research indicating high rates of psychopathology within the JDP, some studies suggest that self-reports of mental health problems completed by the JDP might underestimate levels of psychological difficulty. Shelton (2004) found five themes to be evident within the JDP. These include a desire for caring and stable families, lack of personal control, a

love-hate relationship with school, feeling depressed and hopeless, and a belief that it is better to be tough than sick. The belief that “it is better to be tough than sick” causes many in the JDP to underreport their symptoms in an attempt to avoid appearing vulnerable or weak. Members of the JDP in Shelton’s study reported a stigma associated with mental illness and some reported that they would utilize mental health services if they could do so in secret. Reluctance among the JDP to disclose mental health difficulties indicates that psychopathology levels within the population might actually be higher than they appear.

Suicidality within the JDP and MHSP. High rates of psychopathology, adult incarceration, and family and environmental risk factors are not the only negative variables associated with the JDP and Mental Health Services Population (MHSP). Unfortunately, both of these populations also show high rates of suicide and suicidal behavior (Abram, Choe, et al., 2008; Jackson et al., 1995; Sanislow, Grilo, Fehon, Axelrod, & McGlashan, 2003). Abram, Paskar, et al. (2008) note that individuals in the JDP have such characteristics commonly associated with increased risk for suicide as high rates of trauma and psychiatric disorders. They report that psychopathology has been consistently linked with risk for suicide in adolescents and is prevalent in the JDP. Sanislow et al. (2003) report that members of the JDP display elevated rates of depression, impulsivity, aggression, substance abuse, and general psychopathology, placing them at higher risk of suicide.

Research has shown that suicide rates of the JDP are as high as four times greater than the rate found in the general population (Abram, Choe, et al., 2008; Sanislow et al., 2003). Previous studies of suicidality within the JDP have found that 22% of the population had seriously considered suicide, 19% had conceived of a plan, 15% had made at least one serious attempt, and 8% reported being injured during an attempt in the past 12 months (Sanislow, et al.,

2003). Abram, Choe, et al. (2008) found that approximately one in ten members of the JDP had thought about committing suicide in the past six months and one in ten had ever attempted suicide.

Since fewer than half of the JDP with recent thoughts of suicide had told anyone about their ideation, identifying such youth is a crucial step in preventing self-harm and death among young people (Abram, Choe, et al., 2008). Abram, Choe, et al. (2008) also report that identifying members of the JDP most at risk of suicide is not a simple endeavor. For example, facilities that screen all juveniles within 24 hours of arrival had lower prevalence rates of serious suicide attempts than those that screen only juveniles considered at risk for suicide.

Ford, Chapman, Pearson, Borum, and Meltzer Wolpaw (2008) suggest identifying individuals within the JDP at particular risk of harming themselves or others by examining more specific problems associated with both anxiety and depression, such as traumatic stress, hopelessness, anger, or somatic complaints. Although some past studies (Martin, Martin, Dell, Davis, & Guerrieri, 2008) have attempted to determine a psychological and behavioral profile of JDP members, no previous studies have contrasted the JDP with a nondetention control group from another high-risk population, such as children within the MHSP (Sanislow et al., 2003). Sanislow et al. (2003) note that it is plausible that JDP members exhibit a unique risk profile for suicidal behavior. Asarnow and Guthrie (1989) state that future work needs to clarify factors such as hopelessness that appear to be associated with suicide attempts mainly in depressed children and factors such as unsupportive and unstable family environments that appear to be associated with suicide attempts in depressed and nondepressed subgroups.

Hopelessness

One psychological characteristic common among both the JDP and the MHSP is hopelessness (Becker & Grilo, 2007; Duke, Borowsky, Pettingell, and McMorris, 2011; Milnes, Owens, & Blenkiron, 2002; Rohde, Seeley, Kaufman, Clarke, & Stice, 2006), which is often defined as negative expectations for the future (Bowman, 1993; Chioqueta & Stiles, 2005; Grewal & Porter, 2007; Kashani, Reid, & Rosenberg, 1989; Petrie & Chamberlain, 1983). Duke et al. (2011) define hopelessness as a system of belief, a negative cognitive framework, characterized by pessimistic expectancies about oneself and one's abilities, one's future and prospects for the world around them. They note that hopelessness is distinct from depression.

Hopelessness involves a generalized interpretation of life yielding negative expectations about desired outcomes, and perceived helplessness about changing the likelihood of such outcomes (Duke et al., 2011). Although some research suggests that the relationship between hopelessness, depression, and suicide exists differently in young people than in adults (Asarnow & Guthrie, 1989; Cole, 1989), hopelessness has generally been identified as the major variable linking depression and suicidal intent when the variable of depression is controlled in hopelessness research (Asarnow & Guthrie, 1989; Chioqueta & Stiles, 2005; DeLisle & Holden, 2009; Grewal & Porter, 2007; Petrie & Chamberlain, 1983). Since hopelessness accounts for 76% of the association between depression and suicidal intent (Beck, Steer, Kovacs, & Garrison, 1985), and hopelessness levels are high in both the JDP and MHSP (Becker & Grilo, 2007; Duke et al., 2011; Milnes et al., 2002; Rohde et al., 2006), investigation into how hopelessness is manifested within the two groups is worthy.

Interventions Promoting Hope. Just as hopelessness has been shown to have a relationship to negative outcomes such as suicide, many researchers suggest that hope maintains a relationship with positive outcomes. Hope theorists propose that goal-oriented motivation must be present to activate pathways allowing youth to resist disengagement at an individual and community level that results in the devaluing of, disregard for, and indifference to personal and interpersonal safety (Duke et al., 2011). Interventions involving health realization, which direct youth to tap into their innate, naturally responsive thought processes, give authority to the individual and not to events triggering hopelessness. Such interventions have been shown to lead to reductions in violent and delinquent behaviors in youth (Duke et al., 2011). Rohde et al. (2006) also recommend cognitive interventions that are likely to enhance optimism, and reduce automatic maladaptive thoughts and negative ruminations.

Duke et al. (2011) explain that high hope can be promoted within young people by strengthening prosocial connections among intersecting family, school, and larger community domains. This idea is particularly relevant considering the work by Shelton (2004) and Carroll et al. (2006) and their findings about juvenile delinquents' perceived lack of family and community support. Many juvenile offenders report a perceived external locus of control, which can lead to feelings of helplessness and hopelessness (Shelton, 2004). Support from family and community members could promote a sense of control and autonomy, which Duke et al. (2011) report leads to decreases in delinquent behaviors. The suggestions of Duke et al. mesh well with the assertion of Moffitt (1993) that members of the JDP engaging in adolescence-limited delinquency are mimicking peers with a life-course-persistent style of antisocial behavior. Promoting connections between prosocial peers could lessen delinquency among adolescents.

Hopelessness and Coping. Cole (1989) suggests that coping beliefs might be based in part on the perception of one's own problem-solving ability. Impoverished or rigid problem-solving strategies might lead to failure, which in turn dissolves the myth of omnipotence and well-being that buffers against suicidal thoughts. Interestingly, Cole suggests that such factors as survival-coping beliefs or fear of social disapproval might buffer the effects of hopelessness on suicidality. Theorists have also discussed another factor, the adolescent's personal fable, which might play a role in the degree to which certain groups of adolescents are predisposed to suicidal behavior (Cole, 1989).

An adolescent's personal fable involves a sense of personal agency, uniqueness, indestructibility, and power. The emergence of the personal fable is typical in adolescent development and might buffer the impact of various life stressors (Cole, 1989). Just as other theorists such as Valle, Huebner, and Suldo (2006) view hope as a moderator in the relationship between stressful life events and adolescent well-being, Cole (1989) theorizes that survival-coping beliefs represent one aspect of the adolescent's personal fable that might place the adolescent at risk for suicidal contemplation if the personal fable is underdeveloped. Cole states that an adolescent's failure to believe in his or her own self-efficacy and ability to cope might be more strongly related to suicide than hopelessness, at least for boys. Findings about the importance of developing one's personal fable also have significant implications in light of Shelton's findings about juvenile detainees' perceived sense of powerlessness and external locus of control (2004) and the importance that Moffitt (1993) places upon the relationship between short-term delinquency and adolescents' sense of autonomy.

Cognitions and Hopelessness. Duke et al. (2011) explain the link between hopelessness and violence and delinquency thusly:

Pessimistic cognitions perceived to be global and unyielding, characteristic of a negative explanatory framework, produce a heightened physiologic state resulting in poor capacity for healthy growth and development. Attention is drained and diverted from achieving functional developmental tasks, ultimately giving way to derailment of constructive cognitions. Within these contexts, an individual experiences significant difficulty in processing alternatives to risk behavior and may relinquish motivations for higher functioning to operate in what is perceived as survival mode (p. 92).

Frey and Epkins (2002) found “self-debasing” thoughts to be somewhat common in juvenile offenders. Such thoughts relate closely to negative cognitive triad that composes Beck’s theory of depression (1985), which includes negative beliefs about oneself, the world, and the future. Since hopelessness is commonly defined as negative expectations for the future, one of the components of Beck’s negative cognitive triad, it is not surprising that hopelessness levels are elevated in the JDP. Cognitive distortions such as overgeneralizing, making an assumption that a negative outcome in one experience will occur in similar future situations, and catastrophizing, consistently expecting that the worst will happen, relate closely to hopelessness and are not uncommon in the JDP (Frey & Epkins, 2002). Frey and Epkins note that little data exist on the cognitive characteristics of particular types of juvenile delinquents even though such information has significant implications for treatment.

Measures of Hopelessness

The Beck Hopelessness Scale (BHS). The most common hopelessness instrument, the Beck Hopelessness Scale (BHS), was developed in 1974 by Beck, Weissman, Lester, and Trexler (Kashani et al., 1989). It was developed through research conducted on adults who had

attempted suicide and is, therefore, appropriate for use with adults (Steed, 2001). The BHS includes affective, motivational, and cognitive components that reflect negative expectancies for the future (Kazdin et al., 1983). Correlations between BHS scores and selected MMPI-2 scales attest to the convergent and discriminant validity of the BHS. The BHS measures three factors, feelings about the future, loss of motivation, and future expectations (Grewal & Porter, 2007). Items on the BHS assess generalized hopelessness and not simply circumscribed pessimism and the BHS provides an operational definition of hopelessness that is distinct from symptoms of hopelessness depression (DeLisle & Holden, 2009).

The Hopelessness Scale for Children (HSC). The Hopelessness Scale for Children (HSC) followed the BHS as an instrument intended to measure hopelessness in a younger population. The 17 items that are included on the HSC were determined after items from the BHS were rephrased and pilot tested with inpatient children (Kazdin et al., 1983). Although children utilized in the development of the instrument ranged from 5 to 13 years of age, the instrument has demonstrated high item-total correlations and internal consistency reliability for youth up to 18 years of age (Thurber, Hollingsworth, & Miller, 1996). Items on the HSC are scored as either true or false and the number of “true” responses is summed to obtain the total hopelessness score (Fischer & Corcoran, 1994). Higher scores reflect greater degrees of hopelessness and raw scores range from one to 17. The HSC is intended to be administered as a self-report inventory and requires approximately five minutes of time for its completion (Bowman, 1993). Although the instrument has a second grade reading comprehension level, making it useful for children seven years old or older (Fischer & Corcoran, 1994), Kazdin and his colleagues have administered it verbally to children as young as six years of age (Bowman, 1993). On both the BHS and the HSC, underlying the endorsement of items are key beliefs that

“the future will yield poor outcomes, that one cannot influence these outcomes, and that trying to do so really is not worthwhile” (Kazdin et al., 1986, p. 244). According to Fischer and Corcoran (1994), research on the HSC suggests that scores discriminate between suicidal and nonsuicidal children.

The Hopelessness Scale for Children – Revised (HSC-R). Since the use of the HSC has not been widespread and it lacks valuable normative information (Bowman, 1993), the author of the present study conducted previous research intended to improve upon the HSC and develop the Hopelessness Scale for Children – Revised (HSC-R), which remains unpublished (Ellis, 2011). Previous research showed a significant relationship between social desirability, or a tendency to “fake good” (Beitchman, 1996), and hopelessness (Petrie and Chamberlain, 1983; Holden, Mendonca, & Serin, 1989) so a social desirability component was incorporated into the HSC-R. It was determined that the use of a five-point Likert scale on the HSC-R would yield more detailed results than a true/false method of response, which was used on the original HSC. As a result, a Likert scale was utilized on the HSC-R. Additional items based on face validity were added to the scale to investigate their item-total score correlations, their effect on the mean item-total score correlation, and their impact on the instrument’s internal consistency, and the wording of some of the original items was altered. In a study by Kazdin Rodgers, and Colbus (1986), item number four on the HSC failed to show significance in an examination of item-total score correlations. The authors reported that item four does not contribute in a consistent fashion to the scale and should be excluded from the HSC. Therefore, it was not included on the HSC-R (Ellis, 2011).

Possible total hopelessness scores on the HSC-R ranged from 24 to 120 since the instrument included 24 hopelessness items with each having a possible response range from one

to five. After administering the HSC-R to 30 children without a mental health diagnosis and 51 children within the MHSP, the entire group obtained a mean hopelessness score of 56.67 while the nonclinical group obtained a mean hopelessness score of 54.80 and the MHSP obtained a mean hopelessness score of 58.10 (Ellis, 2011). Statistical analysis revealed that 22 of the 24 hopelessness items contributed significantly to children's total hopelessness scores ($p < .01$). An internal consistency reliability coefficient of .88 was obtained for the hopelessness items for the entire group of participants that completed the HSC-R (Ellis, 2011). Alpha levels of this magnitude indicate a high level of reliability for the hopelessness items on the HSC-R. The HSC-R was found to have a mean item-total score correlation of .53 for the hopelessness items, which was higher than the mean item-total correlation obtained for the original HSC in a past study.

The eight social desirability or "lie" items that were included on the HSC-R had possible responses ranging from one to five, so possible total lie scores range from eight to 40. The entire group obtained a mean lie score of 20.61 while the nonclinical group obtained a mean lie score of 22.50 and the MHSP obtained a mean lie score of 19.22 (Ellis, 2011). An alpha level of .78 was found for the lie items on the HSC-R for the entire group, resulting in a moderately strong level of reliability for these items. Statistical analysis revealed that social desirability was not significantly related to hopelessness scores in the entire group of participants or in the MHSP, but there was a significant negative correlation between social desirability scores and hopelessness scores within the nonclinical group (Ellis, 2011). Due to the improved mean item-total correlation between the HSC and HSC-R, the high reliability of the HSC-R, and the added value of the social desirability scale, preliminary information suggests that the HSC-R appears to be superior to the HSC as a measure of hopelessness in young people. However, more extensive

validation research with nationally representative populations needs to be conducted with the HSC-R in order to reach firm conclusions

Hopelessness in JDP and MHSP Subgroups

Hopelessness within the MHSP Subgroup. The link between hopelessness and suicidal thoughts and behavior is well established and many members of the MHSP receive such services due to suicidality. For example, Jackson et al. (1995) report that estimates of the prevalence of suicide attempts among outpatient preadolescents within the MHSP are as high as 20%. They note that more than 70% of preadolescent inpatients within the MHSP have had suicidal thoughts or made suicidal threats or attempts. Studies have shown hopelessness to be associated with low self-esteem among inpatients within the MHSP (Asarnow, Carlson, & Guthrie, 1987) and researchers have found that young people with high hopelessness scores are at greater risk not only for suicide and depression, but also for overall psychopathology (Kashani et al., 1992; Kashani et al., 1989; Mann, 2004; Martin et al., 2008). Such findings support the likelihood of high levels of hopelessness within the MHSP.

In a study of inpatients within the MHSP, Becker and Grilo (2007) found hopelessness to be related to the risk of violence in general, but not to the risk of self-harm specifically. The researchers note that results are at odds with other research about hopelessness and suicidality, but they are consistent with the findings of other researchers who have suggested that hopelessness might not play as central a role in adolescent suicidality as it does for adults. The link between hopelessness and violence towards others provides a partial explanation for the elevated levels of hopelessness found in the JDP. Duke et al. (2011) suggest expanding the

dialogue about hopelessness and note, “The concept of hopelessness and its relationship to delinquency and violence is salient for diverse groups of adolescents” (p. 92).

Hopelessness within the JDP Subgroup. Research also indicates that hopelessness levels are high among the JDP subgroup. Shelton (2004) found that juvenile offenders felt powerless to change their behavior and felt no control over their lives due to a lack of self-control, or the external controls of family, the juvenile justice system, or mental health treatment providers. Such feelings of helplessness and an external locus of control could contribute to feelings of hopelessness. According to Moffitt (1993), juveniles’ attitudes about their sense of autonomy should be among the strongest prospective predictors of short-term offending. Duke et al. (2011) report that prior research has identified a relationship between youth hopelessness and violence perpetration and showed hopelessness to be an independent correlate with weapon carrying among young males. Abram, Choe, et al. (2008) found that more than one third of the JDP had felt hopeless or thought about death in the six months before detention. A study by Duke et al. found that moderate-high levels of hopelessness were significantly correlated with delinquent behavior.

Elevated Hopelessness Levels in the JDP and MHSP. Many studies have shown that hopelessness levels are high within the two high-risk populations of the JDP and the MHSP (Abram, Choe, et al., 2004; Becker & Grilo, 2007; Duke et al., 2011; Frey & Epkins, 2002; Jackson et al., 1995; Milnes et al., 2002; Shelton, 2004). It is likely, however, that hopelessness is expressed differently among the JDP than it is among the MHSP. For example, the prevalence of suicidal behavior among the MHSP suggests that hopelessness is manifested in these young people through high levels of internalizing problems and self-harm. Since some studies (Becker

& Grilo, 2007) have shown an association between hopelessness and violent behavior, it is quite possible that members of the JDP are more likely than members of the MHSP to express their hopelessness through externalizing problems and aggression towards others. It is also likely that hopelessness within the JDP manifests itself through a lack of empathy and concern for others. Such a presentation would result in higher levels of callous-unemotional traits, the affective and interpersonal components of psychopathy, such as manipulation, lying, callousness, and a lack of guilt and empathy (McMahon, Kotler, & Witkiewitz, 2010). Finally, it is possible that members of the JDP who are hopeless are more likely than their MHSP counterparts to engage in risky sensation seeking illegal behavior. The JDP's lack of hope for the future, combined with their elevated levels of externalizing (Abram, Paskar, et al., 2008; Huizinga & Jakob-Chien, 1998; Imbach, Aebi, Winkler Metzke, Bessler, & Steinhausen, 2013; Pardini et al., 2007; Shelton, 2004), likely result in an interest in the arousal of the mind and senses that result from novel situations such as social drinking, drug use, and gambling (Carroll et al., Daderman et al., 2001).

Other Psychological Variables Related to JDP and MHSP Subgroups

Internalizing Problems. Internalizing problems are behavior patterns that are directed inwardly towards oneself rather than the outside environment (Gage, 2013). They include covert difficulties such as those associated with depression or anxiety (Frey & Epkins, 2002). While overt behavior problems are much more common within the JDP than are internalizing problems, other significant relationships exist between internalizing and certain aspects of juvenile delinquency. For example, Sheidow et al. (2008) found that adolescents participating in serious, chronic, and violent patterns of antisocial behavior displayed greater internalizing problems than those participating in stable patterns of less serious or no antisocial behavior. An escalation of

the seriousness and frequency of antisocial behavior was associated with increased internalizing problems relative to non-escalating juveniles. Other studies (Imbach, et. al, 2013), have replicated such findings. Frey and Epkins found that while one-third of their entire JDP sample had significant internalizing problems, 58% of aggressive delinquents had such problems, suggesting a relationship between internalizing problems and more extreme delinquency. Sheidow et al. call for comprehensive assessment and clinical services within the JDP and note that members of the JDP displaying escalating severity of offenses might be optimal candidates for intensive cognitive-behavioral prevention efforts that target both internalizing and conduct problems. While it is clear that internalizing problems, such as hopelessness, exist in high levels among the JDP, the prevalence of such problems within the population does not indicate that internalizing problems are more common among the JDP than they are among the MHSP.

Despite the high levels of internalizing problems that exist within the JDP, research shows higher internalizing levels among inpatients within the MHSP. For example, Atkins et al. (1999) found that such youth had significantly higher internalizing scores than members of the JDP on the Youth Self-Report (YSR), but externalizing and total scores were equivalent. Although a study by Frey and Epkins (2002) found that approximately one third of the JDP could be characterized as internalizing, the significant majority of the population was noninternalizing. While some studies have shown relatively high levels of internalizing problems among the JDP, research has generally shown that internalizing levels are higher among the MHSP than they are among the JDP.

Externalizing Problems. Externalizing problems are generally described as behavioral patterns directed outwardly towards the social environment (Gage, 2013). They include such acting-out behaviors as delinquency, conduct disorder, and aggression (Frey & Epkins, 2002).

With occasional exceptions (Atkins et al., 1999), research generally shows higher levels of externalizing problems within the JDP than within the MHSP. For example, conduct problems and diagnoses of conduct disorder are common within the JDP (Abram, Paskar, et al., 2008; Shelton, 2004) and antisocial personality disorder, of which conduct disorder is a diagnostic prerequisite (*DSM-IV-TR*, 2000), has been shown reliably to relate to a propensity for externalizing (Hopwood & Grilo, 2010). Shelton (2004) reports that conduct disorder accounts for approximately 50% of mental health referrals in the JDP. Huizinga and Jakob-Chien (1998) found that serious violent juvenile offenders scored significantly higher on externalizing symptoms than their peers who engaged in more minor offenses. Pardini et al. (2007) found that conduct problems, an externalizing variable, predicted delinquency persistence better than other variables such as interpersonal callousness, hyperactivity and impulsivity, and inattention. Tolan and Gorman-Smith (1998) also report the predictive value of childhood behavior problems in speculating about later criminal offending. The relationship between conduct disorder and juvenile offending suggests that members of the JDP show higher levels of externalizing problems than do members of the MHSP.

Comorbidity of Externalizing and Internalizing. Although, by definition, members of the JDP exhibit externalizing problems, research has identified high comorbidity of externalizing and internalizing problems, and internalizing problems are common within the JDP (Frey & Epkins, 2002; Sheidow et al., 2008). Sheidow, et al. (2008) report that internalizing problems and conduct problems share certain risk factors and youth within the JDP display higher rates of internalizing problems than youth without conduct problems. Frey and Epkins (2002) also note the significant relationship between internalizing problems and delinquency and found that approximately one third of the JDP could be characterized as internalizing. Ford et al.(2008)

found that approximately 20% of the JDP have clinical depression or anxiety problems (Ford et al., 2008). Despite such figures, Sheidow, et al. suspect even higher levels of internalizing problems among the JDP because such problems “may be masked by the overt and damaging nature of antisocial behavior” (p. 827). Since hopelessness could be characterized as an internalizing problem, such findings lend credence to the idea that hopelessness levels will be elevated in both the JDP and MHSP. It is likely, however, that hopelessness is expressed more exclusively through internalizing in the MHSP, while it expressed through a variety of externalizing behaviors, callous-unemotional traits, and sensation seeking behaviors in the JDP.

Hopelessness and Externalizing Problems. Although hopelessness is not listed as a symptom of depression (American Psychiatric Association [*DSM-IV-TR*], 2000), it has generally been identified as the major variable connecting depression and suicidal intent (Asarnow & Guthrie, 1989; Chioqueta & Stiles, 2005; DeLisle & Holden, 2009; Grewal & Porter, 2007; Petrie & Chamberlain, 1983) and has been linked to low levels of happiness, joy, and cheerfulness (Chioqueta & Stiles, 2005). Rohde et al. (2006) note that hopelessness is a significant predictor of recovery from depression, an internalizing problem, and Martin et al. (2008) report that several studies have linked delinquency and depression. Since researchers have shown a positive correlation between internalizing and conduct problems, some theorists have proposed the existence of “depressive conduct disorder” (Sheidow, et al., 2008). The proposal of such a disorder illustrates the likely prevalence of hopelessness among members of the JDP, many of whom have conduct disorder, and the potential relationship between hopelessness and juvenile delinquency. Although the internalizing problems of hopelessness and depression exist in high levels within the JDP, research suggests that JDP members might express such feelings through externalizing tendencies and conduct problems.

Callous-Unemotional (CU) Traits. Callous-unemotional traits are deficiencies in affective experience and interpersonal style that include an absence of guilt, a limited range emotional display, a tendency to take advantage of others, and a failure to show empathy (Houghton, Hunter, & Crow, 2013). Certain antisocial cognitions, such as a lack of empathy, have also been shown to have a significant correlation with juvenile offending (McMahon, Kotler, & Witkiewitz, 2010). Theorists such as McMahon et al. (2010) and Houghton et. al (2013) refer to the affective and interpersonal components of psychopathy, such as manipulation, lying, callousness, and a lack of guilt and empathy, as callous-unemotional (CU) traits. Similarly, Pardini et al. (2007) list deceitfulness, manipulativeness, selfishness, a superficially charming demeanor, and a lack of remorse and empathy as characteristics of a callous interpersonal style. Researchers describe a lack of guilt and empathy as an affective aspect of psychopathy and have documented consistent and strong relationships between measures of child and adolescent psychopathy and a range of conduct problems in the JDP (McMahon et al., 2010).

Although Moffitt (1993) estimates that no more than 10% of males should earn a label of “antisocial”, Washburn et al. (2007) found that approximately 20% of male members of the JDP later develop antisocial personality disorder, suggesting that juvenile delinquency has potential value as a predictor of antisocial tendencies. They call for future study about the relationship between callous-unemotional traits and antisocial tendencies among detained youth. Tolan and Gorman-Smith (1998) report that all cases of adult antisocial personality disorder in one study reported severe conduct disorder as juveniles. Pardini et al. (2007) note that future studies should examine the relationship between conduct problems and interpersonal callousness. They add that screening assessments intended to identify boys most in need of treatment should include a measure of interpersonal callousness. Researchers’ findings and recommendations

indicate that members of the JDP show higher levels of callous-unemotional traits than youth within the MHSP.

Callous Unemotional (CU) Traits and Cognitive Distortions. Frey and Epkins (2002) report that cognitive processing distortions associated with externalizing conduct problems, such as a tendency to avoid blame, have been conceptualized as “self-serving.” These distortions disinhibit antisocial behavior (Frey & Epkins, 2002) and are consistent with the phenomena of callousness and unemotionality. Primary cognitive distortions involve self-centeredness and pave the way for such secondary distortions to neutralize empathy or guilt and rationalize and justify self-centered thoughts and antisocial behavior (Frey & Epkins, 2002). For example, effective treatment for the JDP involves eventually addressing the secondary cognitive distortion of referring to others with belittling labels and minimizing and mislabeling antisocial behavior to convince oneself that it does not harm others. Other secondary cognitive distortions involve assuming the worst (Frey & Epkins), which is closely related to hopelessness. Finally, blaming others is a secondary cognitive distortion that involves misattributing blame for one’s negative actions to external sources or innocent others (Frey & Epkins, 2002), which are thoughts consistent with the perceived external locus of control common among the JDP in the study by Shelton (2004). It is evident that there are a number of reasons to suspect that CU Traits are more common among those in the JDP than those in the MHSP.

Callous Unemotional (CU) Traits and Externalizing Problems. Data suggest that CU traits may be particularly useful in identifying a subgroup of antisocial youth with stable and severe antisocial behavior who may differ in their social/emotional, cognitive, and biological functioning (McMahon et al., 2010). Martin et al. (2008) note that JDP members often display

little remorse and such antisocial attitudes are linked with more violent crimes. McMahon et al. (2010) report that higher scores on measures of CU traits are positively related to a more severe, pervasive, and stable constellation of conduct problems and Pardini et al. (2006) found that older boys exhibiting interpersonal callousness are at risk for persistent delinquent behavior. Moffitt (1993) also suggests that life-course-persistent antisocial behavior is possibly associated with family attachment issues, which is sometimes linked with an antisocial personality style (Dadds, Jambrak, Pasalich, Hawes, & Brennan, 2011; Murray & Murray, 2010). Donnellan et al. (2002) found frequency of arrest to be correlated with such measures of normative orientation and values as communality and tolerance, both of which are negatively related to CU traits.

McMahon et al. (2010) found that CU traits measured in seventh grade were predictive of such antisocial outcomes as general delinquency, juvenile and adult arrests, and characteristics of early adult antisocial personality disorder. CU traits predicted such outcomes better than current symptoms of oppositional defiant disorder (ODD) or conduct disorder (CD) (McMahon et al., 2010). Considering CU traits in conjunction with symptoms of conduct disorder was significantly better at predicting antisocial outcomes than a consideration of symptoms of conduct disorder alone. McMahon et al. note that psychopathic individuals often have antisocial and criminal histories prior to adulthood. Such findings about the relationship between CU traits and conduct disorder suggest that both variables will be found in higher levels in the JDP than among the MHSP.

Sensation-Seeking. Sensation seeking, the need for novel, varied, and complex experiences and situations and the willingness to take physical and social risks for the sake of such experiences (Arnett, 1992; Hoyle et al., 2002; Zuckerman, 1994), has also shown a relationship with juvenile offending (Carroll et al., 2006; Daderman, Meurling, & Hallman,

2001). Risk-taking is described as a valid predictor of youth violence (Hawkins et. al, 1998) and individuals high in sensation seeking are drawn to activities that are high in risk, such as reckless driving, drug and alcohol use, smoking, and risky sexual behavior (Hoyle et al., 2002). Moffitt (1993) notes that boys whose delinquent behavior persists into adulthood “take risks and do dangerous things that parents could not possibly endorse” (p. 687). Research has supported the idea that individuals high in sensation seeking underestimate the risks associated with risky behavior and are more likely than their low sensation seeking counterparts to not only try, but also repeat, a wide array of risky activities (Hoyle, et al., 2002). Newcomb and McGee (1991) note that such individuals are more antisocial and found a significant negative association between law abidance and several aspects of sensation seeking. Wilson and Daly (2006) found that members of the JDP scored significantly higher on a sensation seeking personality scale than their nonoffending peers. Washburn et al. (2007) note that such sensation seeking behavior as marijuana use was better at predicting future development of antisocial personality disorder in adolescents within the MHSP than was conduct disorder, providing evidence for the strong link between sensation seeking and antisocial behavior. There are a number of reasons to suspect that sensation seeking levels will be higher in the JDP subgroup than in the MHSP subgroup.

Types of Sensation Seeking. Research utilizing Zuckerman’s sensation seeking model yielded results suggesting that the JDP is not interested in socially desirable forms of sensation seeking, but were instead interested in the arousal of the mind and senses that result from novel situations such as social drinking, drug use, and gambling (Carroll et al., 2006; Daderman et al., 2001). This is consistent with the assertion of Moffitt (1993) that youth who engage in delinquent behavior only during adolescence are attempting to fulfill a desire for independence and material items that they associate with adulthood, but are not available to them due to the

maturity gap. Daderman et al. (2001) found that JDP members displayed high scores on three out of four of Zuckerman's sensation seeking subtypes, boredom susceptibility, experience seeking, and disinhibition, but did not display elevated scores on the thrill and adventure-seeking (TAS) subscale. The TAS subscale includes such socially acceptable forms of sensation seeking as sports like skiing and adventurous activities like skydiving or SCUBA diving. Experience seeking involves seeking new experiences through the mind and senses, such as by listening to arousing music or engaging in social nonconformity. Disinhibition involves partying and seeking social variety. Boredom susceptibility, which involves restlessness and an interest in unpredictability, and TAS are more socially acceptable forms of sensation seeking than are experience seeking and disinhibition (Hoyle et al., 2002; Newcomb & McGee, 1991). A study by Daderman et al. (2001) revealed that JDP members scored significantly higher than air force pilot recruits, another population high in sensation seeking, in the less socially acceptable types of experience seeking; however, pilot recruits scored higher than the JDP in TAS, a more socially acceptable form of sensation seeking. Research clearly shows that members of the JDP are likely to display high levels of sensation seeking, particularly in less socially acceptable forms of the construct.

Hopelessness and Sensation Seeking. The association between hopelessness and conduct problems within the JDP might be attributable to the evidence supporting a relationship between hopelessness and careless decision making, which is characteristic of the risky behavior associated with sensation seeking. Duke et al. (2011) note that youth realization of hope, purpose, and meaning in life are critical in setting the stage for healthful behavior such as the avoidance of risky behaviors that is characteristic of sensation seeking. The negative cognitive framework associated with hopelessness jeopardizes healthy decision making, paving the way

for a willingness to take physical and social risks for the sake of novel experiences, a tendency which is a component of Zuckerman's definition of sensation seeking. According to Duke et al., hopeless young people are less likely than their hopeful peers to be motivated to achieve goals and, therefore, are more likely to engage in risky behavior, such as that associated with delinquency. Washburn et al. (2007) point out that hopelessness might lead to increased risk of antisocial personality disorder by reducing concern for the consequences of antisocial behavior. As studies have consistently shown a relationship between hopelessness and an increased willingness to engage in risky behavior, research supports the idea that hopelessness is likely to contribute to high levels of sensation seeking in the JDP.

Internalizing Problems and Sensation Seeking. While Washburn et al. (2007) note that depression has been shown to increase the risk of developing antisocial personality disorder, the researchers also found that the internalizing problem of anxiety may protect against the development of antisocial personality disorder in adulthood. They suggest that the excessive worrying associated with anxiety is inconsistent with the risky behavior associated with juvenile delinquency. They also note that anxious youth might be more socially isolated than their non-anxious peers and would therefore be less likely to associate with delinquent peers. Moffitt (1993) also reports that a minority of adolescents might avoid delinquent behavior due to personal characteristics that leave them reluctant to associate with delinquent peers. These assertions suggest that the higher levels of internalizing that are found among youth within the MHSP in comparison to JDP members might explain the relatively lower levels of sensation seeking among the MHSP.

Callous Unemotional (CU) Traits and Sensation Seeking. Research findings suggest a relationship between CU traits and sensation seeking. For example, Pardini et al. (2007) report

that interpersonal callousness has been linked with lower levels of fearfulness in youth, which would contribute to an increased willingness to engage in risky behavior. The DSM-IV-TR (APA, 2000) lists impulsivity, reckless disregard for safety, deceitfulness, and lack of remorse as symptoms of antisocial personality disorder, supporting the link between sensation seeking and callousness-unemotionality. Donnellan, Ge, and Wenk (2002) found that individuals characterized by low self-control, hostility, a need for excitement and adventure, and less concern for the well being of others are at risk of criminality. The authors also found that age at first arrest is significantly correlated with measures of normative orientation and values such as communality, interest in pleasing others, responsibility, self-control, ability to follow rules, and tolerance. Several of these variables, such as low self-control, a need for excitement and adventure, responsibility, self-control, and ability to follow rules relate closely to sensation seeking. Other variables studied, such as hostility, concern for the well being of others, communality, interest in pleasing others, and tolerance are more consistent with the concept of CU traits.

Rationale for Present Study

Research indicates that the interrelationships between hopelessness, internalizing traits, externalizing traits, callous-emotional traits, and sensation seeking are complex in relation to JDP and MHSP subgroups. Research suggests that these variables are interrelated differently among JDP and MHSP subgroups. It is anticipated that while hopelessness levels will be similar within each subgroup, the profile of hopelessness as it relates to other variables will be manifested differently within the two populations included in the present study.

The present study involves the administration of scales measuring hopelessness, sensation-seeking, callous-unemotional traits, and internalizing and externalizing disorders to

members of JDP and MHSP subgroups to identify sources of individual differences in latent core profiles. Through the use of Profile Analysis via Principal Component Analysis (PAPCA), weights can be assigned to each individual, and appropriate tests can be applied to mean differences in these weights in order to determine statistically significant differences between the two groups in their relationship to core latent profiles. Researchers have noted that studies comparing these two high-risk populations are rare (Sanislow et al., 2003). Huizinga and Jakob-Chien (1998) note, “It is surprising that there is very little empirical knowledge about the co-occurrence of serious and violent juvenile offending and mental health problems in juvenile populations” (p. 52). Researchers have noted the importance of developing a psychological and behavioral profile of members of the JDP (Martin et al., 2008).

Washburn et al. (2007) note that mental health characteristics of clinical samples may not generalize to the JDP since many members of the JDP do not receive mental health services. Although Washburn et al. found that some mental disorders in the JDP were strong predictors of later antisocial personality disorder, none were adequate as individual screeners for later development of the disorder. They add that conduct disorder is a relatively poor predictor of future development of antisocial personality disorder, suggesting the importance of examining variables other than externalizing problems. Such findings support the value of profile analysis in obtaining latent core profiles.

These findings support the need for identification of a mental health profile for the JDP rather than a focus on one particular mental health diagnosis or psychopathological problem. The presence of high hopelessness levels in both the JDP and the MHSP is well established, suggesting that attempts to determine significant differences between levels of hopelessness alone is likely insufficient for successful distinction between the two groups. It is likely,

however, that hopelessness covaries with other important psychological variables differently in some clinical groups compared to others. For example, hopelessness is likely to show a stronger relationship with internalizing problems among the MHSP than in their offending counterparts. Members of the JDP, on the other hand, are more likely to express their hopelessness through externalizing behaviors, decreased empathy and concern for others as evidenced by higher levels of CU traits, and increased sensation seeking tendencies.

Research Questions and Study Hypotheses

A review of existing literature and research about the psychological characteristics of the JDP and the MHSP suggests that hopelessness levels are high within both populations. Although such an assertion requires further exploration, such a review also indicates that JDP members might underreport their feelings of hopelessness in an effort to appear “tough” (Shelton, 2004). Findings also show that MHSP members are just as likely to report emotional distress on direct measures as they are on indirect measures (Brinkman et al., 2006), suggesting more openness and comfort in disclosing such issues among the MHSP. Therefore, it is anticipated that the differences in overall hopelessness levels in the MHSP will not be significantly different from those in the JDP.

Since variation in hopelessness is unlikely to be sufficient to distinguish between the two populations, other variables must be taken into consideration to draw distinctions between the two groups. Research findings suggest that young people within the MHSP deal with and express their hopelessness differently than do members of the JDP. For example, it is likely that those within the MHSP express their hopelessness through internalizing and suicidal thoughts and behavior. JDP members, on the other hand, tend to be more externalizing, more callous, less empathetic, and more willing to take advantage of others without feeling remorse. They also

have greater needs for excitement and are more likely to engage in careless decision making, contributing to increased risky sensation seeking behavior. It is likely that hopelessness within the JDP is manifested through such behaviors and social interaction styles. Since the relationship between hopelessness and other variables is likely to be complex, a statistical procedure for extracting latent “core profiles” will be applied to data from these two groups.

Profile Analysis via Principal Components Analysis (PAPCA) (Kim, 2013; Stout Sosinsky & Kim, 2013) will allow for the extraction of core profiles from all participants’ performance on the six variables. Latent core profiles reflect common patterns of peaks and valleys in variables that characterize a group. By regressing each person’s observed variable scores onto the variable loadings for a principal component, person weights can be estimated that reflect the relationship between an individual’s observed profile and the latent core profile. Weights representing the nature of the relationship of each group’s subjects to each core profile could then be compared to assess the presence of a significant difference between the two groups.

The Research Questions and Study Hypotheses utilized in the proposed research are organized as follows:

Research Question #1: Are hopelessness levels similar in JDP and MHSP subgroups?

(Hypothesis 1)

H₀: There is no significant difference in mean level of hopelessness in the JDP and MHSP subgroups, as measured by the Hopelessness Scale for Children, Third Edition.

H₁: There is a significant difference in mean level of hopelessness in the JDP and MHSP subgroups, as measured by the Hopelessness Scale for Children, Third Edition.

Research Questions #2: Are levels of internalizing, externalizing, delinquency, callous-unemotional (CU) traits, and sensation seeking different between the JDP and MHSP?

(Hypothesis 2)

H₀: There is no significant difference in mean level of internalizing scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report Internalizing Scale.

H₁: There is a significant difference in mean level of internalizing scale scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report Internalizing Scale.

(Hypothesis 3)

H₀: There is no significant difference in mean level of externalizing scale scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report Externalizing Scale.

H₁: There is a significant difference in mean level of externalizing scale scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report Externalizing Scale.

(Hypothesis 4)

H₀: There is no significant difference in mean level of Callous-Unemotional Trait scores in the JDP and MHSP subgroups, as measured by the Index of Callous-Unemotional Traits.

H₁: There is a significant difference in mean level of Callous-Unemotional Trait scores in the JDP and MHSP subgroups, as measured by the Index of Callous-Unemotional Traits.

(Hypothesis 5)

H₀: There is no significant difference in mean level of Sensation-Seeking scores in the JDP and MHSP subgroups, as measured by the Brief Sensation Seeking Scale.

H₁: There is a significant difference in mean level of Sensation-Seeking scores in the JDP and MHSP subgroups, as measured by the Brief Sensation Seeking Scale.

H₀: There is no significant difference in mean levels delinquency in the JDP and MHSP subgroups, as measured by the Self Report Delinquency Checklist.

H₁: There is a significant difference in mean level of delinquency in the JDP and MHSP subgroups, as measured by the Self Report Delinquency Checklist.

Research Question #3: Is the relationship between hopelessness and each of the other five variables significantly different between the JDP and MHSP?

(Hypothesis 7)

H₀: There is no significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of internalizing traits.

H₁: There is a significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of internalizing traits.

(Hypothesis 8)

H₀: There is no significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of externalizing traits.

H₁: There is a significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of externalizing traits.

(Hypothesis 9)

H₀: There is no significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of callous-unemotional traits.

H₁: There is a significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of callous-unemotional traits.

(Hypothesis 10)

H₀: There is no significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of sensation-seeking scores.

H₁: There is a significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and level of sensation-seeking scores.

(Hypothesis 11)

H₀: There is no significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and delinquency.

H₁: There is a significant difference between JDP and MHSP subgroups in the correlation between hopelessness level and delinquency.

Research Question #4: Can the levels of hopelessness, internalizing, externalizing, delinquency, CU traits, and sensation seeking scores obtained from the two groups help predict (at a level greater than chance) whether a subject belongs to the MHSP or JDP subgroup?

(Hypothesis 12)

H₀: Using binary logistic regression, the six variables do not predict whether a subject belongs to the JDP or MHSP group. $[\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6] = 0$.

H_1 : Using binary logistic regression, the six variables predict whether a subject belongs to the JDP or MHSP group. $[\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6] \neq 0$.

Research Question #5: Using Profile Analysis via Principal Component Analysis (PAPCA), what latent core profiles can be empirically extracted from the complete dataset for the entire group (including both the JDP and MHSP subgroups)?

Research Question #6: Is there a difference in the mean individual weights for latent core profiles (extracted by PAPCA) between the JDP and MHSP subgroups?

(Hypothesis 13)

H₀: There is no significant difference in mean individual core profile weights between the JDP and MHSP subgroups.

H_1 : There is a significant difference in mean individual core profile weights between the JDP and MHSP subgroups.

CHAPTER THREE

METHODS

Participants

The entire sample included 40 subjects. The Mental Health Services Population (MHSP) subsample included 22 children with a psychiatric diagnosis who were placed at the University of Missouri Psychiatric Center (MUPC) in Columbia, Missouri. Common diagnoses among the group included major depression, bipolar disorder, attention-deficit/hyperactivity disorder, oppositional defiant disorder, and generalized anxiety disorder. Ages of participants within this population ranged from 13 through 16 years with a mean age of 14.7 years. The clinical sample consisted of 77% Caucasian youth, 9% African-American youth, and 9% Hispanic youth. Five percent of participants described their race as “Other.” Thirty six percent were boys and 64% were girls. 23% of the MHSP sample had been in juvenile detention at some point.

The Juvenile Detainee Population (JDP) subsample consisted of 18 children placed in either the Robert L. Perry Juvenile Justice Center (RLP JJC) in Columbia, Missouri or the St. Louis City Juvenile Detention Center (SLC JDC) in St. Louis, Missouri. These facilities agreed to participate in the study on the condition that participants not be asked about their offenses of record. Ages of participants within this population ranged from 13 through 16 years with a mean age of 15.2 years. The juvenile offender sample consisted of 39% Caucasian youth, 39% African-American youth, and 5.5% Hispanic youth. Eleven percent of participants listed their race as “Other” and 5.5% did not list their race. Sixty one percent were boys and 39% were girls. Seventeen percent of the JDP sample had been psychiatrically hospitalized at some point. Final demographic information is reported in Table A.

Table A: Descriptive Statistics for Adolescent Juvenile Delinquent and Mental Health Samples

	Age	Grade	Number of Psychiatric Hospitalizations	Number of Times Held in Juvenile Detention
Juv. Det. Mean	15.22	9.67	0.47	2.11
Juv. Det. N	18 (7 F, 11 M)	18 (7 F, 11 M)	17 (7 F, 10 M)	18 (7 F, 11 M)
Juv. Det. SD	1.003	1.283	1.463	1.530
MUPC Mean	14.73	9.18	1.91	0.32
MUPC N	22 (14 F, 8 M)	22 (14 F, 8 M)	22 (14 F, 8 M)	22 (14 F, 8 M)
MUPC SD	1.120	1.140	1.151	0.646
Total Mean	14.95	9.40	1.21	1.12
Total N	40 (21 F, 19 M)	40 (21 F, 19 M)	39 (21 F, 18 M)	40 (21 F, 19 M)
Total Std. Dev.	1.085	1.215	1.468	1.436

Juv. Det.: Juvenile Detention Center

MUPC: University of Missouri Psychiatric Center

Demographic information was obtained through the Youth Self Report (YSR) and Service Assessment for Children and Adolescents (SACA)

Instrumentation

The Hopelessness Scale for Children – Third Edition (HSC-III). The HSC-III includes most of the items on the HSC-R, which is an unpublished scale modified from the original HSC by the author of the present study. There were some modifications made between the HSC-R and HSC-III. The HSC-R demonstrated high reliability (.88) and a mean item-total correlation (.53) that was higher than that of the original HSC (Ellis, 2011). The social desirability items proved to be a valuable addition (Ellis, 2011) to the HSC-R and were retained on the HSC-III. Two HSC-R items that were not significantly correlated with children's total hopelessness scores were not included on the HSC-III (Ellis, 2011). When considered jointly, factor analysis and Pearson product-moment correlations showed that four other items could be omitted from the HSC-R without sacrificing psychometric integrity, and these items were

therefore not included on the HSC-III (Ellis, 2011). All eight lie items were retained resulting in 26 total items on the HSC-III. The original HSC was written at a second grade reading level (Fischer & Corcoran, 1994) and Kazdin and his colleagues have administered the HSC orally to children as young as six years old (Bowman, 1993). The HSC-R was administered to children as young as eight years old without any problems in comprehension (Ellis, 2011). The HSC-III can be administered individually or in groups and requires approximately 10 minutes of completion time (Ellis, 2011).

Achenbach Youth Self-Report (YSR) Internalizing and Externalizing Scales. The Achenbach System of Empirically Based Assessment (ASEBA) Youth Self-Report (YSR) (Achenbach, 2001) is an instrument that measures a variety of psychological factors. The ASEBA YSR includes 112 items in which children rate the strength of their agreement with certain statements according to the past six months. Response options include “not true,” “somewhat or sometimes true,” and “very true or often true.” Scores are provided for syndrome scales, which include anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior. The YSR’s internalizing score, which measures problems that occur mainly within the self, consists of the anxious/depressed, withdrawn/depressed, and somatic complaints syndrome scales. The YSR’s externalizing score, which is comprised of problems that mainly involve conflicts with other people and with their expectations for the child, consists of the rule-breaking behavior and aggressive behavior syndrome scales. Finally, the YSR also provides DSM-oriented scales, which include affective problems, anxiety problems, somatic problems, attention deficit/hyperactivity problems, oppositional defiant problems, and conduct problems (Achenbach & Rescorla, 2001).

Although the YSR includes a number of items in which children are asked for information about their hobbies, teams, and chores, and the sports in which they like to participate, children in the present study will not be asked to provide such information. Similarly, participants in the present study will not be asked to complete items regarding their academic performance, social habits, illnesses, concerns, and best characteristics. None of these items contribute to the YSR's syndrome scales or DSM-oriented scales. The entire YSR, including questions not utilized in the present study, requires 15-20 minutes of completion time. The significantly briefer YSR used in the present study will require approximately 10 minutes.

The YSR is appropriate for children from 11 years of age to 18 years of age. It can be administered orally or completed without assistance by children with fifth-grade reading skills. The YSR scales are based on approximately 2,500 high-scoring youths and normed on approximately 1,000 non-referred youths (Achenbach & Rescorla, 2001). An investigation of internal consistency regarding the YSR's empirically based problem scales yielded Chronbach's alpha coefficients ranging from .71 to .95. The YSR's DSM-oriented scales have Chronbach's alpha coefficients ranging from .67 to .83 (Achenbach & Rescorla, 2011).

Index of Callous-Unemotional Traits (ICU). The ICU (See Appendix) was developed based on the callous-unemotional (CU) scale from the Antisocial Process Screening Device (APSD) (Essau, Sasagawa, & Frick, 2006). The APSD has been shown to designate a unique group of antisocial youth who show a number of characteristics associated with the construct of psychopathy (Essau et al., 2006). The ICU was created utilizing the four APSD items that loaded consistently onto the CU scale of the APSD. Three positively worded and three negatively worded items were developed from each of the four APSD items, resulting in 24 items. Items were read by several children, adolescents, and adults to ensure they were clear

(Essau et al., 2006). The ICU utilizes a four-point Likert scale ranging from zero (not at all true) to three (definitely true).

A factor analysis of the ICU revealed three factors (Essau et al., 2006). One factor consisted of items related to a callous attitude toward others and was labeled “callousness.” A second factor was made up of items showing a lack of caring about performance and was labeled “uncaring.” The third factor consisted of items showing a lack of emotional expression and was labeled “unemotional” (Essau et al., 2006). The ICU has acceptable internal consistency with a coefficient alpha of .77. The callousness and uncaring subscales also have acceptable internal consistency with coefficient alphas of .70 and .73 respectively. The unemotional factor has marginal internal consistency with a coefficient alpha of .64 (Essau et al., 2006). The relatively low alpha for the unemotional subscale is likely related to its short test length; it includes only five items (Essau et al., 2006).

Essau et al. (2006) found that many aspects of ICU scores correlate significantly with the externalizing subscale of the YSR in a sample of German school students between 13 and 18 years of age. For example, a high correlation ($r = .37, p < .001$) was found between callousness items and the YSR’s externalizing scale. Items loading onto the ICU’s uncaring factor also had a significant correlation ($r = .26, p < .001$) with externalizing as measured by the YSR.

Interestingly, the unemotional subscale of the ICU was negatively correlated with the YSR’s externalizing subscale ($r = -.11, p < .001$). The uncaring ICU subscale was not significantly correlated with the YSR’s internalizing subscale, but the callousness subscale was modestly correlated with internalizing ($r = .12, p < .01$) and the unemotional subscale shared a weak negative correlation ($r = -.07, p < .05$). Essau et al. (2006) report a strong correlation between ICU total scores and conduct disorder symptoms ($r = .44, p < .001$), and a strong correlation

between ICU total scores and scores from the Antisocial Behavior Subscale of the Social Health Assessment (SAHA) ($r = .41, p < .001$). Finally, ICU total scores have been shown to be significantly correlated with sensation seeking as measured by the Brief Sensation Seeking Scale (BSSS) symptoms ($r = .19, p < .001$), particularly the disinhibition subscale of the BSSS ($r = .32, p < .001$). This finding is consistent with developmental research suggesting that a temperament related to a lack of behavioral inhibitions can place a child at risk for problems in developing empathy and guilt (Essau et al., 2006).

Brief Sensation Seeking Scale (BSSS). Sensation seeking, the need for novel, varied, and complex experiences and situations and the willingness to take physical and social risks for the sake of such experiences (Arnett, 1992; Hoyle et al., 2002; Zuckerman, 1994), is a dispositional risk factor for various problem behaviors (Hoyle et al., 2002). Psychometric analyses of the BSSS (See Appendix) revealed suitable item characteristics and internal consistency with children of either sex and any ethnicity between 13 and 17 years of age (Hoyle et al., 2002). Although many past studies of sensation seeking have utilized the Sensation Seeking Scale (SSS), developed by Zuckerman, Eysenck, and Eysenck, it includes 40 items and is significantly longer than the eight-item BSSS. The SSS includes four subscales: thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility, and the BSSS is one of the few sensation seeking scales that have been developed since the SSS to include all four aspects of sensation seeking (Hoyle et al., 2002).

The BSSS was created with a sample of 1263 students at a middle school and high school. It utilized items adapted from the SSS, Form V and incorporated a five-point Likert-type response format with options ranging from strongly disagree to strongly agree (Hoyle et al., 2002). Each of Zuckerman's four primary dimensions of sensation seeking is represented by two

items on the BSSS. Standard deviations are relatively consistent across the eight items on the BSSS and its internal consistency is .76 (Hoyle et al., 2002). An analysis of item-total correlations showed moderate values ranging from .31 to .58, indicating that the BSSS covers the entire breadth of the sensation seeking construct. The negative correlation between sensation seeking and law abidance is substantial ($r = -.41, p < .01$) and the positive correlation between BSSS scores and deviance is moderate ($r = .34, p < .01$), supporting the idea that high sensation seekers are generally at risk for problem behaviors (Hoyle et al., 2002).

Service Assessment for Children and Adolescents (SACA). The SACA (See Appendix) is a brief survey originally created by Leaf et al. (1996) to investigate the types of services utilized by children and adolescents. The SACA used in the present study is a version of the instrument that was modified by Gould et al. (2009) to reflect service use experienced by individuals prior to and concurrent with the study. The instrument is not normed and Gould et al. suggest that it is useful for children as young as 11 years of age. The instrument was amended in the present study to include services related to the juvenile justice system. The SACA provided information about how many members of the MHSP have been involved in the juvenile justice system and how many members of the JDP have received mental health services. The SACA allows for an assessment of the percentage of the MSHP that have been held in juvenile detention at some point, and the percentage of the JDP that have undergone a psychiatric hospitalization at some point. Such data can illustrate the degree of potential overlap between the two groups.

Self Report Delinquency Checklist (SRD). The SRD (Dunford & Elliott, 1984) (See Appendix) is a measure of delinquent behaviors in which the youth has engaged over the past

year. It is reliable and valid, and a measure of internal consistency resulted in an alpha coefficient of .90 (Luthar, Shoum, & Brown, 2006). The SRD includes items assessing general delinquency, drug use, status offenses, violent offenses, and property offenses. Those completing the SRD are simply asked to report the number of times he has engaged in a particular behavior over the past year. To standardize scoring of the SRD for the purposes of the present study, subject responses were coded. Each offense that was reported to have never occurred within the past year was coded as “0.” Offenses that were reported to have occurred between 1 – 5 times within the past year were coded as “1.” Offenses that were reported to have occurred between 6 – 10 times within the past year were coded as “2.” Offenses that were reported to have occurred between 11 – 25 times within the past year were coded as “3.” Offenses that were reported to have occurred 26 – 50 times within the past year were coded as “4.” Offenses that were reported to have occurred more than 50 times within the past year were coded as “5.” The SRD used in the present study was amended to include a six-item self-report measure in which participants were asked to report the number of close friends who have committed several types of delinquent acts. These include breaking into a vehicle or building to steal something, using a weapon or threatening to use a weapon, and stealing something worth more than \$50.

Procedures

Approval for the study was obtained from the Institutional Review Board (IRB) of the University of Missouri (MU). Following IRB approval, sites were contacted and permission was sought to gather data at the particular facilities. In-service training was offered by the author as an incentive for sites to participate. Individualized written permission from participants’ parents

or guardians was obtained (See Appendix). Oral assent was obtained from participants (See Appendix), and participants were told that they were not required to participate if they would rather not do so. Participants were provided with an opportunity to participate in a drawing to attempt to win one of five \$10.00 gift cards to a local department store. Children were informed that they were not required to participate in the study and that they could be included in the drawing regardless of their participation. The author of the present study traveled to sites at which permission had been given to gather data. Instruments were administered individually and instructions for instruments were read by the author. Participants were asked to read two sample items aloud to ensure an appropriate reading capability. They were encouraged to ask questions during their completion of instruments.

Confidentiality was be ensured through utilization of a coding system. Particular codes corresponded to particular placement facilities. Each participant also had his own unique code so that each participant's instruments could be matched with one another. Participants' names were not included on questionnaires. Completed instruments and permission slips were stored separately and both were secured in locked cabinets at the home of the author of the present study.

Data Analysis

Hypothesis 1. Hypothesis one evaluates whether a statistically significant difference in hopelessness levels exists between subgroups. Hopelessness is measured by the Hopelessness Scale for Children, Third Edition (HSC-III). In order to test equality of variances, Levene's test will be used. If the significance level after Levene's test for equality of variances is below the alpha level of .05, the null hypothesis that all variances are equal will be rejected and equality of

variances will not be assumed. If hypothesis one is supported, a t-test for independent groups will show a significant difference in hopelessness between the two subgroups at an alpha level of .05. If hypothesis one is not supported, the t-test will not be significant, which will illustrate no significant difference in hopelessness levels in the JDP and MHSP.

Hypothesis 2. Hypothesis two evaluates whether there is a significant difference in mean levels of internalizing scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report (YSR) Internalizing Scale. In order to test equality of variances, Levene's test will be used. If the significance level after Levene's test for equality of variances is below the alpha level of .05, the null hypothesis that all variances are equal will be rejected and equality of variances will not be assumed. If hypothesis two is supported, a t-test for independent groups will show a significant difference in internalizing between the two subgroups at an alpha level of .05.

Hypothesis 3. Hypothesis two evaluates whether there is a significant difference in mean levels of externalizing scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report (YSR) Externalizing Scale. In order to test equality of variances, Levene's test will be used. If the significance level after Levene's test for equality of variances is below the alpha level of .05, the null hypothesis that all variances are equal will be rejected and equality of variances will not be assumed. If hypothesis three is supported, a t-test will show a significant difference in externalizing between the two subgroups at an alpha level of .05.

Hypothesis 4. Hypothesis four evaluates whether there is a significant difference in mean levels of callous-unemotional (CU) traits in the JDP and MHSP subgroups, as measured by the Index of Callous-Unemotional Traits (ICU). In order to test equality of variances, Levene's test will be used. If the significance level after Levene's test for equality of variances is below

the alpha level of .05, the null hypothesis that all variances are equal will be rejected and equality of variances will not be assumed. If hypothesis four is supported, a t-test will show a significant difference in CU traits between the two subgroups at an alpha level of .05.

Hypothesis 5. Hypothesis five evaluates whether there is a significant difference in mean levels of sensation seeking traits in the JDP and MHSP subgroups, as measured by the Brief Sensation Seeking Scale (BSSS). In order to test equality of variances, Levene's test will be used. If the significance level after Levene's test for equality of variances is below the alpha level of .05, the null hypothesis that all variances are equal will be rejected and equality of variances will not be assumed. If hypothesis five is supported, a t-test will show a significant difference in sensation seeking between the two subgroups at an alpha level of .05.

Hypothesis 6. Hypothesis six evaluates whether there is a significant difference in mean levels delinquency in the JDP and MHSP subgroups, as measured by the Self-Report Delinquency Checklist (SRD). In order to test equality of variances, Levene's test will be used. If the significance level after Levene's test for equality of variances is below the alpha level of .05, the null hypothesis that all variances are equal will be rejected and equality of variances will not be assumed. If hypothesis six is supported, a t-test will show a significant difference in sensation seeking between the two subgroups at an alpha level of .05.

Hypothesis 7. Hypothesis seven evaluates whether there is a significant difference in the correlation between hopelessness levels and levels of internalizing traits between the JDP and MHSP subgroups. If hypothesis seven is confirmed, a Pearson correlation matrix will reveal an intercorrelation between hopelessness and internalizing that is significant at the .05 level in one group, but not the other.

Hypothesis 8. Hypothesis eight evaluates whether there is a significant difference in the correlation between hopelessness levels and levels of externalizing traits between the JDP and MHSP subgroups. If hypothesis eight is confirmed, a Pearson correlation matrix will reveal an intercorrelation between hopelessness and externalizing that is significant at the .05 level in one group, but not the other.

Hypothesis 9. Hypothesis nine evaluates whether there is a significant difference in the correlation between hopelessness levels and levels of callous-unemotional (CU) traits between the JDP and MHSP subgroups. If hypothesis nine is confirmed, a Pearson correlation matrix will reveal an intercorrelation between hopelessness and CU traits that is significant at the .05 level in one group, but not the other.

Hypothesis 10. Hypothesis 10 evaluates whether there is a significant difference in the correlation between hopelessness levels and levels of sensation seeking between the JDP and MHSP subgroups. If hypothesis 10 is confirmed, a Pearson correlation matrix will reveal an intercorrelation between hopelessness and sensation that is significant at the .05 level in one group, but not the other.

Hypothesis 11. Hypothesis 11 evaluates whether there is a significant difference in the correlation between hopelessness levels and levels of delinquency between the JDP and MHSP subgroups. If hypothesis 11 is confirmed, a Pearson correlation matrix will reveal an intercorrelation between hopelessness and delinquency that is significant at the .05 level in one group, but not the other.

Hypothesis 12. Hypothesis 12 evaluates whether levels of hopelessness, internalizing, externalizing, delinquency, callous-unemotional (CU) traits, and sensation seeking can help predict whether a subject belongs to the MHSP or JDP. This will be confirmed by binary logistic

regression. If hypothesis 12 is supported, an omnibus test of model coefficients will reveal that the model including the six variables fits the equation better than a model with no predictors at an alpha level of .05. Also, hypothesis eight will be supported if logistic regression coefficients are significant at the .05 level for each of the six variables.

Hypothesis 13. Hypothesis 13 evaluates whether there is a difference in the mean individual weights for latent core profiles between the JDP and MHSP subgroups. It is expected that, when both groups are combined, there will be a significant difference at an alpha level of .05 in the mean subject weights between the JDP and MHSP subgroups. Profile Analysis via Principal Components Analysis (PAPCA) (Kim, 2013; Stout Sosinsky & Kim, 2013) will allow for the extraction of latent core profiles from all participants' performance on the six variables. Latent core profiles reflect common patterns of peaks and valleys in variables that characterize a group. By regressing each person's observed variable scores onto the variable loadings for a principal component, person weights can be estimated that reflect the relationship between an individual's observed profile and the latent core profile.

It has been shown that unrotated principal components work as summative core profiles that encompass individual person score profiles in a population (Kim, 2013). In PAPCA, between-person variance and within-person variance are considered to determine the number of core profiles, or components, that will be extracted. A component is considered a level-effect profile when a high percentage of its variance is accounted for by between-person variance (which is typically the first component extracted). On the other hand, components are viewed as pattern-effect profiles when a high percentage of their variance is explained by within-person variance (typically components extracted after the first component; Kim, 2013). The extraction and selection of pattern-effect profiles, in conjunction with regression procedures, allow for the

determination of weights that represent the nature of each subject's relationship to each core profile.

If hypothesis 13 is supported, PAPCA will result in statistically significant differences at an alpha level of .05 in mean participant weights between the two groups for each core profile.

Hypothesis 13 will be supported further if a point-biserial correlation results in significant relationships between subject group and subject weight in relation to each core profile at the .05 level.

CHAPTER FOUR

RESULTS

Hypothesis 1

In hypothesis one, it was proposed that a statistically significant difference in hopelessness levels exists between subgroups, as measured by the Hopelessness Scale for Children, Third Edition (HSC-III). Means and standard deviations were determined for each group's scores on all study variables (See Table B). An independent samples t-test was conducted to investigate the presence of significant differences in each group's scores on all six scales (See Table C). A Levene's test for equality of variances was conducted with a significance level of .213, so equality of variances was assumed. The MHSP scored an average of 13.679 points higher on the HSC-III than did the JDP, resulting in a significant difference in hopelessness levels in the two groups ($p = .000$).

Table B: Descriptive Results from Administration of Six Scales to Adolescent Juvenile Delinquent (JD) and Mental Health (MH) Samples

Scale*	N		Full Range of Possible Scores		Obtained Score Range		Mean (Standard Deviation)	
	JD	MH	JD	MH	JD	MH	JD	MH
Hopelessness Scale for Children, 3 rd Edition (HSC-III)	17	22	18-90	18-90	19-54	31-78	35.41 (9.049)	49.09 (11.836)
Achenbach Youth Self - Report Internalizing Scale (YSR Int)	18	22	0-100	0-100	35-75	12-91	54.83 (11.557)	61.59 (16.729)
Achenbach Youth Self - Report Externalizing Scale (YSR Ext)	18	22	0-100	1-100	51-80	21-83	66.44 (7.398)	61.59 (13.618)
Self Report Delinquency Questionnaire (SRD)	18	22	0-225	0-225	8-84	0-111	37.17 (20.876)	22.14 (27.995)
Number of Delinquent Friends	18	22	0-54	0-54	0-53	2-43	20.06 (12.369)	10.55 (13.955)
Index of Callous-Unemotional Traits (ICU)	17	22	0-72	0-72	7-38	12-41	23.29 (9.157)	26.64 (8.845)
Brief Sensation Seeking Scale (BSSS)	18	22	4-20	4-20	4-20	7-20	13.67 (4.029)	13.73 (3.210)

* See text for description of individual item scoring for each scale

Hypothesis 2

In hypothesis two, it was proposed that there is a significant difference in mean levels of internalizing scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report (YSR) Internalizing Scale. An independent samples t-test was conducted to investigate the presence of significant differences in each group's scores on all six scales (See Table C). A Levene's test for equality of variances was conducted with a significance level of .358, so equality of variances was assumed. Although the MHSP scored an average of 6.758 points higher on the YSR Internalizing Scale than did the JDP, the difference between the internalizing levels of the two subgroups was not statistically significant ($p = .155$).

Hypothesis 3

In hypothesis three, it was proposed that there is a significant difference in mean levels of externalizing scores in the JDP and MHSP subgroups, as measured by the Achenbach Youth Self-Report (YSR) Externalizing Scale. An independent samples t-test was conducted to investigate the presence of significant differences in each group's scores on all six scales (See Table C). A Levene's test for equality of variances was conducted with a significance level of .041. This significance level is below the previously selected alpha level of .05, so equality of variances could not be assumed. Although the JDP scored an average of 5.126 points higher on the YSR Externalizing Scale than did the MHSP, the difference between the externalizing levels of the two subgroups was not statistically significant ($p = .141$).

Hypothesis 4

In hypothesis four, it was proposed that there is a significant difference in mean levels of callous-unemotional (CU) scores in the JDP and MHSP subgroups, as measured by the Index of Callous-Unemotional Traits (ICU). An independent samples t-test was conducted to investigate the presence of significant differences in each group's scores on all six scales (See Table C). A Levene's test for equality of variances was conducted with a significance level of .957, so equality of variances was assumed. The difference between the levels of CU traits in the two subgroups was not statistically significant ($p = .257$).

Hypothesis 5

In hypothesis five, it was proposed that there is a significant difference in mean levels of sensation seeking scores in the JDP and MHSP subgroups, as measured by the Brief Sensation Seeking Scale (BSSS). An independent samples t-test was conducted to investigate the presence of significant differences in each group's scores on all six scales (See Table C). A Levene's test for equality of variances was conducted with a significance level of .518, so equality of variances was assumed. The difference between the levels of sensation seeking in the two subgroups was not statistically significant ($p = .958$).

Hypothesis 6

In hypothesis six, it was proposed that there is a significant difference in mean levels of delinquency scores in the JDP and MHSP subgroups, as measured by the Self-Report Delinquency Checklist (SRD). An independent samples t-test was conducted to investigate the presence of significant differences in each group's scores on all six scales (See Table C). A

Levene's test for equality of variances was conducted with a significance level of .491, so equality of variances was assumed. Although the JDP scored an average of 9.510 points higher on the SRD than did the MHSP, the difference between the two subgroups' scores was not significant at the .05 level ($p = .067$).

Table C: Independent Samples t-Test to Determine Significant Differences in Means between Adolescent Juvenile Delinquent and Mental Health Samples

Instrument	Mean Difference (MH – JD)	t	Sig. (Two-tailed)
YSR Internalizing (DF = 38)	6.758	1.452	0.155
YSR Externalizing (DF = 33.419)	-5.126	-1.508*	0.141
YSR Total Problems (DF = 38)	3.909	1.303	0.200
SRD Total Delinquency (DF = 38)	-15.030	-1.889	0.067
SRD # of Delinquent Friends (DF = 38)	-9.510	-2.255	0.030*
HSC Hopelessness (DF = 37)	13.679	3.952	0.000**
HSC Lie (DF = 37)	-0.166	-0.261	0.796
ICU Callous-Unemotional Traits (DF = 37)	3.342	1.152	0.257
BSSS Sensation Seeking (DF = 38)	0.061	0.053	0.958

** = Correlation is significant at the 0.01 level (Two-tailed)

* = Correlation is significant at the 0.05 level (Two-tailed)

* = Equal Variances Not Assumed (Levene's F test = 4.471, Sig. = .041)

DF = Degrees of Freedom

Hypothesis 7

In hypothesis seven, it was proposed that there is a significant difference in the correlation between hopelessness levels and levels of internalizing traits between the JDP and MHSP subgroups. A correlation matrix was created to display correlations between scores on all variables for the entire group (See Table D) and for each separate subgroup (See Tables E and F). Although the correlation between hopelessness and internalizing was not statistically significant within the JDP subgroup ($p = .721$), the correlation between the two variables was significant within the MHSP subgroup ($p = .009$).

Hypothesis 8

In hypothesis eight, it was proposed that there is a significant difference in the correlation between hopelessness levels and levels of externalizing traits between the JDP and MHSP subgroups. A correlation matrix was created to display correlations between scores on all variables for the entire group (See Table D) and for each separate subgroup (See Tables E and F). Although the correlation between hopelessness and externalizing was not statistically significant within the JDP subgroup ($p = .763$), the correlation between the two variables was significant within the MHSP subgroup ($p = .014$).

Hypothesis 9

In hypothesis nine, it was proposed that there is a significant difference in the correlation between hopelessness levels and levels of callous-unemotional (CU) traits between the JDP and MHSP subgroups. A correlation matrix was created to display correlations between scores on all variables for the entire group (See Table D) and for each separate subgroup (See Tables E and

F). Although the correlation between hopelessness and CU traits was not statistically significant within the JDP subgroup ($p = .258$), the correlation between the two variables was significant within the MHSP subgroup ($p = .015$).

Hypothesis 10

In hypothesis 10, it was proposed that there is a significant difference in the correlation between hopelessness levels and levels of sensation seeking between the JDP and MHSP subgroups. A correlation matrix was created to display correlations between scores on all variables for the entire group (See Table D) and for each separate subgroup (See Tables E and F). The correlation between hopelessness and sensation seeking was not statistically significant within the JDP subgroup ($p = .473$) or the MHSP subgroup ($p = .245$).

Hypothesis 11

In hypothesis 11, it was proposed that there is a significant difference in the correlation between hopelessness levels and levels delinquency between the JDP and MHSP subgroups. A correlation matrix was created to display correlations between scores on all variables for the entire group (See Table D) and for each separate subgroup (See Tables E and F). Although the correlation between hopelessness and delinquency was not statistically significant within the JDP subgroup ($p = .150$), the correlation between the two variables was significant within the MHSP subgroup ($p = .009$).

Table D: Pearson Correlation Matrix for the Total Sample on Data from All Six Scales

	HSC-III	YSR Int.	YSR Ext.	SRD	ICU	BSSS
HSC-III						
Correlation	1.00	.460**	.212	.054	.448**	.060
Significance		.003	.196	.745	.005	.717
N	39	39	39	39	38	39
YSR Int.						
Correlation	.460**	1.00	.480**	.027	.111	.018
Significance	.003		.002	.870	.500	.911
N	39	40	40	40	39	40
YSR Ext.						
Correlation	.212	.480**	1.00	.576*	.426**	.329*
Significance	.196	.002		.000	.007	.038
N	39	40	40	40	39	40
SRD						
Correlation	.054	.027	.576**	1.00	.275	.507**
Significance	.745	.870	.000		.090	.001
N	39	40	40	40	39	40
ICU						
Correlation	.448**	.111	.426**	.275	1.00	.535**
Significance	.005	.500	.007	.090		.000
N	38	39	39	39	39	39
BSSS						
Correlation	.060	.018	.329*	.507**	.535**	1.00
Significance	.717	.911	.038	.001	.000	
N	39	40	40	40	39	40

HSC-III = Hopelessness Scale for Children, 3rd Edition

YSR Int. = Achenbach Youth Self-Report Internalizing Scale

YSR Ext. = Achenbach Youth Self-Report Externalizing Scale

SRD = Self Report Delinquency Questionnaire

ICU = Index of Callous-Unemotional Traits

BSSS = Brief Sensation Seeking Scale

** = Correlation is significant at the 0.01 level (Two-tailed)

* = Correlation is significant at the 0.05 level (Two-tailed)

Table E: Pearson Correlation Matrix for the JD (Juvenile Delinquent) Sample on Data from the HSC-III and the Other Five Scales

	HSC-III	YSR Int.	YSR Ext.	SRD	ICU	BSSS
HSC-III						
Correlation	1.00	.091	.077	-.353	.281	-.181
Significance		.721	.763	.150	.258	.473
N	18	18	18	18	18	18
YSR Int.						
Correlation	.091	1.00	.182	-.083	-.383	-.176
Significance	.721		.470	.743	.116	.486
N	18	18	18	18	18	18
YSR Ext.						
Correlation	.077	.182	1.00	.576*	.061	.181
Significance	.763	.470		.012	.811	.473
N	18	18	18	18	18	18
SRD						
Correlation	-.353	-.083	.576*	1.00	.168	.351
Significance	.150	.743	.012		.505	.153
N	18	18	18	18	18	18
ICU						
Correlation	.281	-.383	.061	.168	1.00	.651**
Significance	.258	.116	.811	.505		.003
N	18	18	18	18	18	18
BSSS						
Correlation	-.181	-.176	.181	.351	.651**	1.00
Significance	.473	.486	.473	.153	.003	
N	18	18	18	18	18	18

HSC-III = Hopelessness Scale for Children, 3rd Edition

YSR Int. = Achenbach Youth Self-Report Internalizing Scale

YSR Ext. = Achenbach Youth Self-Report Externalizing Scale

SRD = Self Report Delinquency Questionnaire

ICU = Index of Callous-Unemotional Traits

BSSS = Brief Sensation Seeking Scale

** = Correlation is significant at the 0.01 level (Two-tailed)

* = Correlation is significant at the 0.05 level (Two-tailed)

Table F: Pearson Correlation Matrix for the MH (Mental Health) Sample on Data from the HSC-III and the Other Five Scales

	HSC-III	YSR Int.	YSR Ext.	SRD	ICU	BSSS
HSC-III						
Correlation	1.00	.545**	.518*	.543**	.512*	.259
Significance		.009	.014	.009	.015	.245
N	22	22	22	22	22	22
YSR Int.						
Correlation	.545**	1.00	.680**	.178	.330	.153
Significance	.009		.001	.428	.133	.497
N	22	22	22	22	22	22
YSR Ext.						
Correlation	.518*	.680**	1.00	.546**	.705**	.471*
Significance	.014	.001		.009	.000	.027
N	22	22	22	22	22	22
SRD						
Correlation	.543**	.178	.546**	1.00	.466*	.703**
Significance	.009	.428	.009		.029	.000
N	22	22	22	22	22	22
ICU						
Correlation	.512*	.330	.705**	.466*	1.00	.431*
Significance	.015	.133	.000	.029		.045
N	22	22	22	22	22	22
BSSS						
Correlation	.259	.153	.471*	.703**	.431*	1.00
Significance	.245	.497	.027	.000	.045	
N	22	22	22	22	22	22

HSC-III = Hopelessness Scale for Children, 3rd Edition

YSR Int. = Achenbach Youth Self-Report Internalizing Scale

YSR Ext. = Achenbach Youth Self-Report Externalizing Scale

SRD = Self Report Delinquency Questionnaire

ICU = Index of Callous-Unemotional Traits

BSSS = Brief Sensation Seeking Scale

** = Correlation is significant at the 0.01 level (Two-tailed)

* = Correlation is significant at the 0.05 level (Two-tailed)

Hypothesis 12

In Hypothesis 12, it was proposed that levels of hopelessness, internalizing, externalizing, delinquency, callous-unemotional (CU) traits, and sensation seeking can help predict whether a subject belongs to the MHSP or JDP. A binary logistic regression procedure was conducted to investigate the ability to predict to which group a subject belongs based on the subject's scores on the six scales (HSC-III, YSR Internalizing, YSR Externalizing, SRD, ICU, and BSSS). Results indicated that the inclusion of the six variables resulted in improved predictability over a model with no predictors (See Table G). Logistic regression results also indicated that the HSC-III was significant in predicting to which group a subject belonged ($p = .024$) (See Table H). Although the YSR externalizing scale and the SRD appeared to have some value in predicting a subject's group, their value was not statistically significant ($p = .225$ and $p = .186$ respectively).

Table G: Logistic Regression Omnibus Test of Model Coefficients from Administration of Six Scales to Adolescent Juvenile Delinquent (JD) and Mental Health (MH) Subsamples

Chi-Square	Degrees of Freedom	Significance
23.903	6	.001

Table H: Logistic Regression Coefficients from Administration of Six Scales to Adolescent Juvenile Delinquent (JD) and Mental Health (MH) Subsamples

Scale	Coefficient (B)	Standard Error	Wald Statistic	Degrees of Freedom	Significance	Logistic Regression Coefficient (Exp (B))
HSC-III	.164	.073	5.063	1	.024	1.178
YSR Int.	.028	.047	.356	1	.551	1.028
YSR Ext.	-.085	.070	1.473	1	.225	.918
SRD	-.040	.030	1.749	1	.186	.961
ICU	.007	.085	.008	1	.931	1.007
BSSS	.107	.169	.402	1	.526	1.113
Constant	-3.195	3.627	.776	1	.378	.041

HSC-III = Hopelessness Scale for Children, 3rd Edition
 YSR Int. = Achenbach Youth Self-Report Internalizing Scale
 YSR Ext. = Achenbach Youth Self-Report Externalizing Scale
 SRD = Self Report Delinquency Questionnaire
 ICU = Index of Callous-Unemotional Traits
 BSSS = Brief Sensation Seeking Scale

Hypothesis 13

In hypothesis 13, it was proposed that there is a statistically significant difference in the mean individual weights for extracted latent core profiles between the JDP and MHSP subgroups. After a Principal Component Analysis (PCA) of a correlation matrix of the six variables in question, the first three components were selected for further investigation (See Table I). The first component was considered a level-effect profile, since 97% of its variance was accounted for by between-person variance. The second and third components were viewed as pattern-effect profiles because 98% and 100% of their variance was explained by within-person variance, respectively. The second component explained 23% of the variance in the PCA while the third explained 16% (See Table J). It is interesting to note that, although principal components two and three explained only 39% of total variance when they were viewed as

components, when they were viewed as core profiles that would be assumed to encapsulate all possible profile patterns in a given sample, they accounted for 74% of total variance of 40 person score profiles in the current study. The two core profiles resulting from the PCA procedure are displayed in Figure A. These latent core profiles reflect common patterns of peaks and valleys in variables that characterize the entire group of participants. By regressing each person's observed variable scores onto the variable loadings for a principal component, person weights can be estimated that reflect the relationship between an individual's observed profile and the latent core profile (See Table K).

T-tests were conducted to investigate the significance of the difference between subject weights in relation to each profile within the JDP and MHSP. There was a significant difference between subject weights within each group as they related to Core Profile 1 ($p = .001$) (See Table L). A significant difference between subject weights within each group was also found in their relationship to Core Profile 2 ($p = .005$) (See Table M). Finally, a point-biserial correlation also revealed significant relationships between subject group and subject weight in relation to Core Profile 1 and Core Profile 2 ($p = .001$ and $p = .005$ respectively) (See Table N).

Table I: Principal Component Correlation Matrix Table: Data from Six Scales

	Component 1	Component 2	Component 3
HSC-III	.50	.64	.39
YSR Int.	.46	.71	-.36
YSR Ext.	.81	.04	-.45
SRD	.67	-.48	-.34
ICU	.74	-.04	.55
BSSS	.66	-.51	.23

HSC-III = Hopelessness Scale for Children, 3rd Edition
 YSR Int. = Achenbach Youth Self-Report Internalizing Scale
 YSR Ext. = Achenbach Youth Self-Report Externalizing Scale
 SRD = Self Report Delinquency Questionnaire
 ICU = Index of Callous-Unemotional Traits
 BSSS = Brief Sensation Seeking Scale

Table J: Principal Components Analysis of Data from Six Instruments: Total Variance Explained

Component	Extraction Sums of Squared Loadings		
	Total	Percent of Variance	Cumulative Percent
1	2.56	43%	43%
2	1.41	23%	66%
3	.95	16%	82%

Figure A: Two Extracted Core Profiles from Six Scales

CP1 = Latent Core Profile #1
 CP2 = Latent Core Profile #2

Table K: Profile Analysis via Principal Component Analysis (PAPCA) Subject Weights for Two Core Profiles: Total Group, Juvenile Delinquent Subgroup and Mental Health Subgroup

	Core Profile 1			Core Profile 2		
	N	Range	Mean (SD)	N	Range	Mean (SD)
Juvenile Delinquent	18	-11.61 to 42.21	17.7873 (12.87514)	18	-57.20 to -11.35	-34.7047 (13.69120)
Mental Health	22	.14 to 52.32	32.2181 (13.19500)	22	-52.92 to .78	-22.1571 (12.84573)
Total Group	40	-11.61 to 52.32	25.7243 (14.79432)	40	-57.20 to .78	-27.8035 (14.50957)

NOTE: A high positive weight denotes that an individual's observed profile is most similar to the latent core profile. A high negative weight denotes that an individual's observed profile is most similar to the mirror image of the core profile

Table L: T-Test Significance Table for Comparing Adolescent Juvenile Delinquent and Mental Health Subgroups on Core 1 Profile Subject Weights

Subgroup	N	Mean	SD	t Statistic	Degrees of Freedom	Exact Probability (Two-tailed)
Juvenile Delinquent	18	17.7873	12.87514	3.479	38	.001*
Mental Health	22	32.2181	13.19500			

* Significant at $p < .05$

Table M: T-Test Significance Table for Comparing Adolescent Juvenile Delinquent and Mental Health Subgroups on Core 2 Profile Subject Weights

Subgroup	N	Mean	SD	t Statistic	Degrees of Freedom	Exact Probability (Two-tailed)
Juvenile Delinquent	18	-34.7047	13.69120	2.984	38	.005*
Mental Health	22	-22.1571	12.84573			

* Significant at $p < .05$

Table N: Biserial Correlation between Adolescent Juvenile Delinquent and Mental Health Groups and Core Profile Subject Weights

	Core Profile 1	Core Profile 2
Pearson Correlation	-.491**	-.436**
Exact Probability	.001	.005
N	40	40

** Correlation is significant at the 0.01 level (Two-tailed)

CHAPTER FIVE

DISCUSSION

Since research suggests that hopelessness levels are high in both the mental health and juvenile justice adolescent populations (Abram, Choe, et al., 2004; Becker & Grilo, 2007; Duke et al., 2011; Frey & Epkins, 2002; Jackson et al., 1995; Milnes et al., 2002; Shelton, 2004), it was hypothesized that a measure of hopelessness would not be sufficient to distinguish between important differences that characterize the two groups. While it was anticipated that hopelessness levels would be high in both groups, research literature also suggests that hopelessness is manifested differently within these two groups. For example, hopelessness might present in mental health groups as internalizing problems such as anxiety or depression, while it presents in juvenile justice groups as externalizing problems, callous-unemotional traits, and sensation seeking. It was therefore hypothesized that a mental health group would have higher internalizing scores than a juvenile justice group, while a juvenile justice group would score higher than a mental health group in externalizing, delinquency, CU traits, and sensation seeking.

As it was expected that hopelessness would manifest itself differently in the juvenile detainee population (JDP) and mental health services population (MHSP), it was further anticipated that hopelessness would correlate differently with internalizing, externalizing, CU traits, sensation-seeking, and delinquency in each of the two populations. For example, the MHSP might express their feelings of hopelessness through self-harm or suicidal thoughts or behavior, which might play a role in their being psychiatrically hospitalized. The JDP, on the other hand, might express their hopeless feelings through acting out and engaging in illegal behavior that might lead to spending time in juvenile detention. Similarly, it was also

hypothesized that measures of such variables would have predictive value at a level greater than chance when considering to which group each subject in the study belongs. Finally, it was anticipated that Profile Analysis via Principal Components Analysis (PAPCA) would yield latent core profiles that relate differently to individuals within the MHSP and JDP. Profile Analysis via Principal Components Analysis (PAPCA) (Kim, 2013; Stout Sosinsky & Kim, 2013) allows for the extraction of latent core profiles from all participants' performance on the six variables. Latent core profiles reflect common patterns of peaks and valleys in variables that characterize a group. By regressing each person's observed variable scores onto the variable loadings for a principal component, person weights were estimated that reflect the relationship between an individual's observed profile and the latent core profile. Since it is anticipated that the MHSP and JDP express their feelings of hopelessness differently, PAPCA will allow for an explanation of whether differences between the MHSP and JDP are expressed in the latent dimensions yielded by the core profiles extracted in the analysis method. A discussion of the results of the study in relation to each of these hypotheses follows.

Hypothesis #1

The null hypothesis for Hypothesis number one proposed that no statistically significant difference exists in hopelessness levels in the JDP and MHSP. Contrary to research suggesting that hopelessness levels are high in both populations (Becker & Grilo, 2007; Duke, Borowsky, Pettingell, and McMorris, 2011; Milnes, Owens, & Blenkiron, 2002; Rohde, Seeley, Kaufman, Clarke, & Stice, 2006), this null hypothesis was rejected. There was a significant difference in hopelessness levels in the two groups ($p = .000$), with the MHSP reporting higher levels of hopelessness.

Despite no significant difference in lie scores across the two groups (See Table C), it is possible that members of the JDP underreported levels of hopelessness. Shelton (2004) found the juvenile detainees maintain a belief that it is better to be tough than sick. Such a belief could cause many in the JDP to underreport their symptoms in an attempt to avoid appearing vulnerable or weak. Members of the JDP in Shelton's study reported a stigma associated with mental illness, and some reported that they would utilize mental health services if they could do so in secret.

Hypotheses #2 - #6

Null hypotheses for Hypotheses #2 - #6 state that no significant differences exist between the JDP and MHSP in mean levels of internalizing, externalizing, delinquency, CU traits, and sensation seeking. Alternative hypotheses for hypotheses #2 - #6 state that there would be significant differences between the JDP and the MHSP in internalizing, externalizing, delinquency, CU traits, and sensation seeking. Although the MHSP reported a higher mean level of internalizing (61.59) than the JDP (54.83), the difference was not significant at an alpha level of .05. Similarly, although the JDP reported a higher mean level of externalizing (66.44) than the MHSP (61.59), the difference was not statistically significant at an alpha level of .05. The levels of delinquency that were obtained by the SRD were higher in the JDP than in the MHSP, but, once again, the difference was not statistically significant. The differences between the two groups in CU traits and sensation seeking were negligible. One possible explanation for the lack of statistical significance in hypotheses #2 - #6 is the small sample size that was included in the study. Observed differences must be great in order to achieve statistical significance in studies in which sample size is small.

Although up to 23% of one group had, at one point, been a member of the other group, such an overlap between the JDP and MHSP does not seem sufficient to explain the lack of significant differences among variables other than hopelessness. Despite a significant difference in the number of delinquent friends between the two groups and a difference in delinquency levels that was nearly statistically significant (See Table C), two factors which researchers indicate as predictors of lifecourse persistent antisocial tendencies as opposed to adolescence-limited delinquency, the similar levels of CU traits between the two groups suggests that the JDP was representative of youth who engaged in delinquent activities that are common during adolescence as opposed to those predictive of future antisocial behavior.

Hypothesis #7 - #11

Null hypotheses for hypotheses #7 - #11 state that there will be similar patterns of intercorrelations between hopelessness and the other five variables in the MHSP and JDP. Alternately, it was hypothesized that intercorrelations between hopelessness and the other five variables will vary significantly between the MHSP and JDP. Findings were rather robust. A Pearson correlation matrix revealed no statistically significant intercorrelations within the JDP while another such matrix indicated that hopelessness was significantly correlated with every variable except sensation seeking in the MHSP. Null hypotheses for hypotheses #7, #8, #9, and #11 could be rejected. Such a finding suggests that hopelessness has a greater impact on levels of the other variables expressed within the MHSP than it does within the JDP. Findings related to hypotheses #7 - #11 suggest that hopelessness manifests itself differently within the MHSP than it does in the JDP.

Hypothesis #12

The null hypothesis for hypothesis #12 states that the six variables measured in the study will have no predictive value in determining whether participants are members of the JDP or MHSP. Alternately, it was proposed that the six variables of hopelessness, internalizing, externalizing, delinquency, CU traits, and sensation seeking will help predict whether a subject belongs to the MHSP or JDP. Logistic regression results indicated that the inclusion of the six variables resulted in improved predictability over a model with no predictors ($p = .001$). Results also indicated that the HSC-III was significant in predicting to which group a subject belonged ($p = .024$). In fact, for every one unit increase in HSC-III scores, a subject was 16.4% more likely to belong to the MHSP. Although the YSR externalizing scale and the SRD appeared to have some value in predicting a subject's group, their value was not statistically significant ($p = .225$ and $p = .186$ respectively). The YSR internalizing scale, the SRD, the ICU, and the BSSS did not result in statistically significant value in predicting to which group a subject belongs. The null hypothesis for hypothesis #12 can be rejected.

Such findings are rather consistent with the t-tests that were conducted. Despite past research, which suggested that hopelessness would not be sufficient to discriminate between the two groups, there was a significant difference between hopelessness levels in the two groups. Similarly, externalizing and delinquency levels were higher in the JDP than they were in the MHSP, but the differences were not statistically significant. It is therefore not surprising that logistic regression procedures revealed that hopelessness levels are statistically significant in helping to predict to which group a subject belongs. Similarly, externalizing and delinquency levels appeared to have some value in predicting a subject's group, but their value was not

statistically significant. The lack of statistical significance regarding these variables' predictive value could be attributable to the study's small sample size.

Hypothesis #13

The null hypothesis for hypothesis #13 stated that there will be no significant difference in mean individual core profile weights between the JDP and MHSP subgroups after the completion of a Profile Analysis via Principal Components Analysis (PAPCA). Alternately, it was hypothesized that there would be a significant difference in the mean correlations of individuals within each of the JDP and MHSP subgroups when compared to the major profiles extracted from the combined group. The null hypothesis for hypothesis #13 can be rejected.

PAPCA resulted in two pattern-effect profiles and t-tests were conducted to investigate the significance of the difference between subject weights in relation to each profile within the JDP and MHSP. There was a significant difference between subject weights within each group as they related to Core Profile 1 ($p = .001$). A significant difference between subject weights within each group was also found in their relationship to Core Profile 2 ($p = .005$). Finally, a point-biserial correlation also revealed significant relationships between subject group and subject weight in relation to Core Profile 1 and Core Profile 2 ($p = .001$ and $p = .005$ respectively).

A finding of no significant differences between subgroups in mean individual profile weights would suggest a substantial degree of overlap in the types of adolescents who are involved with juvenile detention facilities and mental health treatment facilities. On the other hand, a finding of statistically significant differences between subgroups in mean individual profile weights suggests that qualitatively different types of adolescents tend to be involved in

juvenile detention facilities versus mental health facilities. The fact that hypothesis nine was supported while most individual variables were not sufficient to distinguish between the two groups indicates that the relationship among variable is complex. Underlying latent variables represented in the core profiles are effective in discriminating between the JDP and MHSP while variables other than hopelessness are not effective in such an endeavor when utilized independently. The latent core profiles yielded by the PAPCA in the present study could illustrate how hopelessness is manifested within the two groups. PAPCA proved to be a valuable method for attempting to distinguish between the JDP and MHSP.

PAPCA led to the extraction of two distinct core profiles. Core Profile 1 was represented by high levels of internalizing, a moderate level of externalizing, a low level of delinquency, high levels of hopelessness, a moderate level of callous-unemotional (CU) traits, and low levels of sensation seeking. As subject weights were generally positive in relation to the profile, the entire group of participants related to the core profile itself rather than the core profile's mirror image. The four subjects with the strongest relationship to Core Profile 1 were all members of the MHSP, as were 12 of the 13 subjects with the strongest relationship to the profile. The low levels of sensation seeking and delinquency that exist within those strongly relating to Core Profile 1 could suggest social isolation and a lack of motivation, while the high levels of internalizing and hopelessness represented in the profile could suggest a general sense of malaise and a negative outlook. In light of the significant intercorrelations between hopelessness and the other variables within the MHSP, it is quite possible that hopelessness manifests itself in those with the strongest relationship with Core Profile 1 as a general state of depression. Further research into this possibility, as well as identifying individuals characteristic of Core Profile 1, is warranted.

Core Profile 2 was represented by low levels of internalizing, externalizing, and delinquency, high levels of hopelessness and CU traits, and moderately high levels of sensation seeking. As subject weights were generally negative in relation to the profile, the entire group of participants related to the mirror image of the profile rather than the profile itself. Therefore, those with the strongest relationship to the profile were characterized by high levels of internalizing, externalizing, and delinquency, low levels of hopelessness and CU traits, and moderately high levels of sensation seeking. The three individuals with the strongest relationship to the mirror image of Core Profile 2 were members of the JDP, as were 14 of the 19 with the strongest relationship to the mirror image. Such individuals seem to be characterized by significant conduct issues. While they tend to exhibit high levels of internalizing, they are low in hopelessness. Such low levels of hopelessness, when considered in conjunction with the lack of intercorrelations between hopelessness and other variables that was revealed within the JDP, could suggest possible anxiety rather than depression. It is possible that such individuals tend to express their possible anxiety through acting out and engaging in risky and delinquent behavior. Since such individuals exhibited low levels of CU traits, individuals with the strongest relationship to the mirror image of Core Profile 2 could be engaging in adolescence-limited delinquency rather than lifecourse persistent delinquency. Further research into this possibility, as well as identifying those within the JDP that are characteristic of the mirror image of Core Profile 2, is warranted.

Limitations

The results of the present study are intriguing, but there are a number of limitations that should be considered in conducting future research. First, despite researching suggesting

otherwise, hopelessness levels were significantly different across the two groups. In fact, hopelessness was the only variable that was significantly different between the two groups. It is possible that the HSC-III was not an accurate measure of hopelessness, but statistics related to its development suggest otherwise (Ellis, 2011). It is also possible that the JDP underreported hopelessness levels, which could be related to the use of a self-report measure rather than an interview with the juvenile detainee or the utilization of a form completed by a parent or caregiver. These alternate methods of data collection, as well as efforts to establish rapport and trust prior to participants' completing the HSC-III, could result in more honest reporting of feelings of hopelessness by the JDP in future research. The inclusion of an item assessment agreement with the statement, "It is better to be tough than to be sick" might also be useful. The differences in gender makeup of the two groups is also a potential factor in the levels of hopelessness that were obtained. For example, the JDP included a majority of boys while the MHSP included a majority of girls. It is possible that gender differences in hopelessness were measured to the exclusion of differences between the JDP and MHSP. Similarly, racial makeup of the two groups could have been a confounding variable. The MHSP was predominantly Caucasian while the JDP was much more racially diverse.

Race and sex factors could impact the study in a number of ways. For example, Cole (1989) reports that older African-American girls who had attempted suicide were more apt to manifest internalizing symptoms such as anxiety, depression, and withdrawal than their male peers. On the other hand, suicidal African-American boys were more likely to display externalizing symptoms such as anger, aggression, and agitation, than were suicidal girls. This could cause African-American boys to be more likely to enter the juvenile justice system, while African-American girls might be hospitalized due to their internalizing symptoms. For example,

Cole (1989) found that girls of any race scored significantly higher than boys of any race on three indices of depression.

A study by Becker and Grilo (2007) found that female adolescent psychiatric inpatients had significantly higher levels of hopelessness, depression, and suicide risk than their male counterparts. The Youth Risk Behavior Surveillance Survey found that nearly 36% of girls felt sad or hopeless almost every day for at least two weeks in a row in the 12 months leading up to the study while the same was true for only 21% of boys (Eaton et al., 2008). The prevalence of having felt sad or hopeless almost every day for two or more weeks in a row was higher among black students (29%) and Hispanic students (36%) than white students (26%). All of these factors could help explain the higher levels of hopelessness found in the MHSP group in the present study, since girls were overrepresented in that group.

A larger sample size could allow for a method of participant recruitment that would result in representations of sex and race that mirror the population. For example, future researchers could indicate before recruiting subjects the number of boys and girls that will be included in each group. After the previously determined number of boys is included in the JDP, researchers could stop recruiting boys and continue recruiting girls until the number of girls matches the number of boys. They could use similar recruiting methods to obtain a racial makeup that mirrors that within the general population. On the other hand, researchers might want to maintain a JDP sample that is representative of the actual racial makeup of the JDP in the United States. According to Desai, Falzer, Chapman, and Borum (2012), while racial minorities comprise only approximately 34% of the general population in the United States, they make up about 62% of those charged in juvenile court. Finally, if researchers do not wish to use such recruitment methods, a larger sample size would still allow for the control of the variables of

race and sex. If boys and girls are not equally represented or the racial makeup of each group is dissimilar, as occurred in the present study, race and sex could serve as confounding variables.

Although, according to Asendorpf et al. (2013), the median subject size in representative journals is approximately 40, the same number of participants in the present study, the sample that was obtained in the present study caused difficulty in drawing concrete conclusions from findings. For example, generalizability is lacking. Generalizability is demonstrated that a potential moderator variable, such as race or sex, has no effect on a group difference or correlation (Asendorpf et al., 2013). Generalizability can be improved through increasing sample size. According to Asendorpf et al. (2013), statistical power increases and confidence interval width decreases with larger sample sizes. Therefore, results from studies such as the present study are more likely to be replicated when larger samples are used.

Although reliability levels of instruments were high in the present study, using instruments with even higher levels of reliability could help in drawing conclusions from studies such as the present one (Asendorpf, 2013). Reliable instruments have less measurement error. This decrease in standard deviations causes effect size to increase and confidence intervals to decrease (Asendorpf, 2013). Regarding error introduced by multiple testing, the likelihood that some variables among those measured will show relationships with another is higher in underpowered studies; however, the likelihood that a specific variable will show a relationship with a specific other variable is lessened in studies in which power is lacking (Asendorpf, 2013). In the present study, an investigation of the specific variable hopelessness was conducted to determine if the variable has a relationship with other variables within the two groups. Future researchers should consider the specific aim of their studies when conducting research similar to that in the present study to determine the level of power that is most appropriate.

The sample used in the study was rather small due to difficulty obtaining permission to collect data at other facilities, the reluctance of guardians to sign consent forms, the relatively small populations housed at RLP JJC and MUPC, and the frequency with which participants declined to participate. As expected patterns in the levels of some variables that were obtained from the two groups were borne out, but not to a level of statistical significance, a larger sample size could be useful in future studies. For example, internalizing levels were higher in the MHSP, externalizing levels were higher in the JDP, and delinquency levels were higher in the JDP, but these differences were not statistically significant. Also, it is possible that those declining to participate or those whose parents or guardians refused to provide consent were in juvenile detention or psychiatric treatment as a result of more extreme behaviors. Such individuals might have been particularly hesitant to participate due to a reluctance to disclose such extreme personal behavior. The inclusion of such individuals in future research could result in findings that are more robust.

There are several methods that could be utilized to aid in the recruitment of participants. First, the turnover rate at both MUPC and the Robert L. Perry Juvenile Justice Center (JJC) was quite rapid. Youths typically stayed at either facility for three to five days. Researchers conducting research with these populations would benefit from having a number of individuals who are approved to collect data. In this way, alternate researchers could visit data collection sites when primary researchers are unable to do so due to time constraints or geographical distance. Also, methods to increase trust from both participants and their guardians could increase potential participants and decrease the number of participants who stop after only completing a portion of the questionnaires.

There seemed to be a significant amount of distrust from parents and guardians of those in the JDP. Although parents, guardians, and potential participants were informed that information would remain confidential unless someone's safety was threatened, they still seemed hesitant to participate. This seemed to be particularly true at St. Louis City JJC, where two visits to the facility resulted in the recruitment of only two participants. Although face-to-face contact was made with the parents and guardians of youths at that particular facility, it is likely that face-to-face or telephone contact resulted in more participants from St. Louis City JJC than recruitment methods that would not have involved personal contact. Face-to-face or telephone contact was not made with parents or guardians of youths at MUPC or Robert L. Perry JJC. Researchers working with the MHSP or JDP in the future might obtain more participants if they engage in personal contact with potential participants' parents or guardians.

Researchers conducting future research on the JDP would likely benefit from efforts to establish trust from members of the JDP, as well as their parents and guardians. Participants were often present when their parents or guardians decided whether to sign consent forms and it is likely that, in most cases, parents and guardians did as their children asked. Researchers could conduct counseling or discussion groups at juvenile detention centers in order to establish trust and rapport with potential participants. Other methods to establish rapport, such as playing a board game or video game with potential participants from the JDP might increase their willingness to participate, as well as increase the honesty with which participants complete instruments. Finally, a more significant incentive, such as a guaranteed payment of \$5.00, would likely result in more willing participants.

The coding of SRD responses could have contributed to the lack of a statistically significant difference in the two groups in delinquency levels. For example, subjects

occasionally reported having engaged in certain offenses more than 1000 times within the past year. However, such responses were simply coded as “5” since every offense reported to have occurred more than 50 times within the past year was coded as such.

Overlap between the two groups was considered as a potential confounding variable prior to beginning the study. Due to the many social and psychological characteristics shared by the JDP and MHSP, many of these young people spend time in and out of both juvenile detention centers and mental health facilities. Moffitt (1993) explains, “The professional nomenclature may change, but the faces remain the same as they drift through successive systems aimed at curbing their deviance: schools, juvenile-justice programs, psychiatric treatment centers, and prisons” (p. 678). To address this issue, the Service Assessment for Children and Adolescents (SACA) (Leaf et al., 1996) was utilized (See Appendix). The SACA used in the present study is a version of the instrument that was modified by Gould et al. (2009) to reflect service use prior to and concurrent with the study. The SACA revealed that 23% of the MHSP sample had been in juvenile detention at some point and 17% of the JDP sample had been psychiatrically hospitalized at some point. This overlap between populations could serve to confound findings.

It is possible that youth who have been members of both the JDP and MHSP at one time or another are, in fact, a unique group of young people who do not relate closely to either the JDP or MHSP individually. Future studies utilizing a larger sample can investigate this possibility by examining in the context of three participant groups, those who have only been members of the JDP, those who have only been members of the MHSP, and those who have over time been members of both groups, the hypotheses that were investigated in the present study. PAPCA could yield a third latent core profile that is not closely related to either the JDP or

MHSP, but is closely related to this third group of youths who have spent time in both juvenile detention and in adolescent inpatient mental health facilities.

Consideration was also given to the prevalence of adolescence-limited delinquency as opposed to lifecourse-persistent delinquency. Some theorists, such as Moffitt (1993), propose that, due to the commonality of delinquent behavior during adolescence, “Researchers and practitioners cannot yet effectively assign individual delinquent adolescents to meaningful subtypes on the basis of cross-sectional ‘snapshots’ of their antisocial behavior during adolescence” (p. 678). She suggests that longitudinal studies of individuals’ engagement in antisocial behavior is more appropriate.

A longitudinal design was not an option in the present study so accommodations were made to address the assertion of Moffitt and Agnew (1991) that the vast majority of criminal behavior displayed by adolescents is perpetrated by those who associate with peers that are likely to have a more life-course-persistent style of antisocial behavior. Participants in the study were asked about their associations with delinquent peers and the nature of crimes perpetrated by such peers. This was accomplished through the use of a six-item self-report measure in which the youth is asked to report the number of close friends who have committed several types of delinquent acts. These include breaking into a vehicle or building to steal something, using a weapon or threatening to use a weapon, and stealing something worth more than \$50. A t-test revealed a significant difference between the number of delinquent friends in the two subject groups ($p = .030$), with the JDP reporting more delinquent friends (See Table C). Despite obtained levels of CU traits suggesting that juvenile detainees included in the study were representative of adolescence-limited delinquency rather than lifecourse-persistent antisocial behavior, the finding that the JDP had a significantly higher number of delinquent friends than

the MHSP provides some evidence that the JDP in the study is more likely to engage in life-course persistent delinquent behavior than is the MHSP.

Since Moffitt and other researchers (Tolan & Gorman-Smith, 1998) report that life-course-persistent offenders display more extreme delinquent behavior as adolescents than do adolescence-limited delinquents, participants in the present study were asked about the severity of their delinquency through the utilization of the SRD. Although the SRD yielded a mean delinquency score of 37.17 for the JDP, while the mean SRD score for the MHSP was only 22.14, a t-test revealed that the difference in delinquency levels was not significant. Such a finding suggests that some delinquency is common among all adolescents, which could confound findings of the present study. It is unfortunate that permission was given to collect data at juvenile detention centers only under the condition that participants not be asked about their offense of record. Therefore, despite the importance of offense severity in consideration of adolescence-limited versus lifecourse persistent juvenile delinquency, information about participants' offenses could not be collected. Also, information about subjects' socioeconomic status, parent education level, and parent income was not collected. An attempt was made to collect information related to such factors after the completion of the study, but data was not available. The collection of such information should be included in future research in this area.

Further research with the JDP should also consider utilizing a longitudinal design. The present study yielded findings worth investigating longitudinally. For example, future researchers could investigate whether those members of the JDP who relate most closely to the mirror image of Core Profile 2 are, in fact, lifecourse persistent delinquents who persist in their antisocial behavior. On the other hand, in light of the low CU traits scores represented by the mirror image of Core Profile 2, it is quite possible that those most closely related to the mirror

image of Core Profile 2 are, in fact, adolescence-limited delinquents. If a longitudinal approach is not possible, PAPCA using the variables in the present study could be conducted with adults who are incarcerated and adults in psychiatric inpatient facilities to determine if the core profiles yielded are similar to those yielded in the present study.

Implications for Future Research

The present study yielded several important findings. First, there is evidence that hopelessness levels are higher in the MHSP than in the JDP. Although it is possible that the JDP underreported hopelessness levels on the HSC-III, the significant relationship between hopelessness and suicide indicates that those within the MHSP are at a higher risk of suicidality than those within the JDP and professionals working with the MHSP should be accordingly vigilant.

Hopelessness was found to be the only variable that was significantly different in the two groups, indicating that none of the other five variables would be sufficient to distinguish between the two groups if considered individually. It should be noted, however, that hopelessness was significantly related to every other variable except sensation seeking in the MHSP, while there were no significant relationships between hopelessness and the other variables in the JDP. Such a finding lends credence to the idea that hopelessness manifests itself differently in the two populations. Despite the small sample size in the study, there is evidence that hopelessness has a greater impact on other psychological variables in the MSHP than it does in the JDP. Further exploration into this likelihood warrants future research in this area.

PAPCA resulted in two pattern-effect profiles and t-tests were conducted to investigate the significance of the difference between subject weights in relation to each profile within the

JDP and MHSP. There was a significant difference between subject weights within each group as they related to both core profiles. While most of the variables included in the present study are not sufficient to distinguish between the JDP and MHSP individually, when they are utilized to create profiles representing latent variables for the entire group, there are significant differences in the nature of the relationship that each group has with each profile. It is clear that PAPCA is a useful procedure in exploring the possibility that underlying variables distinguish between two groups.

The two latent core profiles yielded by PAPCA have significant value when studying the MHSP and JDP when considering the core profiles' relationships to individuals within the two groups. For example, as those relating most closely to Core Profile 1 have high levels of hopelessness and internalizing, as well as low levels of delinquency and sensation seeking, it is quite possible that those relating closely to Core Profile 1 are experiencing depression. In light of the significant relationship between hopelessness, depression, and suicide, individuals with profiles similar to the one represented in Core Profile 1 should be monitored closely for signs of suicide, regardless of whether they are members of the JDP or MHSP.

Due to the significant relationship between members of the MHSP and Core Profile 1, one can conclude that Core Profile 1 is far more representative of the MHSP than it is of the JDP. Therefore, members of the JDP could be assessed along variables included in the study and offered services accordingly. For example, if a member of the JDP has a profile similar to the one represented in Core Profile 1, they would likely benefit from services similar to those offered in an inpatient psychiatric facility.

The information yielded by PAPCA in relation to Core Profile 2 is also of value. The mirror image of Core Profile 2 was strongly related with many members of the JDP. Such

individuals were characterized by significant conduct issues. While they displayed high levels of internalizing, they were low in hopelessness, suggesting possible anxiety. Individuals with profiles similar to Core Profile 2 could be assessed with an anxiety scale and, if such a measure reveals a high level of anxiety, treated accordingly with counseling or medication. Since individuals relating closely to Core Profile 2 exhibited low levels of CU traits, those with such profiles could be engaging in adolescence-limited delinquency rather than lifecourse persistent delinquency. Those in the legal system, particularly those involved in sentencing such youths, should take this into account.

It is clear that, while hopelessness is a variable that is valuable in investigating the differences between youth in juvenile detention and those receiving inpatient mental health treatment, other aspects of the differences between the groups are extremely complex. Therefore, PAPCA has significant value when studying the groups included in the present study. While significant differences between the two groups clearly exist, the nature of such differences warrants further investigation.

Future research should include a much larger sample size, made possible by obtaining approval for others to collect data, and establishing rapport and trust with participants. Future researchers should also obtain information about participants' socioeconomic status, and consider methods of data collection other than self-reports, such as interviews or parent questionnaires. Further research should be conducted with participant groups that are more homogenous, which will be enabled somewhat through the inclusion of a larger sample. Finally, future research should be conducted through the use of a longitudinal design.

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CONSENT FORM TO PARTICIPATE IN A RESEARCH STUDY

Researcher's Name(s): Dan Ellis

Project Number: 1204415

Project Title: Comparing Profiles of Psychological Characteristics of Juvenile Offenders and Youth with Mental Health Diagnoses

INTRODUCTION

This consent may contain words that you do not understand. Please ask the investigator to explain any words or information that you do not clearly understand.

Your child is being asked to participate in a research study. This research is being conducted to attempt to determine and compare characteristics of young people receiving mental health services and young people involved in the juvenile justice system. When your child is invited to participate in research, you have the right to be informed about the study procedures so that you can decide whether you want to consent to your child's participation. This form may contain words that you do not know. Please ask the researcher to explain any words or information that you do not understand.

You have the right to know what your child will be asked to do so that you can decide whether or not to include your child in the study. Your child's participation is voluntary. Your child does not have to be in the study if your child does not want to. You may refuse to include your child in the study and nothing bad will happen. If you do not want your child to continue to be in the study, your child may stop at any time without penalty or loss of benefits to which your child is otherwise entitled.

Your child will continue to be eligible to participate in a drawing to win one of five Walmart gift cards even if your child withdraws from the study after it begins.

WHY IS THIS STUDY BEING DONE?

The purpose of this research is to attempt to determine and compare characteristics of young people receiving mental health services and young people involved in the juvenile justice system. The study could yield valuable information about differences between children involved in the juvenile justice system and those receiving mental health services, thereby helping specify the types of services that should be offered to children within each population.

HOW MANY PEOPLE WILL BE IN THE STUDY?

About 100 people will take part in this study nationwide.

WHAT IS MY CHILD BEING ASKED TO DO?

Your child will be asked to complete six brief questionnaires. Questionnaire topics include sensation-seeking, hopelessness, callous-unemotional traits, the frequency with which the child displays certain behaviors, past service utilization, and past delinquent activity.

HOW LONG WILL MY CHILD BE IN THE STUDY?

This study will take approximately 50 minutes to complete. Your child can stop participating at any time without penalty.

WHAT ARE THE BENEFITS OF BEING IN THE STUDY?

Your child's participation will benefit the field of science due to the knowledge that will be gained through this research.

WHAT ARE THE RISKS OF BEING IN THE STUDY?

Risks of participation are quite minimal.

WHAT ARE THE COSTS OF BEING IN THE STUDY?

There is no cost to you.

WHAT OTHER OPTIONS ARE THERE?

Participation in the study is voluntary. Instead of including your child in this study, you may simply decline to sign this form and inform the primary investigator that you would not like your child to not be included. Your child will not be penalized for your decision to not allow your child to participate.

CONFIDENTIALITY

All reasonable measures to protect the confidentiality of your child's records and your identity will be taken. Your child's identity will not be revealed in any publication that may result from this study. The confidentiality of all study related records will be maintained in accordance with State and Federal laws. Participants' names will not be included on questionnaires and confidentiality will be ensured through a coding system.

Information produced by this study will be stored in the investigator's file and identified by a code number only. The code key connecting your name to specific information about you will be kept in a separate, secure location. Information contained in your records may not be given to anyone unaffiliated with the study in a form that could identify you without your written consent, except as required by law.

WILL MY CHILD BE COMPENSATED FOR PARTICIPATING IN THE STUDY?

Although your child will not be paid for participating in the study, participants will have an opportunity to participate in a drawing to win one of five \$10 Walmart gift cards. Participants will be eligible to participate in the drawing regardless of their completion of all of the questionnaires.

WHAT ARE MY CHILD’S RIGHTS AS A PARTICIPANT?

Participation in this study is voluntary. Your child does not have to participate in this study.

You will also be informed of any new information discovered during the course of this study that might influence your child’s health, welfare, or willingness to be in this study.

WHO DO I CONTACT IF I HAVE QUESTIONS, CONCERNS, OR COMPLAINTS?

If you have any questions or concerns regarding this study, or if any problems arise, you may contact the primary investigator, Dan Ellis, at (573) 239-9110 or dje0a8@mail.missouri.edu, or his advisor, Dr. Craig Frisby, at (573) 884-2561 or frisbycl@missouri.edu.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

If you have any questions regarding your child’s rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll your child or to have your child continue to participate in this study, you may contact the University of Missouri Campus Institutional Review Board (IRB) (which is a group of people who review the research studies to protect participants’ rights) at (573) 882-9585 or umresearchcirb@missouri.edu. The IRB’s website is <http://www.research.missouri.edu/cirb/index.htm>. Their address is 483 McReynolds Hall, Columbia, MO 65211.

You may ask more questions about the study at any time. For questions about the study, contact the primary investigator, Dan Ellis, at (573) 239-9110 or dje0a8@mail.missouri.edu, or his advisor, Dr. Craig Frisby, at (573) 884-2561 or frisbycl@missouri.edu.

SIGNATURES

I have read this consent form and my questions have been answered. My signature below means that I do want my child to be in the study. I know that I can remove my child from the study at any time without any problems.

_____
Subject’s name

_____
Date

_____
Parent/Legal Guardian

_____
Date

Child Assent Without Written Documentation

Comparing Profiles of Psychological Characteristics of Juvenile Offenders and Youth with Mental Health Diagnoses.

Introduction:

“Hello. My name is Dan Ellis and I am a student at the University of Missouri. Your parents or guardians have provided permission for you to participate in this study, which is intended to investigate the characteristics of children receiving mental health services and children involved in the juvenile justice system.”

Description:

“The study involves completing six questionnaires, which will require approximately an hour of your time. Questionnaires relate to topics such as hopelessness, behavior, risk-taking, interacting with others, delinquency, and services you have used.”

Confidentiality:

“Your name will not be included on any of the questionnaires. Your privacy will be respected and your name will not be connected with any of your results. If your responses reveal that you are at significant risk of harming yourself, however, your site director will be informed.”

Compensation:

“You are not required to participate and may quit or leave at any time. Please understand that, if you are currently involved in the juvenile justice system, your participation will not affect your release or parole. All participants will be eligible to participate in a drawing for one of five \$10 Walmart gift cards. You may participate in the drawing regardless of whether you complete all of the questionnaires.”

Conclusion:

“Do you have any questions or concerns?”

If you do not wish to participate, please say so now and you may leave. If you would like to quit after beginning the instruments, you may do so.

Again, my name is Dan Ellis and I am a student at the University of Missouri. My telephone number, if you would like to write it down, is (573) 239-9110. My email address is dje0a8@mail.missouri.edu. My advisor’s name is Dr. Craig Frisby. His telephone number is (573) 884-2561. His email address is frisbycl@missouri.edu. You may contact me or Dr. Frisby with any questions or concerns you may have. Would anyone like me to repeat any of those telephone numbers or email addresses?

Do you have any other questions or concerns? Thank you for your participation. Let’s begin.”

Hopelessness Scale for Children – Third Edition

Instructions to be read to the child: “These sentences are about how some kids feel about their lives. Your answers let us know about how kids feel about things.”

“I am going to read each sentence to you. I’d like you to tell me how you feel about each sentence. If you strongly agree with the sentence, you would respond, “Strongly Agree.” If you kind of agree with the sentence, you would respond, “Agree.” If you are not sure how you feel about the sentence, you would respond, “Not Sure.” If you kind of disagree with the sentence, you would respond, “Disagree.” If you strongly disagree with the sentence, you would respond, “Strongly Disagree.”

“There are no right or wrong answers. Just tell me how much you agree or disagree with each sentence.”

1. I might as well give up because I can’t make things better for myself.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

2. When things are going badly, I know they won’t be as bad all of the time.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

- *3. I am always happy.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

4. I will have enough time to finish the things I really want to do in life.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

5. Some day, I will be good at doing the things that I really care about.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

6. I will get more of the good things in life than most other kids.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*7. I like everyone I know.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

8. There is no reason to think I will have good luck when I grow up.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*9. I always tell the truth.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

10. All I can see ahead of me are bad things, not good things.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*11. I am always good.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

12. When I think about the future, it seems like things probably won't work out the way I want them to.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

13. I don't think I will have any real fun when I grow up.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

14. Tomorrow seems unclear and confusing to me.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*15. I'll try anything.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

16. When I grow up, I will have more good times than bad times.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

17. There's no use in really trying to get something I want because I probably won't get it.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*18. I am always nice to everyone

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*19. I always do the right thing.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

20. I am excited about the future.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

21. I think my life will be good when I'm grown up.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

22. I think I will have fun when I grow up.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

23. If I try hard, I can make things better for myself.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

24. I can see more good things than bad things ahead of me when I grow up.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

*25. I always know what to say to people.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

26. If I am patient, things will eventually work out for me.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

* Lie Item

SRDBC-C

This questionnaire contains a number of questions about your behavior in the last year. Please answer all of the questions as accurately as you can. Do not try to look good or bad. All the information you provide is totally confidential and will not be shown to your parents or anyone else.

How many times in the last year have you:

1. purposely damaged or destroyed property belonging to your parents or other family members. _____
2. purposely damaged or destroyed property belonging to a school. _____
3. purposely damaged or destroyed other property that did not belong to you (not counting family or school property). _____
4. stolen (or tried to steal) a motor vehicle, such as a car or motorcycle. _____
5. stolen (or tried to steal) something worth more than \$50. _____
6. knowingly bought, sold or held stolen goods (or tried to do any of these things). _____
7. thrown objects (such as rocks, snowballs, or bottles) at cars or people. _____
8. run away from home. _____
9. lied about your age to gain entrance or to purchase something; for example, lying about your age to buy liquor or get into a movie. _____
10. carried a hidden weapon other than a plain pocket knife. _____
11. stolen (or tried to steal) things worth \$5 or less. _____
12. attacked someone with the idea of seriously hurting or killing him/her. _____
13. been paid for having sexual relations with someone. _____
14. been involved in gang fights. _____
15. sold marijuana or hashish ("pot," "grass," "hash"). _____
16. cheated on school tests. _____
17. hitchhiked where it was illegal to do so. _____
18. stolen money or other things from your parents or other members of your family. _____
19. hit (or threatened to hit) a teacher or other adult at school. _____
20. hit (or threatened to hit) one of your parents. _____
21. hit (or threatened to hit) other students. _____

- 22. been loud, rowdy, or unruly in a public place (disorderly conduct). _____
- 23. sold hard drugs, such as heroin, cocaine, and LSD. _____
- 24. taken a vehicle for a ride (drive) without the owner's permission. _____
- 25. had (or tried to have) sexual relations with someone against their will. _____
- 26. used force (strong-arm methods) to get money or things from other students. _____
- 27. used force (strong-arm methods) to get money or things from a teacher or other adult at school. _____
- 28. used force (strong-arm methods) to get money or things from other people (not students or teachers). _____
- 29. avoiding paying for such things as movies, bus or subway rides, and food. _____
- 30. been drunk in a public place. _____
- 31. stolen (or tried to steal) things worth between \$5 and \$50. _____
- 32. stolen (or tried to steal) something at school, such as someone's coat from a classroom, locker, or cafeteria, or a book for the library. _____
- 33. broken into a building or vehicle (or tried to break in) to steal something or just to look around. _____
- 34. begged for money or things from strangers. _____
- 35. skipped classes without an excuse. _____
- 36. failed to return extra change that a cashier gave you by mistake. _____
- 37. been suspended from school. _____
- 38. made obscene telephone calls, such as calling someone and saying dirty things. _____

How often in the last year have you used:

- 39. alcoholic beverages (beer, wine and hard liquor). _____
- 40. marijuana--hashish ("grass," "pot," "hash"). _____
- 41. hallucinogens ("LSD," "Mescaline," "Peyote," "Acid"). _____
- 42. amphetamines ("Uppers," "Speed," "Whites"). _____
- 43. barbiturates ("Downers," "Reds"). _____
- 44. heroin ("Horse," "Smack"). _____
- 45. cocaine ("Coke"). _____

ICU
(Youth Version)

Name: _____

Date Completed: _____

Instructions:

Please read each statement and decide how well it describes you. Mark your answer by circling the appropriate number (0-3) for each statement. Do not leave any statement unrated.

0 Not at all true   1 Somewhat true   2 Very true   3 Definitely True

1. I express my feelings openly. 0 1 2 3
2. What I think is "right" and "wrong" is different from what other people think. 0 1 2 3
3. I care about how well I do at school or work. 0 1 2 3
4. I do not care who I hurt to get what I want. 0 1 2 3
5. I feel bad or guilty when I do something wrong. 0 1 2 3
6. I do not show my emotions to others. 0 1 2 3
7. I do not care about being on time. 0 1 2 3
8. I am concerned about the feelings of others. 0 1 2 3
9. I do not care if I get into trouble. 0 1 2 3
10. I do not let my feelings control me. 0 1 2 3
11. I do not care about doing things well. 0 1 2 3
12. I seem very cold and uncaring to others. 0 1 2 3
13. I easily admit to being wrong. 0 1 2 3
14. It is easy for others to tell how I am feeling. 0 1 2 3
15. I always try my best. 0 1 2 3
16. I apologize ("say I am sorry") to persons I hurt. 0 1 2 3
17. I try not to hurt others' feelings. 0 1 2 3
18. I do not feel remorseful when I do something wrong. 0 1 2 3
19. I am very expressive and emotional. 0 1 2 3
20. I do not like to put the time into doing things well. 0 1 2 3
21. The feelings of others are unimportant to me. 0 1 2 3
22. I hide my feelings from others. 0 1 2 3
23. I work hard on everything I do. 0 1 2 3
24. I do things to make others feel good. 0 1 2 3

Unpublished rating scale by Paul J. Frick, Department of
Psychology, University of New Orleans (pfrick@uno.edu)

Brief Sensation Seeking Scale

1. I would like to explore strange places

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

2. I like wild parties

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

3. I would like to take off on a trip with no pre-planned routes or timetables

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

4. I would love to have new and exciting experiences, even if they are illegal

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree

Incredible Years Study	Date / /	RI Initials	FAMID

Service Assessment for Children and Adolescents

We are interested in learning about any help or services for behavioral or emotional problems (CHILD) receives currently or received in the past. This includes any services you have told us about in the questions you have already answered for this study. We understand that your child may receive help for developmental problems such as speech, physical, or occupational therapy, but for this section, we are interested in any help s/he has ever received for emotional or behavioral problems. This includes problems with things like aggression, intense emotions, extreme shyness, withdrawal, fears and sadness, as well as problems with social relationships with family or other children.

I know your child may never have received any help for these kinds of problems, but I need to ask you these questions anyway. I am going to read you a list of services. If you don't know what some of these mean, ask me and I'll try to explain.

Has (CHILD) ever received any educational services for emotional or behavioral problems, such as:

		Ever No	Ever Yes	DK	Yrs-Mos old @ 1 st help?	Last Year No	Last Year Yes	DK
1	Help at a special day care program.							
2	Getting special help in a regular child care or preschool program? For example, an aide who gives 1-on-1 help, such as play therapy or behavior modification.							
3	A therapeutic nursery or special program designed specifically for children with emotional or behavioral problems?							
4	play group that meets at least once a week and is led by a professional, such as a psychologist, psychiatrist, social worker or counselor.							

For the next questions, I will be asking about places that (CHILD) may have gotten outpatient help or services for emotional or behavioral problems. For this section, the types of help your child may have gotten include things like: play therapy, counseling, special testing, medicine for his/her emotions or behavior, and behavior modification. **Has (CHILD) ever received this kind of help from...**

		Ever No	Ever Yes	DK	Yrs-Mos old @ 1 st help?	Last Year No	Last Year Yes	DK
5	A community mental health center, child guidance clinic, or outpatient mental health clinic?							
6	A professional in a private office like a psychologist, psychiatrist, social worker, or counselor?							
7	An in-home provider, therapist, family preservation worker or counselor?							
8	A pediatrician or family doctor?							
9	A nurse practitioner?							

Because of emotional or behavioral problems, has (CHILD) ever been seen by

		Ever No	Ever Yes	DK	Yrs-Mos @ 1 st help?	Last Year No	Last Year Yes	DK
10	A healer, Shaman, or Spiritualist							
11	An Acupuncturist, Chiropractor, or Nutritionist?							

Now, I'd like to ask whether (CHILD) has ever stayed overnight in any of the following settings because of any emotional or behavioral problem...

		Ever No	Ever Yes	DK	Yrs-Mos old @ 1 st help?	Last Year No	Last Year Yes	DK
12	A psychiatric or medical unit in a general hospital?							
13	A residential treatment center?							
14	A group home?							
15	A foster home?							

16. Has (CHILD) ever received any other type of help or services for emotional or behavioral problems?

	Describe service	Ever No	Ever Yes	DK	Yrs-Mos old @ 1 st help?	Last Year No	Last Year Yes	DK
a								
b								
c								
d								

**Now, I am interested in whether you have EVER received any help or services to help YOU deal with or understand any emotional or behavioral problems this child may have – if any.
Have you EVER gotten this kind of help from...**

	Type of service or professional	Ever No	Ever Yes	DK	Yrs-Mos old @ 1 st help?	Last Year No	Last Year Yes	DK
17	Community mental health center, child guidance clinic, or outpatient mental health clinic?							
18	Professional in a private office, like a psychologist, psychiatrist, social worker, or counselor?							
19	An in-home provider, therapist, family preservation worker, or counselor?							
20	A pediatrician or family doctor?							
21	Nurse practitioner?							
22	Self-help group?							
23	Child care provider?							

25a. In the last 12 months, have you received any parenting skills training, or training on ways to discipline your child? This might have occurred one-to-one with a therapist, coach, nurse, or some other provider, or in a parenting group format.

No	Yes
0	1

25b. If yes, "Where did you receive these services?" (Code all that apply)

	1	At home
	2	At an agency or other community organization
	3	Somewhere else, describe
	3t	

25c. In what format did this occur?

	1	Individually
	2	Just our family
	3	A group involving other families

26. Has (CHILD) ever received any medication for emotional or behavioral problems?

	Describe medication and dosage	Ever No	Ever Yes	DK	Yrs-Mos old @ 1 st help?	Last Year No	Last Year Yes	DK
a								
b								
c								
d								

The next questions are about prescription medications [Child] has taken by mouth or injection for emotional or behavioral problem.

27. In the past month, has (CHILD) used any medications for an emotional or behavioral problem?

No	Yes
0	1

If "NO", go to Parent Service Questions

If "YES", continue with medication questions.

28. Let's talk about the medication/s. If container/s are not available for this medication, ask,

VITA

Daniel Jarrad Ellis was born in Columbia, Missouri. After completing his schoolwork at Hickman High School in Columbia in 1993, Daniel began working at a group home for children with special needs. He began college at the University of Missouri after graduating high school and graduated from Columbia College with a Bachelor of Arts in psychology in 1999. Dan continued his work at the group home and began employment at a private psychology office, where he worked for the next 13 years. Dan began the Graduate School at the University of Missouri in 2002.