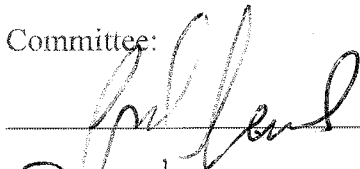


RECIDIVISM OF AFRICAN AMERICAN MALES REQUIRING MENTAL HEALTH
SUPPORTS AS A FUNCTION OF PLACEMENT, PROGRAMMING, AND
SERVICES

by

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A Dissertation
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of
Doctor of Philosophy
Education

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Dedication

This is dedicated to the source of all that is good within me, my Lord and Savior... to my expansive village of friends and family and the amazing woman that led the pack, my mother Ms. Charlene Eberhardt... my brother who helped carry me when standing seemed impossible... to love and the unique peace and comfort it brings... to the generations of giants upon whose shoulders I stand... to the matriarch of my family, my grandmother Ms. Martha E. Stubbs... the many children and young people whose resilience and courage have inspired an insatiable passion to serve... and the countless others who prayed and cried on my behalf.

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Abstract

RECIDIVISM OF AFRICAN AMERICAN MALES REQUIRING MENTAL HEALTH SUPPORTS AS A FUNCTION OF PLACEMENT, PROGRAMMING, AND SERVICES

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George Mason University, 2014

Dissertation Director: Dr. Fred Bemak

This research project will explore how recidivism rates for African American males receiving mental health supports through the Department of Youth Rehabilitative Services in the District of Columbia differ as a function of the programs, services, and placement they were assigned to. Ultimately, the researcher is interested in knowing how well the system is working for African American juveniles. Participant and program data are secondary data that have been provided through previously collected information in the District of Columbia's Department of Youth Rehabilitative Services' database. A series of logistic regression and chi-square analyses were run to determine how recidivism varies as a function of programming, placement, and setting. The results of this inquiry suggest that recidivism rates do not significantly vary between the home, community, and secure setting. Furthermore, the accuracy of a youth's placement is also not significantly related to the likelihood of recidivism. Additionally, recommendations

for mental health support according to DYRS and test developer criteria do not significantly relate to whether or not youth receive mental health supports during their initial placements with DYRS. Also, recidivism does not vary as a function of whether a youth is receiving mental health supports. The identification of effective treatment for this group can go on to inform treatment for not only the disproportionately represented African American population, but the segment of that population that receives mental health supports within the juvenile justice system.

Keywords: African Americans, juvenile justice, recidivism, intervention

Chapter One: Introduction

Introduction to the Problem

This research project will explore how recidivism rates for African American males receiving mental health supports through the Department of Youth Rehabilitative Services in the District of Columbia differ as a function of the programs, services, and placement they were assigned to. Specifically, the researcher is interested in knowing if youths' recidivism differs as a function of the setting placements, program assignments, types of services received through the programs, and the various activities youth are engaged in during service delivery. Overall, I am interested in evaluating how well the juvenile justice system is working for the African American male juvenile population.

In order to substantiate the relevance of exploring the outcomes of the African American juvenile offender population, I begin by shedding light on the context of the United States juvenile justice system and how it has evolved over the years. Next, the risks said to characterize the juvenile offender population and the prevalence of mental health among the population as a whole will be discussed. Following which, the unique challenges and risks associated with African Americans in the juvenile justice population will be introduced. Discussion of the African American population's experiences within the juvenile justice system and the cultural context of the United States will also be introduced. Next, the application of theoretical concepts such as ecological models of

development and risk-resilience models to the conceptualization of the juvenile justice population and potential points of intervention are highlighted. Finally, trends in the rehabilitative programs that juvenile offenders get assigned to are discussed and along with the previously mentioned content, are used to begin establishing the need for the current proposed research.

This chapter is intended to introduce the reader to the larger social context in which African American juvenile offenders with mental health concerns are situated within. Furthermore, through the sections that follow, the reader will become more familiar with the basic trends and themes that have emerged with incarceration, mental health identification, and service delivery models, as well as program features such as treatment and setting that are likely to directly impact this population.

Efforts to Address Risk

The U.S. Office of Juvenile Justice and Delinquency Prevention (OJJDP) has been making efforts to understand juvenile violence, design appropriate policy, and identify programming that serves to reduce delinquency rates for decades. This is evidenced by the research and programs that they continue to fund from year to year: The Northwestern Juvenile Project (Teplin, Abram, Washburn, Welty, Hershfield, & Dulcan, 2013); Intensive Aftercare Program (Altschuler & Armstrong, 1994); Serious and Violent Offender Reentry Initiative (Winterfield & Brumbaugh, 2005); and OJJDP's Disproportionate Minority Contact (DMC) Reduction Model (OJJDP, 2012). Despite federal funding, program initiatives, and newly established evidence based treatments and interventions, research continues to show that vulnerable groups of the juvenile

population continue to be at heightened risk for both delinquency and recidivism (Zhang, Barrett, Katsiyannis, Yoon, 2011). Consequently, it is clear that this population continues to require specific and targeted remedies to address their challenges (National Council on Crime and Delinquency, 1992). The question we are left to ask is: Which of these targeted efforts are actually working to accomplish the goal of reduced delinquency and recidivism rates?

In accordance with the law, most states require screening for mental health and substance abuse during the juvenile intake process (Stewart & Trupin 2003). It is through these procedures that we begin to learn of the risk factors associated with most juvenile offenders. In her pioneering research on risk factors, Loeber (1990) defined risk factors as effects whose exposure increases the odds that a negative outcome will ensue. As further testament to the fact that behavioral outcomes are a projection of the complicated interactions of both individual and environmental (risk and protective) factors, many have taken interest in understanding what conditions can be associated with which behavioral outcomes (Desai, Fraser, Day, & Cooley, 2006; Fishbein & Perez, 2000; Loeber & Stouthamer-Loeber, 1986; Office Of Juvenile Justice and Delinquency Prevention (OJJDP), 1999; Schwalbe, Fraser, Day, & Cooley, 2006; Snyder & Sickmund, 2006; Teplin et al., 2013; Zhang, Barrett, Katsiyannis, & Yoon, 2011). Of those young people identified as being at high risk, African American males have been observed to be the most vulnerable to incarceration and recidivism (Schwalbe, Fraser, Day, & Cooley, 2006; Stewart & Trupin, 2003). What can we learn when we examine the relationships between the individual, environmental, and program interventions of formerly incarcerated

African American juvenile males receiving mental health supports? One of the goals of the current research is to ask questions that will allow us to begin answering some of the broader questions referenced above.

Mental Health Concerns among the Incarcerated

There is good cause for us to more closely examine the effectiveness of reentry programming for young people identified as being in need of receiving mental health supports. The degree to which mental illness overlaps with incarceration has been a long standing concern. Within the literature, the prevalence of mental health and substance use disorders among juvenile offenders ranges from 20-60%, depending on the tools and criterion used in the screening process (Grisso, 1999; Snyder & Sickmund, 2006). Additional findings indicate that the presence of mental health disorders for juvenile offenders is more extreme (80%) for those young people who were previously reported as maltreated and subsequently placed in out-of-home care (Yampolskaya & Chuang, 2012). Of further significance, youth who endorse having more behaviors indicative of mental illness have an increased likelihood of serving harsher sentences and are often deemed ineligible for less restrictive programming (Stewart & Trupin, 2003). As it relates to recidivism, those juveniles with mental health concerns have been found to be more vulnerable, in that as many as 55% of these institutionalized juveniles will reenter the criminal justice system as adults, many for violent offenses (Blackburn, Mullings, Marquart, & Trulson, 2007; Snyder & Sickmund, 2006). The point of contention here is not whether or not those with mental health concerns are more violent or are unable to be adequately served within the juvenile justice system, but rather, whether or not the

juvenile justice system is appropriately and adequately meeting the needs of these youth. Furthermore, I am interested in knowing how recidivism for this group of young people varies as a function of program assignments? Do these programs lend themselves to a greater likelihood of success upon reentry to the community setting?

Introduction to the Project

With the support of the District of Columbia's Department of Youth Rehabilitative Services (DYRS), I will be investigating how recidivism varies as a function of their setting and program placement options for African American males. The current investigation will focus in on those that have been identified as needing mental health supports and how recidivism varies as a function of various aspects of their services and programming. DYSRS is allowing me to make use of the de-identified information within their client database for my dissertation research. Young people that have been committed to DYRS are assigned to one of three potential placement settings: (1) New Beginnings (secure facility) or residential treatment, 24 hour secure supervision; (2) a community facility with staff, e.g. group home placement; and (3) home placement with supports. In fiscal year 2011, a total of 1,269 committed youth were served by DYRS with 96% of them being African American and 86% of them being male (DYRS, 2011). Initial placement decisions are determined with the assistance of the Structured Decision Making (SDM) system, which was recently validated by the National Council on Crime and Delinquency (NCCD) and the Annie E. Casey Foundation (2012).

Demographics and Social Context of Juvenile Offenders

A large body of research has sought to identify factors that are predictive of delinquency, incarceration, and/or recidivism (Loeber & Stouthamer-Loeber, 1986; Mulder, Brand, Bullens & van Marle, 2010; OJJDP, 1999; Snyder & Sickmund, 2006; Yampolskaya & Chuang, 2012; Zhang, Barrett, Katsiyannis, & Yoon, 2011). Researchers have found that social factors such as negative parent-child relationships and poor parenting practices as well as poor supervision and peer groups (Andrews, Bonta, Gendreau, & Cullen, 1990, 2006; Loeber & Stouthamer-Loeber, 1986), being raised in a single-parent household with a female head (Snyder & Sickmund, 2006), and low educational achievement (Mears & Aron, 2003; Siennick & Staff, 2008) are all predictors of delinquency, incarceration, and/or recidivism. Early collections of research published by OJJDP (1999a) identified demographic variables such as race, gender, age, and both physiological and psychological characteristics as individual risk factors for delinquency. Prevalence of the previously discussed risk factors for delinquency all tend to be higher among minority groups within the United States (Loeber, 1990; OJJDP, 1999b; Stewart & Trupin, 2003).

African Americans in the Justice System

Though risk factors are more prevalent among minority groups within the United States (Loeber, 1990; OJJDP, 1999; Stewart & Trupin, 2003), there continue to be gaps in the literature. Little research has analyzed the effects of specific environmental, individual and institutional factors on the effectiveness of mental health and rehabilitation services for the minority juvenile offender population with mental health concerns.

Research concerning African American juveniles receiving mental health support is particularly relevant given that the profile of mental illness and risk/protective factors often varies across gender and racial groups (Griffin, Scheier, Botvin, & Diaz, 2000; Liu & Kaplan, 1999), as does the appropriate identification of their needs (Drakeford & Garfinkel, 2000). To this point, human behavioral ecologists Smith and Winterhalder (2002) propose that variability in behavior takes place as individuals' couple strategies that have been developed within their unique situational context with their more diverse social environments.

Research has been done to demonstrate how mental health manifests differently for individuals from different cultural groups (Griffin, Scheier, Botvin, & Diaz, 2000). Similarly, research has found that some of the tools used to assess mental health under identify minority youth for mental health service delivery in the juvenile justice system (Drakeford & Garfinkel, 2000). In addition to mental health, there are numerous risk-factors that place African American youth in the juvenile justice system at greater risk than their Caucasian and fellow minority peers (OJJDP, 2002). Research has shown that a number of treatments and interventions are effective with African Americans, though the difference is not statistically significant, the effects of these treatments for this group of youngsters are lower than those for their Caucasian counterparts and result in a lower projected re-offense rate for the majority group (Wilson, Lipsey, & Soydan, 2003). While effectiveness of specific treatments resulted in positive results for both the majority and minority groups and little difference overall, it was clear that a number of the

interventions indicated greater effectiveness with the majority group than the minority group.

Ecological Model

Ecological models of human development would suggest that development is a gradually evolving interplay between the growing human organism and their changing environment, which can be either formal (explicit rules or law) or informal (incidental learning or implied expectations) and impressed upon by either the immediate or larger social contexts that one is embedded within (Bronfenbrenner, 1977). Ultimately, concerning resilience and child outcomes, there are factors within us, our environments, and our context that positively contribute (assets), some that negatively contribute (risks), and others that are more variable in nature. At the intersection of the “Protective” and “Promoting” pathways, mental healthiness is achieved through a cultural– ecological transactional theoretical framework (Kia-Keating, Dowdy, Morgan, & Noam, 2009, p.2). This frame of reference encourages understanding adolescent health by way of attending to the contexts, experiences, and opportunities facilitated through adolescents interactions with their environments and furthermore, how those experiences influence their developmental trajectories. It is this balance that most reentry programs and community support services are seeking to create as they set out to strengthen and develop skills, create positive experiences, and generate opportunities that will help temper the effects of negative factors that are also present within the worlds of juveniles in the justice system. It is through this lens that we begin to understand the power of the resilience that juvenile justice interventions seek to cultivate.

In the current study, risk can be operationalized by the Structured Decision Making (SDM) score that is generated by DYRS. Some examples of risk factors that have been taken into consideration in order to generate this score are participants' previous exposure to the juvenile justice system (prior offense), school discipline, family criminality, and peer relationships, as well as age at initial incarceration. While we cannot erase the deleterious experiences that many of the young people in the system have had, I am interested in seeing how recidivism varies as a function of program participation and involvement in various activities such as mentorship, group counseling, family therapy and the like for African American youth with and without mental health concerns. Do mental health scores determine program type in this sample? In keeping with the ecological theory literature, program type can be perceived as closely related to interventions that promote change between youth and the nature of their interactions with their families, school environments, and community members. If mental health functioning does not determine program type or the nature of intervention services, is the relationship between program type and recidivism moderated by mental health scores?

Programming

Some argue that recidivism is most effectively prevented when treatment targets the specific risk factors that are present for juvenile offenders (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Schumacher & Kurz, 2000). While this may be true, just as there are individual and environmental factors, many researchers note that there are both static (unable to be influenced by intervention) and dynamic (able to be influenced by intervention) risk factors (Lodewijks, Doreleijers, de Ruiter, & de Wit-

Grouls, 2001; Loeber, Slot & Sergeant, 2001; Resnick, Ireland, & Borowski, 2004). With this in mind, many have attempted to design and implement intervention programs that maximize the opportunity for positive outcomes amongst the juvenile offender population. However, vast differences in performance across sites and therefore the degree to which results can be generalized remains a consistent concern (Donohue & Siegleman, 1998). Another fear that has been reported concerning the effective evaluation of interventions with this population is the lack of adequate comparison groups that most studies have due to an exclusive focus on treatment outcomes (Tate, Reppucci, & Mulvey, 1995).

Despite the previously listed concerns, some research has been able to demonstrate the effectiveness of social interventions. One research team found that interventions that are reflective of the multifaceted nature of antisocial behavior and that target multiple systems within adolescents' lives (e.g., conflict resolution and peer groups) have demonstrated more favorable outcomes (Loeber & Farrington, 1998). The effectiveness of interventions that set goals to simultaneously reduce risk while enhancing protective factors is strongly emphasized not only in this same report, but across the literature (Catalano, Arthur, Hawkins, Berglund, & Olson, 1998; Conyne & Cook, 2004; Kraemer et al, 1997; Loeber & Farrington, 1998).

Present day reform models attempt to integrate the seemingly competing demands of detention (community safety and consequence) and rehabilitation in order to achieve the goals of the juvenile justice system (Tate & Redding, 2005). There are two types of models that are most commonly employed by juvenile justice systems; currently,

graduated sanction and balanced restorative justice reform models are front runners in the juvenile justice system. On a smaller scale, while research has been done to assess differential outcomes for juveniles placed in programs operating within juvenile justice systems, very little research has investigated differential outcomes for treatment setting. Of those studies that have examined the impact of treatment setting on youth outcomes or the appropriateness of setting based upon client need, none have simultaneously compared all three of the most commonly assigned treatment settings in the juvenile justice system (secure, residential treatment, and community).

In review, interventions are thought to be most effective when collaboratively designed and implemented across multiple levels of the system. Although a few evidence based treatment programs have been validated with minority youth (e.g., functional family therapy, multidimensional family therapy, multisystemic therapy), there continue to be questions concerning the logistics of how to optimally treat ethnic minority youth (Cunningham, Foster, & Warner, 2010) and address the disproportionate representation of African American males in the juvenile justice system that persists (OJJDP, 2012). One of the goals of the current research is to examine which types of programs and services are more or less strongly related to recidivism.

Terms and Definitions

For the purposes of this research, young people identified as being “in need of mental health supports” are those young people who have either been diagnosed with a mental illness from the DSM-IV diagnostic manual or who have been informally identified by staff and are receiving additional emotional support within the juvenile

justice system. This distinction is attributed to the under-identification of African American juveniles for formal identification of mental illness through traditional avenues.

Chapter Two: Literature Review

In the sections below I will provide some background on how the United States juvenile justice systems have evolved over the years in regard to policy, ethnic breakdown, and trends. Next I will introduce the reader to the juvenile justice population by highlighting many of the most common risk factors that have been found to predict not only incarceration but recidivism among this population. I will speak at greater length regarding mental health among the incarcerated in this section. Finally, I will conclude with specific discussion of African Americans in the justice system, mental health identification for African Americans as well as the African American population in the juvenile justice system in the District of Columbia.

Juvenile Justice in the US

Although the current research concerns the effectiveness of treatment setting for African American juveniles with mental health concerns while giving credence to various background factors, to understand this population it is important to first have a sense of the context within which they are situated. Just as Bronfenbrenner's (1977) ecological model purports of the human experience, African American Juveniles with mental health are impressed upon and interact with the larger as well as smaller systems within their environments. Specifically, this population is one among many that is situated within the larger social and political contexts of the US juvenile justice system. From within that

context their interactions are colored by the evolution of the juvenile justice system and the various groups that are represented within it.

Evolution of Juvenile Justice

In the first quarter of the nineteenth century facilities for exclusively troubled juveniles were not yet in existence, as troubled juveniles and adults were held in the same facilities. It was not until 1825 that the Society for the Prevention of Juvenile Delinquency in New York City established the New York House of Refuge to house delinquents. The Chicago Reform School did not open its doors until 1855 and much like the reformers that advocated for the establishment of the Society for the Prevention of Juvenile Delinquency, the reformers in Chicago sought to protect juvenile offenders through their separation from adult offenders and their emphasis on rehabilitation (ABA, 2007). With the establishment of a separate system for juvenile offenders, the juvenile courts adopted “parental” roles, as their primary focus was the best interest of the child.

One pivotal case, *In re Gault*, 387 U.S. 1 (1967) marked the introduction of due process of the law as a constitutional right of juvenile offenders (ABA, 2007). As a result of this law juveniles were granted the right to an attorney and extended additional protections that only adult criminal defendants were afforded up until this time (Scott & Steinberg, 2008). Scott and Steinberg refer to what happened next as the “upswing” of juvenile violence towards the end of the twentieth century. They report that this influx created a “moral panic” of sorts where public opinion was such that juveniles should be held to the same standard as adult criminal offenders so long as their rights were not being infringed upon and their safety was maintained. As the system incarcerated

juveniles at higher rates for a wider range of charges and harsher punishments, diversion and community-based programs, and then the deinstitutionalization movement came to the forefront as advocates challenged the circumstances under which youth were being incarcerated (State of Louisiana-Youth Services Office of Juvenile Justice, n.d.).

Yes, the undercurrent that drives the purpose of juvenile incarceration has shifted over the years (Federal Bureau of Prisons: US Department of Justice (BOP), 2010). Currently, services rendered call for the provision of rehabilitation services during periods of detention (OJJDP, 1999, 1999b). In keeping with such, The Federal Bureau of Prisons notes that it affords inmates the opportunity to become law abiding citizens, engage in self-improvement services, and improves safety through the provision of facilities that are both secure and safe (BOP). Fully aware of the gaps, disproportional prevalence rates, and the frequently poor matches between juvenile needs and program services, the Office of Juvenile Justice and Delinquency Prevention (1999) reports constant efforts to understand juvenile violence, design policy, and identify programming that serves to reduce delinquency rates. Concerning this country's ability to adequately meet its delinquency goals or the proper balance between punishment and rehabilitation, one team of early researchers argues that the true test of the effectiveness of our law is to capture its impact on those who have had direct contact with it (Hulin & Maher, 1959). Recidivism rates and the unrelenting comorbidity of mental health with the juvenile offender population are clear signs that society as a whole, must do better.

Current Juvenile Representation in the US

While the percentage of juveniles in the US population has changed along with the ethnic break-down of juveniles in the populations (growing number of Latinos), the disproportionate representation of minorities within the juvenile justice system has not changed and continues to be a serious problem (OJJDP, 2004). African American males represent roughly 40% of those juveniles having contact with the juvenile justice system (OJJDP). The Office of Juvenile Justice and Delinquency Prevention has funded efforts made by researchers to determine potential root causes for this overrepresentation as well as potential solutions that can be implemented to address it. Given that both the relationship between mental health and recidivism (Blackburn, Mullings, Marquart, & Trulson, 2007; Snyder & Sickmund, 2006) and the prevalence of mental health amongst juvenile justice populations as a whole has been substantiated in the literature (Grisso, 1999; Snyder & Sickmund), it is reasonable to suggest that looking more closely at the African American juvenile justice population with mental health concerns might serve to inform the disproportionate representation of African Americans in the juvenile justice system.

Getting to know the Juvenile Justice Population

While there is a fair degree of variance from offender to offender, having a familiarity with the challenges and obstacles that young people within the system have had to face or are likely to face upon release is invaluable. The literature presented below will highlight pertinent findings concerning common juvenile offender challenges. Knowledge of these challenges has helped providers to develop and provide targeted

treatment and interventions that cater to youths' unique experiences. A majority of the research on risk and protective factors that are commonly associated with delinquency has been conducted with juvenile offender populations from actual correctional facilities. Consequently, research in this regard is generally inclusive of ethnically diverse juvenile offender populations.

A place called home. It is critical that we know not only the context that many of these young men come from, but just as importantly, the context into which they are expected to successfully reintegrate. Significant research has been conducted in hopes of identifying factors that are predictive of delinquency, incarceration, and recidivism (Loeber & Stouthamer-Loeber, 1986; Mears & Aron, 2003; Mulder, Brand, Bullens & van Marle, 2010; OJJDP, 1999; Siennick & Staff, 2008; Snyder & Sickmund, 2006; Yampolskaya & Chuang, 2012). In summary, researchers have found that social factors such as parent rejection and marital problems, poor supervision, composite of family handicap, and peer groups (Loeber & Stouthamer-Loeber), as well as being raised in a single-parent household with a female head (OJJDP; Snyder & Sickmund), and educational achievement (Mears & Aron; Siennick & Staff) are all predictors of delinquency, incarceration, and/or recidivism. In related literature on delinquency abstention or individuals who abstain from engaging in delinquent acts, young people with fewer delinquent peers, stronger teacher attachment, and fewer symptoms of depression were all found to be less likely to engage in delinquent behavior (Johnson & Menard, 2011).

The “I” in team: Individual factors. While our surroundings often work to influence our lived experiences, we cannot neglect to consider the impact that our individual factors have as well. A collection of research published by OJJDP (1999) identified demographic variables such as race, gender, age, and both physiological and psychological characteristics as individual risk factors for delinquency. Of the many individual factors that are thought to predict delinquency, some researchers argue that gender and age are among the strongest (Juvenile Justice Bulletin, 2000; Tatem-Kelly, Huizinga, Loeber, & Department of Justice, 1997). In fact, according Tatem-Kelley et al, , males ages 15 to 17 years are at greatest risk for juvenile delinquency (Tatem-Kelly et al,. As was indicated earlier in this manuscript, those with mental health concerns have been found to be more vulnerable to incarceration (Grisso, 1999; Snyder & Sickmund, 2006); it too is considered an individual risk factor.

Many have taken interest in understanding what optimal composite of individual and environmental risk and protective factors can be associated with which behavioral outcomes (Fishbein & Perez, 2000; Loeber & Stouthamer-Loeber, 1986; Office Of Juvenile Justice and Delinquency Prevention (OJJDP), 1999; Sherman, Gartin, & Buerger, 1989; Snyder & Sickmund, 2006). As it relates to race and gender, of those young people identified as being at high risk, African American males have been observed to be the most vulnerable to incarceration (Loeber, 1990; OJJDP, 1999; Stewart & Trupin, 2003). What can we learn when we examine the degree to which the individual, environmental, and program interventions of formerly incarcerated African American juvenile males receiving mental health supports contributes to or deters

recidivism? Steele's (1993) position regarding the inherent difficulty involved in trying to understand the psychological processes and behaviors of an individual without first building a working knowledge of their context seems most accurate.

Mental Health Concerns among the Incarcerated

Though there are many individual factors that are said to influence the likelihood that a juvenile will engage in delinquent behavior. Nevertheless, for the purposes of the current research, mental wellbeing is at the forefront of the project. Having a foundational understanding of how mental health in the juvenile justice system has developed, how it is identified, and the trends that are frequently observed with it will help the reader to better comprehend the relevance of the current research. The following sections will take the reader through the literature concerning mental health among the incarcerated.

Juvenile Justice Obligation to Treat

Tuma (1992) notes that the necessity for the provision of children's mental health services emerged as early as 1909 and 1930 when the White House conferences resulted in recommendations for the rights and development of programs for children with mental disturbances. In 1980, a federal court ruling in the Willie M. v. Hunt lawsuit required North Carolina to develop an integrated system with a range of services to meet the needs of children that were physically aggressive and struggling with serious disturbances (Oswald & Singh, 1996). Given the nature of the juvenile justice system, treatment in this context is broader and often used interchangeably with "rehabilitation" which concerns

efforts to modify juvenile offending and behavior through means that often involve mental health interventions (Tate & Redding, 2005).

The National Council on Crime and Delinquency (NCCD) (1992) notes that the provision of health care (mental and physical), as well as various aspects of their environments and individual factors have the capacity to impact the wellbeing of all young people in the juvenile justice system. Consequently, due to their complexity the NCCD reports that this population requires specific and targeted remedies to address their challenges (1992). The rhetorical question we are left to ask is: Which of these targeted efforts are actually working to accomplish the goal of reduced delinquency and recidivism rates?

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments-(8th Amendment, U.S. Constitution)

All persons born or naturalized in the United States and subject to the jurisdiction thereof are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws. (14th Amendment, Section 1. U.S. Constitution)

Standing on the foundations of the 8th and 14th Amendments, some argue that access to not only physical, but mental health treatment as well, is the constitutional right of all incarcerated persons (Teplin et al., 2002). Thus, in accordance with the law, most states require screening for mental health (including suicide attempts / suicidal ideation) and substance abuse during the juvenile intake process (Stewart & Trupin 2003). Nevertheless, research has shown that the mentally ill within this context continue to be an underserved population (Teplin, Abram, McClelland, Washburn, & Pikus, 2005).

Detection of Mental Health Disturbance

Studies have shown that the most common disorders present among juvenile offenders are conduct, mood, substance use, and attention-deficit hyperactivity disorders (Lexcen & Redding, 2000; Teplin, Abram, McClelland, Culcan, & Mericle, 2002; Ulzeu & Hamilton, 1998; Wasserman, McReynolds, Lucas, Fisher, & Santos, 2002). While these have consistently been the types of disorders most prevalent among juvenile offenders, the rate at which they are detected amongst juvenile justice populations varies considerably. Researchers have observed that different states of mental wellbeing such as emotionality, depressed mood, and anxiety are in fact associated with harm to self and others (Cauffman, 2004). However, this is not to say that mental health concerns necessitate the presence of violence, but rather, that when improperly addressed, there is greater potential for individuals with these challenges to engage in acts that are harmful to themselves or others in comparison to their same aged peers without diagnosis. Potentially, this may be on account of those with mental health challenges expending so much energy on mitigating their day to day activities that they have less energy to expend

on developing and applying healthier coping skills. This might provide some insight into the high prevalence rates of mental health among the incarcerated.

There is good cause for us to more closely look at the effectiveness of reentry programming for young people with mental health concerns. In particular, we should be paying close attention to the unique demographic differences which may lend themselves to added risk or resilience concerning recidivism for those with mental health concerns and how their presence is likely to alter the type of program placement that is most appropriate. The literature suggests that there are several factors that contribute to the range of mental health rates in the justice system. While timing (amount of hours youth were assessed after entering the system) (Deardorff, Gonzales, & Sandler, 2003), the types of tools used (Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001.) and gender (Timmons-Mitchell et al, 1997) are said to impact the rates of mental disturbance detection, diagnosis and mental health related concerns have also been seen to vary by race and ethnicity (Teplin et al, 2002).

Mental Health and Recidivism

According to Lexcen & Redding (2002), research concerning juvenile justice has repeatedly indicated that the lack of attention given to mental health problems of juvenile offenders is likely to result in recidivism and future adult offending. One set of researchers found that the male juvenile delinquents from their sample that were receiving insufficient care committed twice as many adult offenses and twice as many violent crimes as those male juvenile delinquents that were receiving “adequate” mental health care (Lewis, Yeager, Lovely, Stein, & Cobham-Portorreal, 1994). Just as those

battling addictions that are receiving substance abuse treatment, it is imperative that those with other mental health challenges are adequately being served or the thoughts that led them to believe that they could engage in criminal acts are likely to remain and resurface if unaddressed or insufficiently treated. As it relates to identification of need, one study suggests that although 50% of their 292 participants presented with signs of moderate to severe mental health concerns, only 15% of the juveniles were actually receiving mental health services (Wasserman, McReynolds, Lucas, Fisher, & Santos, L., 2002). In connection with the presence of mental health and time served, youth who endorse having more mental health symptomology have an increased likelihood of serving more extreme sentences and are less eligible for less restrictive programming (Stewart & Trupin, 2003).

While there is research that speaks to the juvenile offender population with mental health concerns as a whole and observations have been made to suggest that the manifestation of symptomology and subsequent identification of mental health concerns may vary among various groups (Mallett, 2009; McCabe, Stewart, & Trupin, 2003; Teplin et al., 2002), there is little research that has analyzed the effect of specific individual, environmental, and programmatic (setting & services) factors on their ability to reduce the likelihood of recidivism for the African American juvenile offender population with mental health concerns.

African Americans in the Juvenile Justice System

In particular, this section will help the reader understand why special attention should be paid to the group of African American juvenile offenders with mental health

concerns. The reader will move beyond an awareness of the overrepresentation of African Americans in the juvenile justice system and begin developing a working knowledge of what that overrepresentation looks like for African Americans in the U.S. Additionally, some of the policies and efforts that have been made to address disproportionate representation as well as the literature that has sought out explanations for it will be reviewed. Given what we know about the relationship between mental wellbeing and both incarceration and recidivism, research on help seeking, the detection and consequent reception of mental health supports for African Americans will begin to shed light on the relevance of the current research.

African American Juvenile Offenders

In efforts to address what had become a problematic fact in the juvenile justice system, in 1988, Congress made amendments to the Juvenile Justice Delinquency Prevention Act of 1974 (OJJDP, 2004). These amendments mandated that disproportionate minority confinement be addressed in the state plans of those states where a given minority group is detained such that their representation in the system exceeds the proportion of their group represented in the population. While a number of minority groups are disproportionately represented within the juvenile justice system, Black juveniles are overrepresented at all phases of the juvenile justice system in comparison with their peers and the proportions with which they are represented in the population (OJJDP, 2004). The report notes that despite being 15% of the United States population of individuals ages 10-17, African Americans account for 26% of all juvenile arrests, 30% of all cases in juvenile court, 45% of all delinquency cases that involve

detention, and 40% of juveniles in residential placement (OJJDP, 2004). Presently, OJJDP notes that although they have mandated that DMC be addressed in order for state systems to be eligible for government grant funding, disproportionate contact at each point in the “juvenile justice system continuum” is a continued reality (OJJDP, 2012).

Disproportionate Representation

One of the most commonly used definitions of the term minority within the literature was coined by Staples and Mirande (1980); the minority is a “collectivity whose membership is derived from a shared racial identity, with high visibility in the society and a devalued social status.” Within the criminal justice system, disproportionate minority contact (DMC) is characterized by a collection of trends that concern the representation and treatment of racial and ethnic minorities (Desai, Falzer, Chapman, & Borum, 2012). Specifically, DMC refers to minority groups having greater representation within the justice system than their minority group represents in the general population. The overrepresentation of African Americans in the justice system is well documented in both the juvenile and adult systems on both national and statewide levels. In fact, with the exception of probation, African Americans are disproportionately represented at every point in the justice system (OJJDP, 2004). Nonetheless, despite their overrepresentation in the juvenile justice setting, ethnic minorities are simultaneously underrepresented in its’ mental health service delivery (Cohen, 1991; Drakeford & Garfinkel, 2000; OJJDP, 1999b); this too continues to be a concern of the justice system (Mallett, 2009).

While a wide variety of possible explanations for DMC have been researched over the years, one set of authors note that by and large, explanations can be grouped into

three trains of thought: *differential involvement*, *differential selection and processing*, and then a combination of the two (Desai, Falzer, Chapman, & Borum, 2012). *Differential involvement* stipulates that minorities have more contact with the justice system because they engage in more criminal activity. *Differential selection and processing* indicates that variations in police staffing and practices lead to more minority contact. The third grouping simply notes that reasons for DMC rest in the combination of greater involvement and selection and processing biases. Somewhat differently, some attribute disproportionality to social economic disparities and exposure to crime (Chapman et al., 2006). Though some have sought to identify root causes such as lower educational levels in the African American community (OJJDP, 2004) or racial disparities in written law and enforcement practices, intervention has yet to result in noteworthy transformation (Williams & Williams-Morris, 2000). One set of experts offer up the United States' long standing racial history as the root cause, as it has informed many of the beliefs and fears that maintain our countries policies (Williams & Williams-Morris). To this end, research has investigated how African American's awareness of this country's racial history and the degree to which they identify with being African American go on to impact the beliefs and behaviors of this group (Sellers, Smith, Shelton, Rowley, & Chavous, 1998; Belgrave & Allison, 2006).

Racial Identity

In the context of the Multidimensional Model of Racial Identity (Sellers, Smith, Shelton, Rowley, & Chavous, 1998), *Centrality* is the degree to which an individual generally defines themselves with respect to race (Sellers et al, 1998), while *regard*

relates to the sentiment individuals have concerning their group membership in conjunction with their perceptions of how others assess and value the group that they are a member of (Belgrave & Allison, 2006). Certain cognitive patterns have the potential to result in harmful outcomes while others can be beneficial; some of the following behavioral styles have emerged amongst the race literature. Several research findings suggest that race centrality can serve as both a risk factor for experiencing discrimination and a protective factor that buffers the negative impact of discrimination on psychological distress (Krieger, Kosheleva, Waterman, Chen, & Koenen, 2011; Parham & Helms, 1985; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). In essence, while maintaining the position that being African American is a central part of your identity can serve to prepare you for the fact that you will experience discrimination that has nothing to do with who you are as a person but everything to do with your race; the psychological impact of discriminatory treatment is often buffered (Sellers, Morgan, & Brown, 2001). Conversely, when your African American group membership is central to your identity, your awareness of discrimination may increase to a level that creates added psychological distress and negatively impacts your day to day experiences. For some, this added awareness results in persistent feelings of defeat or even rage (Sellers et. al).

Discrimination

Research suggests that there is a relationship between racial discrimination and psychological functioning (Clark, Coleman, & Novak, 2004; Scott, 2003; Wong, Eccles, & Sameroff, 2003). In a sample of African American youth, Clark et al, discovered that perceived discrimination was positively related to both externalizing and internalizing

symptoms. Similarly, Wong et al (2003) found that reports of discrimination at school were positively related to anger, depressive symptomology, and involvement with problem behaviors. In Scott's research, a connection between discrimination and youths coping behaviors was observed. Namely, results indicated that experiencing discrimination was related to externalizing coping strategies. One such example is cursing out loud.

When compared to adolescents of other races or ethnicities, the risk for experiencing racial discrimination is especially pronounced for African Americans (Fisher, Wallace, & Fenton, 2000). Although African American adolescents are at greater risk for discrimination, research suggests that certain racial identity attitudes and beliefs can influence how individuals experience racial discrimination and serve as protective factors to moderate the risk (Sellers, Morgan, & Brown, 2001 as cited in Sellers, Copeland-Linder, Martin, & Lewis, 2006) Ultimately, African American youth must go through a process where they integrate the values of their culture and the values of the larger society. Tatum notes that this integration often involves questions that explore what it means to be African American and how that reality might serve to alter who they perceive they can aspire to be and require them to create self-ascribed limitations (1997). Developmentally, adolescent ethnic minorities that belong to historically stigmatized groups often become "hypersensitive to social messages" concerning inferiority and stigmatization (Cross and Cross, 2008). For African American males, prolonged exposure to negative stereotypes may have a vested stake in their poor adjustment and further perpetuate contact with the criminal justice system (Cooper et al, 2008).

Stereotype Threat

The construct of stereotype threat manifests in the poor execution of a set of evaluative tasks when an individual that identifies with a group that is commonly associated with weaknesses in a given domain is reminded of their group membership in either overt or subtle ways. (Alter, Aronson, Darley, Rodriguez, & Ruble, 2010; Steele, 2003). The extent to which the impact of stereotype threat holds is dependent on the degree to which individuals identify with the group being stereotyped. Furthermore, individuals must identify with the group for the threat to be perceived as relevant to their ability, or lack thereof to execute a task (Alter et al., 2010; Inzlicht & Kang, 2010). Accordingly, there is evidence to suggest that African American youth are aware of the “criminal” stigma associated with their group and have come to the point where they anticipate negative police behavior (Brunson and Miller, 2006; Carr, Napolitano, & Keating, 2007).

Schmader and friends developed a three factor stereotype threat model. The poor performance of stereotyped groups is said to be attributed to the depletion of the cognitive resources available to devote to tasks such as decision making once individuals in these groups have expended energy on: (1) physiological stress responses; (2) performance monitoring; and (3) mental suppression of negative thoughts (Schmader, Johns, & Forbes, 2008). Researchers have begun to explore the connections between stereotype threat, cognition, and motivation (Forbes & Schmader, 2010). With cognitive retraining, Forbes and Schmader observed that positive attitudes were able to motivate stigmatized individuals to engage in stereotypically threatening sectors. In the same vein,

the literature indicates that the impact of stereotyped threat might be buffered by conditions that promote the acquisition of cognitions that reframe threats as challenges (Alter et al., 2010). Perceivably, given this phenomenon, one would deduce that the impacts of stereotype threat and additional risk factors have the potential to be buffered through the implementation of a treatment model that encourages individuals to assume a new “mindset.” Moreover, a train of thought that renders people as stakeholders in their treatment and persons who possess control over their behavior and development.

Distrust in the System.

Though the Tuskegee experiments are one of the most frequently cited reasons for African Americans distrust of medical or health systems (Gamble, 1997), one set of researchers found that knowledge of the study was not a significant predictor in distrust, but rather that race was (Brandon, Isaac, & LeVeist, 2005). Simply put, though trust does vary by race, it is unlikely that knowledge of the Tuskegee experiment is a primary explanation for widespread distrust of medical care among African Americans. Brandon, Isaac, and LeVeist note, it is more likely that African American mistrust of “medical care stems from a general mistrust of societal institutions” (Brandon et al, 2005). Centuries of documented discriminatory treatment, laws, policies, and practices are more likely to be perpetuating the pervasive distrust of African Americans towards dominant White society and the large structures operating within the U.S. (Chandler, 2010). In this regard, one set of authors note that “mistrustful” attitudes may not necessarily be directed towards Whites, but the institutionalized racism present in larger institutions and structures that are believed to be greatly influenced by upper-class White society (Biafora et al, 1993).

One study assessed the relationship between cultural mistrust and delinquent behavior among African Americans, Haitians, and Caribbean Island adolescent males (Biafora et. al, 1993). Findings indicate a strong relationship between racial mistrust and conventional forms of delinquency for all three ethnic groups. Using Terrell and Terrell's 1981 Cultural Mistrust Inventory (CMI) and self-report items pulled from Kaplan and his colleagues' research consisting of *Major and Minor Deviance* (1984; Kaplan, Johnson, & Bailey, 1986; Kaplan, Martin, & Robbins, 1982), researchers found that mistrust and deviance scores were statistically significant for the total sample as well as for each of the three subgroups. Furthermore, even when controlling for factors such as family cohesion, peer influence, and family problems, mistrust was the strongest predictor of deviant behavior among all three of the ethnic groups represented within this study.

With the intention of documenting the experiences that urban youth were having with adults in positions of public authority, such as police officers, educators, and social workers, researchers administered a "broad based street survey" to 911 New York youth (Fine et al, 2003). Youth were asked about their trust of, experiences with, and attitude towards adults who monitor their communities and schools. Overall findings suggest that urban youth, and particularly young males of color, experience a strong sense of betrayal by these adults and feel as though they themselves are frequently mistrusted and unwelcomed. Specifically, in relation to attitudes towards police, a high percentage of young people "disagreed or strongly disagreed" with the statement "I feel comfortable when I see police on the street." These findings were consistent with similar research conducted by Carr, Napolitano, and Keating in 2007, as they also found that youth across

a number of neighborhoods and ethnicities had negative views (low legitimacy and high cynicism) of the police.

When it is all said and done, public trust is critical to police effectiveness and the legitimacy of their actions, in fact, research findings indicate that trust can serve to enhance these processes (Lyons, 2002; National Research Council, 2004; Sunshine and Tyler, 2003;). According to the National Research Council (2004), trust facilitates police legitimacy; where police legitimacy is defined as “the judgments that ordinary citizens make about the rightfulness of police conduct and the organizations that employ and supervise them” (p.291). One pair of authors note that having “trustworthy” law enforcement is preferred given the power and control that is inherent with their privileged position where some degree of trust, whether formal (status that comes with the position) or actual (reflected in actual interactions) is assumed with the title (Gianakis & Davis, 1998). When that trust is deficient, it suggests that law enforcement officials are not perceived to be deserving of that inherent trust (Goldsmith, 2005). In summary, African Americans distrust in larger social structures such as the justice and health care systems frequently manifest in negative attitudes and behaviors that lend themselves to disproportionate contact with each of the systems in comparison to other racial/ethnic groups.

Mental Health Identification for African Americans

This section will provide the reader with some background on a few of the many factors that researchers have assessed concerning the under-identification of African Americans for mental health services within the juvenile justice system. Prior to their

entering the juvenile justice system, African American youth in the studies featured below were significantly less likely to have accessed mental health treatment (Dalton, Evans, Cruise, Feinstein, & Kendrick, 2009; Rawal, Romansky, Jenuwine, & Lyons, 2004). While some cite socioeconomic disadvantage, others reference issues stemming from cultural mistrust. Additionally, I have reviewed research concerning factors that differentiate mental health service delivery once youth have been placed within the system. Tools, their developmental and cultural appropriateness as well as referral rates are discussed in greater detail below.

Disadvantage and utilization trends. While it is not the emphasis of the current study, there are additional factors that are also likely to contribute to African Americans reception of mental health services while within the juvenile justice system-- namely, help seeking behaviors, disadvantage, and the misdiagnosis of minority groups using the Diagnostic and Statistical Manual of Mental health Disorders. Help seeking trends that have been identified among the minority youth reveal that they utilize mental health services at a much lower rate than other groups (Rawal, Romansky, Jenuwine, & Lyons, 2004). In a related study with a sample of 937 male juvenile offenders (81% African American), it was observed that Caucasian youth were more likely to have a history of mental health history than African American youth prior to placement within the juvenile justice system: outpatient treatment history (African Americans-38%, Caucasians-71%); Psychiatric Hospitalization (African American-13%, Caucasians-33%) and; Admitted on psychotropic medication (African Americans-10%, Caucasians- 38%) (Dalton, Evans, Cruise, Feinstein, & Kendrick, 2009). When controlling for MAYSI-2 Score elevations

and prior mental health history, White youth were between three and five times more likely to be identified for mental health services within the justice system.

In addition to the distrust of the medical system that was referenced above is the impact of socioeconomic disadvantage. Time and time again, research has demonstrated that lower SES is a likely contributor to poorer health outcomes (see review of literature in Chandler, 2010). Consider the fact that African Americans are disproportionately represented in the juvenile justice system and that African American also disproportionately reside in low-income and impoverished homes and neighborhoods (Peterson & Krivo, 2005). Given these excessive economic disadvantages, African American youth are less likely to have health insurance and more likely to have out-of-pocket mental health costs, which is a significant barrier to obtaining treatment. This indicates that African American youth with emotional and behavioral problems are less likely to be served in mental health settings, which can be costly. Also, though African American youth are more likely to be referred to mental health services through juvenile justice and social services agencies than in a community setting, they are still less likely to be referred for mental health services as compared to Caucasians in juvenile justice settings (Barksdale, Azur, & Leafe, 2010).

Tools, detection, and referral. Practitioners and leadership within the juvenile justice system have a responsibility to ensure that the tools being used are going to provide an unbiased assessment of youths' needs (McCabe et al, 1999). Drakeford and Garfinkel's (2000) research suggests that mental health disparities are fueled by the inability of professionals within the system to properly diagnose and assist African

American children. In part, poor identification may be due to inaccurate perceptions and difficulty capturing accurate levels of distress. The consistent difficulty of assessment tools and formal mental health models to adequately capture the full experience of these populations is a likely contributor to their over- and underrepresentation within the correction and mental health systems, respectively.

Among the handful of studies that explore development and the appropriateness of widely accepted developmental models for minority youth, evidence suggests that factors in these models manifest differently across racial groups (see Liu & Kaplan, 1999 and Green & Way, 2005 for examples). In some instances, the differential presentation of developmental pathways and resulting behavior for this population are likely to have some impact on the identification of emotional and behavioral problems (Coll et al, 1996). Bottom line, minorities come from a different context which results in differential developmental pathways (Green & Way) and manifests in different clinical profiles and presentations. Furthermore, as was indicated by results found in one 2005 study that examined the rates at which various groups (gender and racial) were receiving appropriate treatment for major mental disorders, African American males, aged 14-18 years, had the lowest rate of service provision for any group, 7.3% (Teplin, Abram, McClelland, Washburn, & Pikus, 2005). Ultimately, for reasons such as differing behavioral presentation, lower identification as well as improper diagnosis and service provision for African Americans, it makes sense to group those with formal mental health diagnosis and those who have otherwise been identified as needing mental health

supports by service providers in the system into one category, those receiving mental health supports or those with mental health concerns.

Despite the inborn challenges, some researchers have demonstrated the ability to identify minority offenders that may be struggling and in need of mental health supports. Teplin et al (2002) and Cohen (1991) utilized alternative yet widely accepted assessment tools to more adequately identify what appeared to be comparable levels of need across racial groups. The prevalence of mental health disorders for Non-Hispanic Whites, Hispanics, and African Americans was examined using the Diagnostic Interview Schedule for Children (2.3 Version) in the Teplin et al study (2002). Teplin and her colleagues found higher rates of conduct disorder, disruptive behavior disorders, and substance use disorders for Non-Hispanic White youth, but no differences by race were found between African Americans and this group for the detected presence of affective, psychotic, or anxiety disorders (with the exception of separation anxiety, which was higher for African Americans). In a separate study, using a demographic questionnaire and the Child Behavior Check List (CBCL), a broad measure of mental health concerns, Cohen (1991) found comparable scores indicating mental illness between participants placed in correction and psychiatric facilities. Despite this fact, 63% of the participants placed in corrections were Black, while Black youth represented 34% of the sample receiving appropriate psychiatric treatment at a psychiatric facility (Cohen, 1991). The implication of these findings is that the system does not always adequately identify juveniles with mental health concerns, particularly minority populations through the formal screening process.

AFAMS in the District

The District of Columbia is divided into eight geographic areas referred to as wards, wards are diverse in that each of them represents a variety of socioeconomic status', racial representation, education and employment levels. While there are a wide variety of racial groups present within the district, according to the 2002 Census, the District of Columbia consisted of 112,100 juveniles under the age of 18. Fifteen percent of that juvenile population was classified as White, while 72% of that population was classified as Black. These rates are thought to be consistent with the more recent racial breakdown in the district. In fiscal year 2011, a total of 1,269 committed youth were served by DYRS. Ninety-eight percent of those youth served by DYRS were African American. This is not entirely representative of the national sample, where roughly 16.4% of the juvenile aged population is African American and 45% of those placed in detention and 40% of those juveniles placed within residential treatment within the U.S. are African American (OJJDP, 2004). While a greater percentage of DC's population is African American (65%), similar to most of the country, a disproportionate percentage of African Americans are incarcerated within their system (96%).

Problem Statement

Effective service delivery among juvenile offenders with mental health challenges has been a long standing issue in the fields of mental health and juvenile justice (Oswald & Singh, 1996). Though tremendous research has been done to enhance service delivery for the juvenile justice population as a whole (Conyne & Cook, 2004; Lipsey, 2009;

Lipsey & Cullen, 2007; Loeber & Farrington, 1998; Wilson, Bouffard, & Mackenzie, 2007), gaps still remain. Currently, there is no research that evaluates how recidivism varies as a function of different treatment settings for African American juvenile offenders with mental health concerns. This is particularly problematic given the large representation of African Americans in the juvenile justice system and the reality that mental health diagnosis and concerns have been observed manifesting differently among different racial groups (Teplin et al, 2002).

The following review of the literature further establishes the need for my proposed research, but also serves to explicate the theoretical framework from which I will orient my analysis and understanding of the data that I am collecting. I open by highlighting the individual and environmental risk factors that are most predictive of delinquency, incarceration, and recidivism. Next, I will review the relevance of the ecological risk/protective models of resilience when conceptualizing the needs of this population. I will next speak to the literature on intervention programs for juvenile populations. Finally, I conclude by highlighting why it is important to explore which program features or activities are effective for African Americans that receive support for mental health concerns.

Theoretical Support

The theoretical models presented in the sections that follow will help organize the connections and relationships between the factors and contexts that have been outlined in previous sections. Below, the reader will begin to conceptualize how factors such as mental health, family context, peer relationships, policy and social structures interact to

help inform the juvenile justice environment and reintegration process for African American males with mental health concerns.

Ecological Model

According to ecological models, development is a gradually evolving interplay between the emerging human organism and their shifting environment. Human development can be impressed upon either formally or informally by either the immediate or larger social contexts that one is embedded within (Bronfenbrenner, 1977). Thus, people's behavior is often a reflection of the cumulative effects of their dynamic environments interacting with their individual characteristics. Intervening with individuals in such a way that not only they themselves but the very nature of their interactions with the people places and things operating within their contexts are optimally altered, is most ideal.

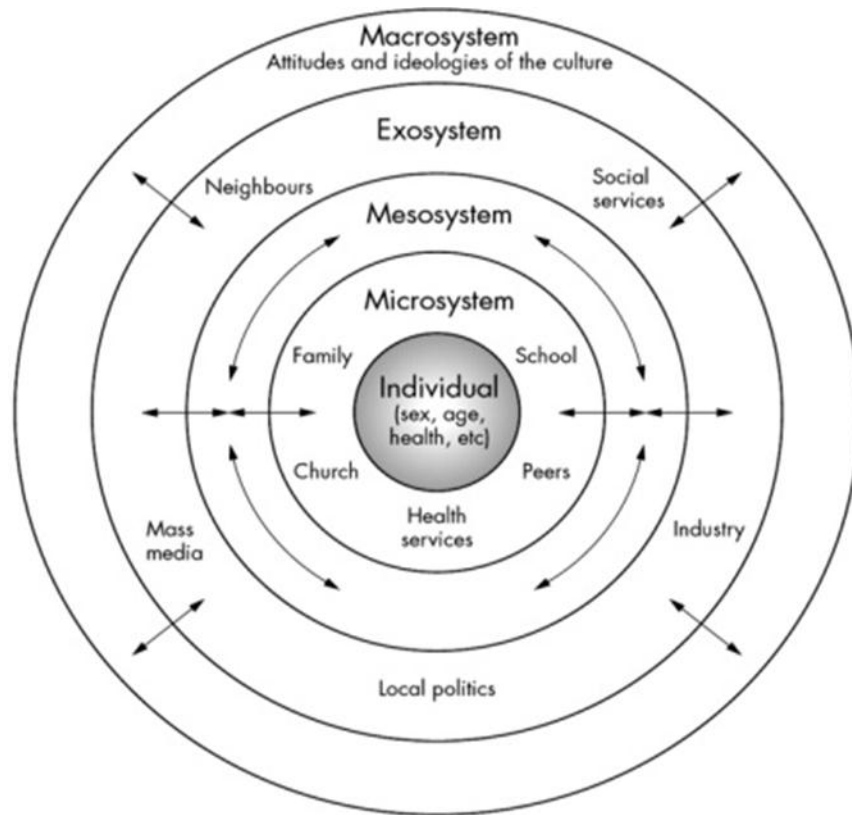


Figure 1. Ecological Model (Rose, 2010)

In his earliest writings on the model, Bronfenbrenner (1997) expressed that our ecological environments are best understood through a series of nested systems that are each contained within the next (see Figure 1). The first level of this system is the microsystem, an intricate series of interwoven relationships that are constantly developing between the person and their environment in their immediate settings, e.g. home, school, and work. This concerns the activities that individuals engage in while taking the perspective of a particular role. The second level, the mesosystem is characterized as the interrelations among the major settings described in the microsystem. Namely, the mesosystem of a teenage male may consist of the interactions among his

family, peers, and school administrators. An exosystem, the third level of the model, is composed of the social structures that do not contain the developing individual but infringe upon and include the immediate settings in which individuals can be found. Generally speaking, the exosystem influences, imposes limits, or determines what takes place in these settings and is inclusive of the major institutions of society (e.g. the neighborhood, mass media, governmental structures, allocation of services, and informal social networks). The macrosystem differs from the preceding levels as it is not delineated by specific contexts affecting the lives of individuals, but is most easily identified as the patterns and “blueprints” that exist in the culture or subculture of a given space. These patterns can be both formal and informal. Law, regulations, and rules are some examples of patterns that have been explicitly stated, but the structure of a classroom such as where children and teachers sit and how instruction is carried out, is an example of a more informally set pattern. Ultimately, environmental structures and the interactions and processes that take place between and within them “must” be recognized as interdependent and understood in terms of systems (Bronfenbrenner, 1977).

One of the all-encompassing take home points of Bronfenbrenner’s ecological model is that “all aspects of the environment interact with and affect each other interdependently and on multiple levels.” Some of the basic tenets of this theory are that it is composed of a series of subsystems that are nested within larger systems. Each person within the system is believed to contribute to it as everything is believed to be connected and all causality is viewed as interactional. The system is sustained by the cyclical use and reuse of all matter and energy in an attempt to reach a balanced state.

Further contributing to the sustainment of the system is its ability to withstand diversity, which is a necessary and adaptive process.

According to Conyne and Clack's (1981) work, ecological climate is the means through which individuals both construct and experience their world; a world whose climate consists of physical, social, and institutional components. How might young persons with mental health concerns living in a system such as a neighborhood that is situated in an urban city with low SES and high crime rates experience and make sense of their world; how might they go about finding balance from within their context? This is just an example, as court involved juveniles can come from all walks of life. Point being, whether internal, within the community, family, or school context, this theory stipulates that one must assume that an imbalance is present somewhere in the system and that it is likely to manifest and impact behavior. It is in this regard that most reentry programs and community support services are seeking to create balance, as they set out to strengthen and develop skills, create positive experiences, and generate opportunities that will help temper the effects of negative factors that are also present in juveniles' worlds. It is through this lens that we begin to understand the power of resilience that is developed in the face of adversity.

Bronfenbrenner's model of human development (Bronfenbrenner & Ceci, 1994), as applied to the experience of trauma and disaster was described in great detail by Hoffman and Kruczek (2011). Researchers have found that the set of nested systems that compose Bronfenbrenner's ecological model are useful for outlining how individuals respond to a traumatic event (Hoffman & Kruczek) or violence (Cicchetti, Rogosch,

Lynch, & Holt, 1993) and the manner in which those responses are shaped systemically. In the process of applying Bronfenbrenner's model to survivors of trauma, Hoffman and Kruczek examined the literature to identify effects that traumatic events such as community violence have on both individual's psychological resources and the central relationships they maintain within family, community, and larger societal networks. Hoffman and Kruczek argue that their findings establish the relevance of counseling interventions in these instances of trauma to promote the following: healthy development across the life span as opposed to psychopathology, the importance of relationships and connectedness, the emphasis on social justice and aspects of multicultural experiences, as well as the facilitation of vocational adjustment. These interventions are reflective of the expressed needs of individuals who have survived trauma and are also core values within the counseling profession.

While this study was helpful, it still leaves the reader uncertain of how one might go about applying this model in such a way that meaningful interventions can then be developed. Nevertheless, some efforts are being made. Trauma informed care and counseling has come to the forefront as a new line of evidence based practice (Ko et al, 2008) and a number of systems including the District of Columbia's juvenile justice (DYRS) and child welfare (CFSA) agencies are currently seeking to incorporate it into their service delivery models. Nevertheless, while there is extensive theoretical work that has been put forth concerning how various levels of environmental and internal factors weigh in on recidivism for the juvenile justice population as a whole, few studies have

looked at the relationships that these factors have with recidivism for African American juvenile males with mental health concerns.

Programming

While theoretical models that evaluate context from an ecological perspective and those that shape our understanding of resilience provide outlines for potential interventions, it is the application of the concepts found within these models that come to shape the behaviors of our young people. While not all models are explicitly ecological in nature, many take into account that behind a child's behavior, one might find a tumultuous family context, school challenges, exposure to crime, and poor peer relationships that accompany their mental health and personality traits. Still, other models function under the pretense that we cannot change the deleterious factors young people are exposed to and simply seek to buffer or counter those exposures through experiences like mentorship or enrichment programs. In the sections below some of the trends in programming for the juvenile justice population are presented along with some of the research that has been conducted in various settings of the juvenile justice system. While the research does not focus specifically on African American males with mental health concerns, it helps familiarize the reader with the trends in programming and effectiveness of setting for other groups of juveniles and in some instances, specifically for juvenile offenders with mental health concerns.

Trends in Programming

The degree to which the scales of justice teeter between service delivery that emphasizes detainment and service delivery that focuses on rehabilitation has shifted

with social sentiments and fear historically. Present day reform models attempt to integrate the seemingly competing demands to achieve the goals of the Juvenile Justice system (Tate & Redding, 2005). Balanced and restorative justice (BARJ) and graduated sanctions are the two leading juvenile justice system reform models.

The BARJ model revolves around generating responses to nonviolent crimes that have been rooted in the community context, as all relevant parties from the offender, courts, and youth advocacy groups to the victims are involved in the justice process (Bazemore & Maruna, 2009; Bazemore, Zaslau, & Riester, 2005). This type of model is said to empower the community, as it shifts power from the “top-down” giving the community a say so in how it supports its members (Tate & Redding, 2005). This type of a system requires the collaboration of many community agencies and resources to be effective on all of these levels. The accepted notion is that rather than just treating the offender, the system is looking at addressing each of the levels of society that they are connected to, whether it is their family, community, or the victim.

Somewhat differently, for the chronic, serious, or violent offender a series of graduated sanctions and services is the tactic most often employed by the Office of Juvenile Justice and Delinquency Prevention (OJJDP, 2005). Ultimately, the intensity of the intervention and the level of security or restrictiveness of placement elevate as the offense severity increases or the behavior becomes more repetitive. Though services are generally more restrictive than those in BARJ, this approach still incorporates interagency collaboration to address risk and concerns in young people’s families, communities, peer groups, and school settings.

Below, we move beyond juvenile justice system program models, to the specific programs that are operating within them and their overall effectiveness with the juvenile justice population.

Program Dimensions

Some argue that recidivism is most effectively prevented when treatment targets the specific risk factors that are present for juvenile offenders (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Schumacher, & Kurz, 2000). While this may be true, just as there are individual and environmental factors, many researchers note that there are both static (unable to be influenced by intervention) and dynamic (able to be influenced intervention) risk factors (Loeber, Slot, & Sergeant, 2001; Resnick, Ireland, & Borowski, 2004). With this in mind, many have attempted to design and implement intervention programs that maximize the opportunity for positive outcomes amongst the juvenile offender population. However, vast differences in performance across sites and therefore the degree to which results can be generalized remains a consistent concern (Donohue & Siegleman, 1998). Another fear that has been reported concerning the effective evaluation of interventions with the juvenile justice population is the lack of adequate comparison groups that most studies have due to an exclusive focus on treatment outcomes (Tate, Reppucci, & Mulvey, 1995). The current research project is interested in more than the outcomes of African American youthful offenders that are enrolled in various programs, but also trends associated with various service providers, types of services rendered, dosage, and specific activities that they complete with the support of service providers. .

What Is and Is Not Working in Programming

Despite the previously listed concerns, research has been able to demonstrate the effectiveness of a number of interventions. One research team found that interventions that are reflective of the multifaceted nature of antisocial behavior and that target multiple systems within adolescents' lives (e.g., conflict resolution and peer groups) have demonstrated more favorable outcomes (Loeber & Farrington, 1998). The effectiveness of interventions that set goals to simultaneously reduce risk while enhancing protective factors is strongly emphasized not only in this same report, but across the literature (Catalano, Arthur, Hawkins, Berglund, & Olson, 1998; Conyne & Cook, 2004; Loeber & Farrington, 1998; Kraemer et al, 1997). Studies examining recidivism effects associated with rehabilitation treatment, consistently find large and positive effects. However, Lipsey and Cullen (2007) report that there is extensive variability in those effects that can be attributed to the type of treatment, the integrity of implementation, and the type of offender that received it.

Lipsey's (2009) meta-analysis evaluated the extent to which various characteristics present within interventions for juvenile offenders are effective. This is somewhat different than most meta-analyses in this field which typically seek to substantiate the aptitude of a specific program or intervention to reduce recidivism (Lipsey & Cullen, 2007). Though these various reviews generated useful information on their respective interventions, they were each limited in that they did not speak to overarching trends or patterns in the types of traits that make these interventions and programs effective. Lipsey looked at three categories of factors: (1) intervention approach

and modality; (2) quantity and quality of treatment provided; and (3) characteristics of the juveniles (Lipsey). One of the major questions posed in this research concerns investigating how the effectiveness of a specified treatment modality interacts with the level of supervision provided within the juvenile justice system. Data were taken from 548 independent study samples selected from 361 primary research reports that were conducted between 1958 and 2002. Recidivism outcome from each of the studies were converted into one standardized effect size (phi coefficient) which enabled comparisons to be made across studies. Juveniles assignments to conditions were randomized, matched, or did not demonstrate any significant differences across groups.

To determine the relative influence of each of the factors that were evaluated, random effects multiple regression analysis was conducted on the recidivism effects sizes. Overall, findings suggest that few of the many factors that were examined were actually related to the effects of the interventions. When risk was statistically controlled, no significant relationship between the level of supervision and later recidivism was found. Additionally, when controlling for supervision, there were negligible differences in effect between those receiving intervention characteristics in the community and those receiving them in a corrections setting. Meaning, when risk and other characteristics of juveniles were controlled for (age, ethnicity, gender), there was little support for the argument that longer sentencing or harsher punishments result in lower recidivism rates. Beyond delinquency risk, the most consistent relationship observed was that between recidivism effects and the quality of program implementation; higher quality was associated with larger effects on recidivism. This speaks to the importance of the integrity

with which programs are implemented. Contrary to what one might expect, the duration and dosage or hours of service were not related to recidivism effects. To these points Lipsey (2009) notes, “it does not take a magic bullet program to impact recidivism, only one that is well made and well aimed.”

When compared to one another, “therapeutic philosophies” like counseling and skills training were more effective than those approaches that relied on strategies of control like surveillance (electronic monitoring) or deterrence programs (scared straight) and various forms of discipline. Though youth’s level of justice supervision did not relate to recidivism rates overall, counseling interventions are one instance in which outcomes were more favorable for those youth in the community as compared to those that were incarcerated. Counseling approaches such as individual, group, family and a host of others were evaluated; mean recidivism reductions for mentoring and group counseling were the highest amongst those examined, 21% and 22% respectively. Though the other approaches all demonstrated recidivism reduction effects, they were smaller, ranging from five to 16%. Between skill building approaches such as job related skills, cognitive behaviors skills, academic skills, and behavioral and social skills, behavioral (22%) and cognitive-behavioral interventions (26%) were especially effective, while job related skills were notably less effective (6%).

Authors note that gender and ethnicity were unrelated to the observed effects sizes, but counseling was found to be less effective for juvenile samples that were predominately male and somewhat more effective for largely minority samples. That being said, while we know that there were slightly more positive effects for samples that

were composed of predominately minorities, detailed information was not provided and leaves the reader uncertain of which minority groups may benefit from counseling or which counseling approaches were found to be more effective with which ethnic minority groups. Furthermore, there was no mention or apparent consideration of mental health in this meta-analysis. While this review of the literature revealed some valuable information, there were some important details that were left out of the publication and factors that were not considered in the analysis. The reader is still left uncertain how effective these programs characteristics are for serving juvenile offenders with mental health concerns and how those effects compare to juveniles with different characteristics. The current research will evaluate how recidivism varies as a function of various services that are offered in programs characteristics (mental health, mentorship, life skills, etc.) for African American juveniles with and without mental health supports.

Programming for those with Mental Health Concerns

While some judges take juveniles' presentation or history of mental health into consideration, authors suggest that the restriction of freedom that comes with incarceration often impacts the degree to which symptomology presents (Sevin, Goldstein, Olubadewo, Redding, & Lexcen, 2005). For this reason some may argue that regardless of severity, those with mental health concerns may be done a disservice when incarcerated. Research conducted by William and Chang (2000) speaks to this point, as they found that inpatient treatment is no more effective than outpatient treatment. In fact, Sevin, Goldstein, Olubadewo, Redding, and Lexcen argue that inpatient treatment may actually impair youths' abilities to apply their newly acquired skills in their natural

environments. Extrapolating from these findings, it might be possible that home or community based commitments are also equally as effective as secure care facilities.

Conduct disorder, one of the most persistently diagnosed and suspected diagnoses among juvenile offenders, is typically treated nonpharmacologically (Klein et al, 1997). Kazdin (1997) reports that impairments concerning conduct are frequently associated with living conditions and educational obstacles. Understandably, the strain that these types of challenges place on both children and their parents are believed to promote and sustain antisocial behavior in children. When considering this likelihood, approaching service delivery from an ecological perspective would require that youth have some degree of access to the various levels of the immediate as well as the more distant concentric systems in their ecological environments.

While some believe that placement should be based on youth need, rather than delinquency, efforts to discriminate treatments that reduce both delinquent behaviors and mental health symptoms from one another have been largely unsuccessful (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). As a result, researchers attempts to determine if community-based or juvenile corrections-based systems are more efficiently meeting the needs of youth with mental health disorders have been inconclusive (Faenza & Siegfried, 1998; Greenbaum, Foster-Johnson & Petrila, 1996; Mulvey, Arthur, & Repucci, 1993). While researchers in more recent years have evaluated the effectiveness of various programs interventions and their attributes, many have failed to address or speak to the effectiveness of said

interventions for those with mental health concerns (Ladenberger & Lipsey; 2005; Lipsey, 2009; Lipsey & Cullen, 2007; Wilson, Bouffard, Mackenzie, 2005).

While distinctions in the ability of home, community-based, or secure care (corrections and residential treatment) care treatment to positively impact recidivism for juveniles with mental health concerns has never been simultaneously compared in a research study, one study did look at the mental health needs of juveniles in each of these respective settings (Lyons, Baerger, Quigley, Erlich, & Griffin, 2001). Researchers gathered information from youths' case folders and an administration of the Children's Severity of Psychiatric Illness Scale. Their findings suggest that youth in both secure care and residential treatment centers had higher levels of mental health need and that prior treatment experiences for mental health and substance abuse were strongly related to incarceration. Though they are likely to be relevant to policy and the implementation of future programs, these findings do not speak to the effectiveness of placement in one of these three settings. The reader should couch these results in the literature on African Americans' differential access to mental health care and attitudes towards the medical system due to concentrated disadvantage and cultural distrust (See Barksdale, Azur, & Leaf, 2010; Brandon, Isaac, LeVeist, 2005; Drakeford & Garfinkel, 2000). If prior treatment is strongly related to incarceration (Dalton, Evans, Cruise, Feinstein, & Kendrick, 2009), the idea that the African American juvenile justice population is less likely to have received prior treatment is likely to further contribute to their placement in the secure corrections system over and above alternative placement options.

Although research has not been conducted to evaluate differential recidivism outcomes or treatments for juvenile offenders with mental health concerns that are placed in one of these three settings, research has been done on the effectiveness of placement in either secure care, residential treatment, or community-based settings (Andrews et al, 1990; Hartwell, McMackin, Tansi, & Bartlett, 2010). These studies did not specifically focus on the African American juvenile offender population; however, they are likely to provide insight to the types of settings and treatments that are optimal and will be most successful given their specific risk factors.

Secure Care Treatment Placement for Juveniles with Mental Health

In their 1990 publication, Andrews and his colleagues conducted a meta-analysis to explore the extent to which correctional treatment is effective in the face of various factors such as type of treatment (level of appropriateness), treatment setting, and behavioral intervention. In hopes of disputing the “nothing works” mantra that had begun to circulate about correctional services, Andrews and his colleagues expanded upon a previous meta-analysis (Whitehead & Lab, 1989). In addition to using 45 of the 50 studies incorporated in the Whitehead and Lab research, Andrews and his colleagues selected an additional 35 studies. The researchers in this study purport that the principles of risk, need, and responsivity may be helpful in determining relationships between cases, services rendered, and outcomes.

The risk principle indicates that higher (often restrictive) levels of service are most appropriate for higher risk cases, while low risk cases are best paired with minimal services. The need principle refers to criminogenic needs (clinically dynamic risk

factors) and suggests that intervening in such a way that contingencies within the home, work, or school setting are modified to decrease the reward of criminal activity and increase the reward of noncriminal activity by providing individuals with more to lose should their criminal activity persists (For early research see Hunt & Azrin, 1973). Lastly, the responsivity principle refers to the selection of the style and modality of services rendered; service should (a) have the ability to influence specific types of immediate target behaviors/concerns and (b) appropriately match the learning style of the offender.

Setting in the study was initially broken up into four levels: nonsystem diversion, system diversion, probation/parole/community corrections, and institutional/residential; however, the effects for the three community settings were statistically indiscernible so the variable was reduced to two levels, community and institutional/residential. The major finding of this study concerned the appropriateness of treatment factor; its effect was most clearly seen on recidivism to the degree that the service provided adhered to the principals of risk, need, and responsivity. The findings concerning setting were referred to as “tentative,” as their application may suggest to practitioners that the institutional/residential setting may “dampen” the positive effects of otherwise appropriate service delivery. Ultimately, the results of this meta-analysis indicate that literature reviews have consistently found that on average, 40% of the “better controlled” correctional treatment evaluations report positive effects (Andrews et al, 1990). These observations support the fact that at least some service delivery programs are working with at least some of the juvenile offenders under certain circumstances (Andrews et al,

1990). Nevertheless, solid conclusions were not drawn concerning treatment setting, as they revealed a weakened level of effect for appropriate services rendered in the institutional/residential setting.

While this meta-analysis yielded some interesting results, institutional and residential treatment settings were combined into a single category (institutional/residential) and does not allow for us to speak of the differences in outcomes between the two. This is problematic given the fact that the two settings are often dramatically different in approach and restriction and that current research suggests that the nature of the residential treatment setting lends itself to greater assignment compliance and more frequent individual and group treatment sessions (Serin & Preston, 2001). Additionally, the studies included in this meta-analysis observed general offender populations with no reference made to mental health status. This is problematic given what the literature notes about the uniqueness of the needs of juvenile offenders with mental health concerns. Consequently, the results of this meta-analysis referenced above are not likely to fully generalize to the population of juvenile offenders with mental health concerns, or more specifically to the subset of that population that are African American males.

In 2007, a document that was produced by the National Center for Mental Health and Juvenile Justice (NCMHJJ) in partnership with the Council of Juvenile Correctional Administrators (CJCA) and the financial support of OJJDP. This document detailed a comprehensive model for the identification and subsequent treatment of young people with mental health needs in the juvenile justice system. After completing an all-

encompassing review of the research, a series of evidence-based recommendations for service delivery resulted. Four cornerstones were developed that comprise the nine principles upon which the model was developed and reflect the most crucial areas of need in service delivery to young people represented in the juvenile justice system: (1) Improved collaboration between the juvenile justice and mental health systems; (2) Improvement in systematic strategies for identifying mental health needs; (3) The need for more opportunities for youth to be appropriately diverted into effective community-based mental health treatment and; (4) The need for young people in the system to have access to effective treatment in order to meet their needs. Naturally, some of the recommendations that came out of this project were that in addition to collaborating with one another, juvenile justice and mental health systems need to also include family members and caregivers when seeking to intervene with these young people.

Additionally, research supports that both systems should collaborate during each stage of the juvenile justice process and jointly evaluate the programs and service delivery strategies that are intended to improve identification and treatment of juvenile offenders with mental health needs. Specifically, research supports that screening and assessment should be taking place at the youths' "earliest point of contact" with the system (e.g. probation or juvenile court intake) and at points of transition in order to allow for informed placement decisions. Along similar lines, research also supports that mental health assessments should be provided to all youth whose mental health screening demonstrates a need for further assessment and should be done in conjunction with risk

assessments to allow for appropriate referral recommendations that balance public safety and youths' mental health needs.

Residential Treatment Placement for Juveniles with Mental Health

Some research has found that in comparison to residential treatment programs, community-based programs offer fewer opportunities for implementing token economies, have shorter treatment exposures, and fewer individual or group treatment sessions (Serin & Preston, 2001). Though compliance may not reflect the transforming power of residential treatment, the likelihood of attendance and homework completion being as much of a challenge in this setting as it is in a community based program is less likely. Of the three settings, research on the effectiveness of residential treatment centers was the scarcest. In fact, one recent publication seeking to compare school connectedness for youth in the community to those youth in residential treatment settings reported having to pull from the alternative school research due to the lack of good residential treatment center research (Nickerson, Hopson, & Steinke, 2011). Chamberlain and Friman (1997) note that the “gap” in research on residential treatment programs is difficult to explain given the extensive research on interventions for children with conduct and antisocial behavioral problems.

In an attempt to dispel some of the widespread negative conceptions about residential treatment programs, Friman and his colleagues conducted a longitudinal study comparing the views and outcomes of youth from a residential treatment program to a group of youth in alternative community based treatments (1996). In this study, 497 youth in a residential program in the Midwest that adhered to the Teaching-Family Model

(TFM) were compared to 84 youth receiving “treatment-as-usual”; however, the comparison group comprised youth who were living with someone that was not a parent, others that lived in group foster homes, group homes, or psychiatric settings. The primary findings that researchers were looking to collect in this study concerned: (1) Whether youths found the delivery of treatment to be helpful, (2) Youths’ satisfaction with the supervising adults, (3) Degree to which they felt isolated from their families, (4) Degree to which they felt isolated from friends, and (5) Their sense of personal control. Findings suggest that youths in the treatment program were significantly more positive than the comparison group on four of five scales and significantly approached significance on the fifth scale. Though findings were significant, there were considerable limitations with this study. The comparison group was not uniform in the way of treatment provision and in order to qualify, youth in the experimental group could not have a history of psychosis or drug addiction. These factors significantly reduce our ability to generalize this study’s results to the juvenile justice population as a whole, and exclude the likely effectiveness of this program for African American male youth with mental health concerns.

Community Based Treatment for Juveniles with Mental Health

One set of researchers note that incarceration results in youths’ exclusion from schooling and work placements due to their being estranged from their communities (Gardner, 2010). The youth interviewed in Gardner’s study shared that the exclusion experienced while incarcerated makes it difficult to comply with the requirements of probation and court appointed aftercare plans (Gardner). Furthermore, the stigma associated with incarceration often leads to self-doubt as it relates to success (Mears &

Travis, 2004) and complex difficulties that emerging into a new developmental age often create (Anthony et al, 2010), e.g. not only must they re-acclimate to their community system they must do so in the face of adulthood which comes with independence and responsibilities that are also new and unfamiliar (Steinberg, Chung, & Little, 2004). Taken together, researchers suggest that community-based care allows for the application of newly acquired skills while in context (Hartwell, McMackin, Tansi, & Bartlett, 2010; Quinsey, Harris, Rice, & Cormier, 1998; Redding, Lexcen, & Ryan, 2005). According to Lambie and Randell (2013), the most advocated community-based treatments for juvenile offenders are Multisystemic Therapy (MST) (Henggeler & Sheidow, 2012; Letourneau et al, 2009), Functional Family Therapy (FFT) (earliest outline in Alexander, Robbins, & Sexton, 2000) and Multidimensional Treatment Fostercare (MTFC) (Chamberlain, 2003). The general ideas believed to enhance the effectiveness of these community-based treatments concerns their underlying concepts. All of these interventions are family centered, community based and provide comprehensive approaches that promote collaboration between juvenile justice, mental health, and other services. Their application in the community context allows them to incorporate family systems approaches, as well as principles of cognitive behavior therapy and social learning; additionally they assist young people and their families to develop the skills, competencies, and motivation needed to adaptively and prosocially function within their natural environments (Lambie & Randell, 2013).

The premise of Eddy and Chamberlain's (2000) research is founded on similar principles, in that community based treatment allows for a smoother transition out of

juvenile justice custody than residential treatment. Eddy and Chamberlain (2000) conducted research that compared the effectiveness of Treatment Foster Care in the community to standard residential group home placements utilized by the juvenile justice system. They conducted a randomized clinical trial that contrasted usual group home treatment (GC) and multidimensional treatment foster care (MTFC). It was hypothesized that the more that treatment condition (MTFC or GC) resulted in increases in family management skills and decreases in deviant peer association, the more concurrent and subsequent youth antisocial behaviors would decrease.

Participants in the Eddy Chamberlain study consisted of 79 chronic and severe offenders residing in Lane County, Oregon. Utilizing randomized assignment, thirty-seven participants were placed in MTFC while 42 were in the GC treatment. Of the participants, 85% were White, 6% African-American, 6% Hispanic, and 3% American Indian. Though rates were not given for the other racial-ethnic groups, researchers report that according to the US Department of Commerce's Bureau of the Census, 92% of youth living in the local area at the time of the study were White (U.S. Department of Commerce, Bureau of the Census, 1993). As was indicated by non-significant differences on multiple baseline variables, randomization was successful. 53 of the original 79 participants in the randomized trial were included in their analysis (23 in GC, 30 in MTFC).

In the MTFC placement, treatment foster families were monitored weekly to check on youth progress. Youth participated in weekly individual sessions and family therapy sessions with representatives from youth's anticipated family of residence upon

completion of treatment (in most cases, the biological or stepfamily of the youth). As part of family therapy, home visits were used during the course of the treatment so that parents and youth could practice their skills in the context of their family environment. Group care (GC) consisted of youth being placed in 1 of the eleven group homes in the state. Findings suggests that MTFC as compared to GC, allowed for more successful youth-family reintegration, better reduced interaction with negative peers, enhanced the development of family management skills, and the reduction of recidivism than when carried out in a residential group-home setting.

While Chamberlain has gone on to replicate these results with juvenile offenders with substance abuse disorders (Smith, Chamberlain, & Eddy, 2010), youth from state mental hospitals (Chamberlain & Reid, 1991), youth in the child welfare system (Chamberlain, Moreland, & Reid, 1992), and female juvenile offenders (Leve & Chamberlain, & Reid, 2005), outcomes have only been examined in comparison to group home placement. Consequently, research has not been conducted on the effectiveness of MTFC for juvenile offender with mental health. Additionally, support in these research evaluations only provides support for the effectiveness of a very specific type of community-based treatment as compared to group home residential treatment. Additionally, given that African Americans represented only a small percentage of the studies sample, we are unable to speak to the generalizability of these results for a primarily African American sample.

Relevance of this Project

In review, interventions are most effective when collaboratively designed and implemented across multiple levels of the system. To this end, the goal of this research is to examine how recidivism varies as a function of the settings, programs, and activities that are assigned. Although a few evidence based treatment programs have been validated with minority youth (e.g., functional family therapy, multidimensional family therapy, multisystemic therapy), there continue to be questions concerning the logistics of how to optimally treat ethnic minority youth (Cunningham, Foster, & Warner, 2010) and address the disproportionate representation of African American males in the juvenile justice system that persists (OJJDP, 2009). Furthermore, beyond the type of mental health treatment or therapy that may effectively improve outcomes for this population, there has been little to no research that indicates the context (i.e., placement such as secure, community based treatment, or home based care) that is most advantageous for this population.

Chapter Three: Methods

Methods

Research Questions

Overall, this research evaluated how effective the current service delivery model employed by the Department of Youth Rehabilitative Services in the District of Columbia is for its African American male population, most specifically its African American male population that is receiving mental health supports.

Question 1. Do recidivism rates of African American males vary as a function of their initial setting placement?

Question 2. Are youth in need of Mental Health according to the MAYSI-2 receiving such services?

Question 3. Do MAYSI-2 dimension scores moderate the relationship between service type and recidivism?

Question 4. Do recidivism rates differ between those without mental health concerns?

Question 5. Do recidivism rates differ between those placed according to the placement matrix and those who are not?

Data Source

Following the approval of George Mason University's Institutional Review Board as well as their own, the District of Columbia's Department of Youth Rehabilitation Services (DYRS) allowed me to make use of the de-identified information within their client database for my dissertation research. The District of Columbia's Department of Youth Rehabilitation Services works in conjunction with local law enforcement, juvenile courts, and mental health agencies as well as federal probationary services. Once young people are arrested they are either released to their families or they are detained in the local detention center (Youth Services Center). The young people are detained until their court date. There are three possible next steps from detention. Youth may be found innocent of criminal charges and get released to their parents, they may be put on probation with the federally run Court Social Services, or lastly, young people may be committed to DYRS. Though a young person may be committed to DYRS, they may not necessarily be placed in secure placement. Placement is largely determined by their score on the Structured Decision Making system, a validated tool used by the district. This tool takes a number of factors into account and produces a score which is used to determine placement (Please see instruments section below for greater detail). Young people who have been committed to DYRS are assigned to one of three potential placement settings: (1) New Beginnings, their secure facility; (2) a residential treatment center for those who have been identified as needing unique supports, e.g. fire starters, sex offenders, youth with substance abuse issues; and (3) community placement with supports.

New Beginnings is DYRS' secure facility. New Beginnings provides 24-hour supervision to a maximum of 60 young people. On average, youth spend between nine and 12 months at this facility. Youth are provided with everything from onsite medical and dental care to schooling while placed on this campus. Youth have the opportunity to enroll in training programs for the workforce, life-skills, and various recreational activities. Upon release from this placement, youth are reintegrated into their communities and generally receive continued support services and monitoring for the 12 months following their release. Given that youth are not assessed beyond their 12 month community reintegration period, these are the 12 months within which recidivism is measured.

Residential treatment facility placement varies with need, as DYRS contracts with a number of different providers that are situated both within and outside of the DC metropolitan area. While youth needing substance detoxification or to be stabilized can be temporarily placed in a residential drug treatment program, they are often transferred to a secure residential treatment center when they require extended care. Youth with specific mental health (often sex offenders), behavioral (fire starters), and substance abuse needs all receive educational and behavioral modification programs that are specialized according to their needs. These facilities are often located outside of the DC metropolitan area and placement typically last between six and 12 months. Similar to secure care, youth exiting out of these treatment programs generally go on to receive community support for 12 months after the completion of their residential treatment program. These 12 months are the period during which recidivism is monitored.

Young people that are placed in the community with supports can be placed in a community-based residential facility, independent living program, therapeutic foster care/extended family, or back in their homes. Though staffing/supervision may vary, regardless of the placement that they are assigned to, all youth attend school and/or work and receive support services in the community. It should be noted that nearly 50% of youth that are committed to DYRS are directed to community placement. Somewhat differently, young people placed in the community are monitored for recidivism at the point at which their community placement begins, as this is the only period of time for which they are under DYRS supervision.

Sampling

For young people to be included in the current study they must have been referred to the District of Columbia's DYRS for criminal behavior between October 2009 (Fiscal year 2010) and 2012 which results in a commitment discharge date of July 2013. The criminal behavior could have resulted in one of the three aforementioned placement resolutions: secure, residential treatment or community based care. However, those youth who do not attend and are unable to be found in time for their court ruling are indefinitely recorded as being in abscondence. The sample for this study included youth committed to DYRS beginning in fiscal year 2010. This time frame became the focus of this study given that it was not until FY 2009 when DYRS's newly functional service delivery system was implemented and not until FY 2010 that administrators felt it was operating with a desirable level of fidelity. Consequently, recidivism periods from 2010 through July 2013 were assessed for the current research. The criminal activity that first occurred

during the 2009-2012 time period was used in the study as the focus offense. Any criminal activity that took place after the focus offense was considered recidivistic. Youth committed to DYRS range from 13-20 years of age. Only the African American male youth from the DYRS population were included in this study. According to the DYRS 2011 Annual Performance Report, African Americans represented 96% of the youth committed to DYRS in 2011 while males represented 86% of the juvenile justice population committed to DYRS during that same time period. Ultimately, only those African American male juveniles admitted after 2010 were included as participants in this study.

Measures

The dependent variable for the current research is recidivism. The independent variables reflect placement, mental health, community, arrest, and risk/severity factors. For greater detail please refer to the descriptions provided below.

Dependent Variable

The criterion variable for the current research study is recidivism. Recidivism was dichotomized as (1) juveniles with documented arrests during the follow-up period and (0) juveniles with no documented arrests during the follow-up period. The follow-up or recidivism period is scheduled to last a total of 12 months for each youth regardless of the level of their care. According to DYRS *A committed youth has recidivated if he or she is convicted in Washington, D.C. of a new juvenile or adult offense which occurred within one year of being placed in or returned to the community* (DYRS, 2011). Using

recorded criminal behavior that occurs during a follow-up period as a means to define recidivism is a standard operationalization of recidivism (Jack, 2000).

Independent Variables

Mental health factors. The mental health of youth in DYRS custody is initially screened with the Massachusetts Youth Screening Instrument-Version 2 (MAYSI-2). The MAYSI-2 is a 52 question yes/no self-report inventory that is designed to assess the presence or absence of behaviors and symptoms that are indicative of several common areas of emotional, behavioral, and psychological disturbance (Vincent, Grisso, Terry, & Banks, 2008). The MAYSI-2 can be administered by hand or on computer and is intended for youth ages 12-17 that are entering the juvenile justice setting. The MAYSI-2 requires a fifth grade reading level and takes approximately 10-15 minutes to complete.

For males, there are seven scales on the MAYSI-2: Alcohol/Drug Use, Angry-Irritable, Depressed-Anxious, Somatic Complaints, Suicide Ideation, Traumatic Experiences, and Thought Disturbance (boys only). Scores that fall in the *Caution Zone* indicate the presence of concerns and exceed the scores of two-thirds of youths in the juvenile system. Scores within the *Warning Zone* indicates the potential of clinical significance and are only this high for 1 in 10 youth. According to DYRS' algorithm, the range of these zones varies somewhat from dimension to dimension.

Though not all utilized in the final analyses that were run, in total, 11 distinct variables were created to characterize mental health needs and supports within the system. As it relates to the recommendation variables, the African American male youth participants sampled for this study were split into two sub groups; those who were

eligible to receive mental health supports and those who were not. Ultimately, participants were coded “0” if their score did not indicate a need for mental health supports and “1” if they did. Given that DYRS’ algorithm for mental health support varied slightly from that of test developers, two separate variables were used to reflect mental health service needs: Test Developer Recommendation and DYRS & Test Developer Recommendation. Overall, DYRS’ algorithm is more stringent than that of test developers. Youth receiving above a score of 0 on either the *Suicide Ideation* or *Thought Disturbance* dimensions are immediately flagged for mental health supports within DYRS. Youth scoring above a 4 in any of the other dimensions are flagged and more formally assessed for mental health need during the initial clinical interview and assessment that takes place within the first 48 hours of commitment. I did not have youth’s responses to the actual MAYSI-2 items; rather, I had their overall scores on the various dimensions.

Mental Health information that was factored in as predictors of recidivism consisted of *MAYSI-2* scores. The *MAYSI-2* variables reflect youths’ *MAYSI-2* scores on the seven dimensions and gave information on the potential presence of mental health concern. Additionally, *MAYSI-2* scores were coded (yes/no) if they are in the *CAUTION ZONE* and (yes/no) if they are in the *WARNING ZONE* on two separate variables. To run the logistic regression analyses, the Caution and Warning variables for each of the dimension were collapsed into seven respective variables that reflected whether a youth’s score on a given dimension was elevated or within expected limits. Another variable that was considered that concerns mental health was the *Mental Health Supports* variable

which will be coded (yes/no) and reflect whether or not youth are receiving mental health supports that are inherent to their placement within DYRS juvenile justice system. The final variable pertaining to mental health that was included was the *Mental Health Services* variable which indicated whether or not youth received mental health services that were above and beyond those built into their respective placements.

Background factors. Age at Commitment was included as a variable in the analysis. The Age at Commitment variable was calculated using youth “DOB” and the “Open Date” variable provided by DYRS; the “Open Date” variable refers to the date that the youth’s case was first opened or committed to DYRS. A separate variable which reflects youths’ Age of Risk was also calculated using DOB, Age at Commitment, and the appropriate time adjustment depending on their initial commitment placement.

Placement factors. A wide variety of placement factors were captured and then represented on a set of independent variables. These variables contain information of the types of services being provided. Setting consisted of three levels that reflect whether a youth is placed in a secure (2), community (1), or home setting (0) while committed to DYRS. Service Type reflects the types of services that youth were assigned to receive. There are a total of 10 Service Type levels that represent services such as Mentorship and Mental Health.

Arrest factors. Arrest and detention Information was captured on a handful of variables. The Sentence Length variable will give the full duration of youths’ commitment to DYRS in days. In keeping with the Uniform Crime Reporting Program (UCR) that is utilized by the U.S. Department of Justice- Federal Bureau of Investigation,

only the most severe charge within each petition was used for reference or to measure recidivism during a second offense. Using the “hierarchy rule,” stipulates that only the most serious offense in a multiple-offense criminal incident be referenced when analyzing crime statistics (United States Department of Justice-Federal Bureau of Investigation, n.d.). Criminal Charges reflects each youth’s initial conviction charge and in those instances where youth were arrested with multiple charges, this variable reflects the most serious of the group. Re-offense Charges reflects the most serious conviction charge brought against those youth who commit an offense during their recidivism period; for those youth who did not commit a second offense this variable was coded “no charge.” Prior Incarceration was coded yes if the youth had a conviction prior to the current conviction of focus and no if there were no previous convictions. Number of Prior Offenses reflects the number of times that youth were previously charged and found guilty of committing an offense. Finally, Age at Time of First Offense reflects the age at which youth were first committed for an offense.

Risk and severity. Youth placement within DYRS is not random, but rather it is determined by a specific set of criteria on the Structured Decision Making (SDM) system. The SDM is an assessment tool that accounts for factors such as offense severity, school discipline/attendance, prior adjudication, peer relationships, and substance abuse concerns when determining the most appropriate placement. The District developed and started using the SDM roughly five years ago when they began exploring methods that would allow them to more accurately determine the appropriate level of restriction for newly committed youths’ placements. The SDM system links two key factors in the

generation of projected “risk” level: (a) the likelihood that youth will reoffend and (b) the severity of a youth’s committed offense. Risk level can be assessed as *high*, *medium*, or *low*.

With funding from the Annie E. Casey Foundation (AECF) and in collaboration with AECF and DYRS, The National Council on Crime and Delinquency (NCCD) conducted a risk assessment validation and review of the SDM system. The results of this validation study indicate that the SDM does successfully classify committed youth into three groups that reflect the likelihood of their re-arrest, with youth categorized “low-risk” being least likely to recidivate and those assigned to the “high-risk” category being most likely to recidivate. There is support for researchers accounting for risk/severity when making comparisons across groups (Andrews & Bonta, 1994; Friendship, Mann, & Beech, 2003). Two new variables were created to capture risk and severity information. *Risk* is reflected on a continuous variable that reflects the risk score captured by the SDM. A second variable, *Categorical Offense Severity* will reflect the category assigned by DYRS to represent the severity. A placement matrix of the two variables is utilized by DYRS to assess each inmates recommended placement level. The placement matrix classifications are as follows: low, medium or low, medium, high or medium, and high. Given that there are only three possible settings once committed to DYRS, the five categories are collapsed into three: high (24 hour secure), medium (community), and low (home with supports).

Procedures

The sample for this study was provided by the District of Columbia's Department of Youth Rehabilitative Services. A final set of roughly 400 youth between the ages of 13 and 20 will be included in this sample. Data were collected through a series of online district database systems (Youth Empowerment System, JUSTIS, and Mental Health). As neither an employee intern nor a staff member with DYRS I was not permitted to directly access the data for this study. Consequently, for data that required access to sensitive files, assistance was given by DYRS research and evaluation team members. Knowledgeable team members collated and transferred the data to me electronically. Given their knowledge of the datasets, criminal activity information, demographic variables, and incarceration statistics, DYRS staff helped provide clarity on those variables and pieces of documentation that were unclear or not readily interpretable.

Though de-identified, data was received in its raw format. The data I was given access to were coded with an internally provided ID number that enabled participant information to be linked from data grouping to data grouping during the analysis process. The de-identified information that was extracted from their larger databases was password protected and saved on a flash drive as excel documents. In order to ensure the integrity of the original dataset throughout the analysis process, the file was first saved as a "read only" file. Subsequently, MD5sums were run at the outset and periodically as analysis was carried out. The MD5sum program is designed to calculate and verify 128-bit MD5 hashes. MD5 hashes operate somewhat like fingerprints for files, as no two sets of MD5 hashes are the same. MD5 hashes allowed me to determine if the data was still

identical to the data that was originally provided which is critical because it is easy to inadvertently change an excel file. Additional measures were taken to ensure that the information was accurately transferred into SPSS from excel. All of the data has been password protected.

Given that data was electronically released to me on a flash drive, independent manipulation and off-site data management took place. Though DYRS strictly prohibited me from storing the data on public computers or domains, I cleaned, organized, and analyzed the data on a personal laptop and computers in private computer labs. These processes were carried out at an off-site workspace on GMU's Fairfax campus or from the researcher's home office.

The original variables were maintained throughout the analysis process; however, the data was transformed into new variables once transferred into my statistical package. Data within the "new" variable fields is what was utilized for analysis. Ultimately, data was parsimoniously transformed into new variables, such that the information able to be effectively captured was maximized. When appropriate for the analysis, new variables that were created from the decomposed SDM risk assessment; namely, a *parent/sibling incarceration* and a *peer relationships* variable were intended to be utilized.

Analysis

Preliminary diagnostics were run to determine the appropriateness of each youth's line of data for inclusion based upon what variables were missing and the projected impact of that missing information. When working with correlations, missing data were addressed using pairwise deletion; whereas for regression analyses, listwise deletion was

used. Preliminary diagnostics were run to yield the means, standard deviations, and intercorrelations of each of the predictors. In addition to these, I assessed the degree to which the various groups being compared in the different analyses varied from one another and the extent to which they were appropriate for comparison.

Additionally, before running the logistic regression models, preliminary diagnostics were also run to assess leverage and deviance residuals (deviance D). The likelihood ratio chi-squared test was run from step to step of the model to evaluate its improvement of fit with the addition of predictors. The odds that recidivism will or will not happen at a given level of the predictor while holding all others constant as well as an evaluation of the statistical significance of the incorporated predictors were also conducted. In addition, the Hosmer & Lemeshow Test was also run to evaluate how well the model generated fit the data.

Criterion Variable

The criterion variable for the current research study is recidivism. Recidivism was dichotomized as (1) juveniles with a documented conviction during the follow-up period and (0) juveniles with no documented conviction during the follow-up period. The follow-up or recidivism period is scheduled to last a total of 12 months for each youth regardless of the level of their care.

Questions, Hypotheses and Anticipated Analysis

Question 1: Do recidivism rates of African American males vary as a function of their initial setting placement? Research indicates that when risk and other characteristics of juveniles were controlled for (age, ethnicity, gender), there was little support for the

argument that longer sentencing and harsher punishments or those receiving interventions in a corrections setting result in lower recidivism rates (Lipsey, 2009).

Hypothesis 1: I hypothesize that recidivism rates will be lower for those youth placed in their home setting than for youth placed in either the community group home setting or the secure setting.

Analysis 1: I used a chi square test to assess the degree to which recidivism rates differ between youth placed in the home, community, or 24 hour secure settings.

Question 2: Are youth in need of Mental Health according to the MAYSI-2 receiving such services? The literature suggest that there are several factors that contribute to the range of mental health rates in the justice system; timing (amount of hours youth were assessed after entering the system) (Deardorff, Gonzales, & Sandler, 2003) and the types of tools used (Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001) are all said to impact the rates of mental disturbance detection, diagnosis and mental health related concerns. Presumably, placement that is done in accordance with criterion set by test developers will more accurately identify mental health need than an algorithm that has not been validated.

Hypothesis: I hypothesize that youth identified as in need of mental health support according to the MAYSI-2 are substantially less likely to receive it in the current juvenile justice system.

Analysis: I used a chi square test to assess the degree to which mental health service rates differ between youth identified as needing additional mental health supports using the MAYSI-2 developers' criterion and youth identified as needing additional mental health supports using DYRS' criterion.

Question 3: Do MAYSI-2 dimension scores moderate the relationship between service type and recidivism? While research indicates that mean recidivism reductions for mentoring (21%) and group counseling (22%) surpassed other counseling interventions (individual and family counseling) and among skill building approaches such as job related skills, cognitive behavior skills, academic skills, and behavioral skills, behavioral (22%) and cognitive-behavioral type interventions were especially effective, whereas job related skills were less effective (6%) (Lipsey, 2009), there is little that speaks to the effectiveness of these types of interventions among juvenile offenders with mental health concerns. Furthermore, although these interventions are widely used with juvenile justice populations, research does not necessarily support their effectiveness with the general population let alone with a population being impacted by mental health challenges.

Hypothesis 3a: I hypothesize that there will be an interaction between Thought Disturbance and Mental Health services. The effect between Mental Health Services and Recidivism will be larger for those with elevated Thought Disturbance scores than for those without.

Hypothesis 3b: I hypothesize that there will be an interaction between Thought Disturbance and Education services. The effect of Education Services on

Recidivism will be smaller for those with elevated thought disturbance than for those without.

Hypothesis 3c: I hypothesize that there will be an interaction between Thought Disturbance and Mentorship services. The effect of Mentorship Services and Recidivism will be smaller for those with elevated Thought Disturbance than for those without it.

Hypothesis 3d: I hypothesize that there will be an interaction between Suicide Ideation and Mental Health services. The effect of Mental Health Services on Recidivism will be greater for those with elevated Suicide Ideation than for those without it.

Hypothesis 3e: I hypothesize that there will be an interaction between Suicide Ideation and Mentorship services. The effect of Mentorship services on Recidivism will be smaller for those with elevated Suicide Ideation than for those without Suicide Ideation.

Hypothesis 3f: I hypothesize that there will be an interaction between Suicide Ideation and Education services. The effect of Education services on Recidivism will be smaller for those with elevated Suicide Ideation than for those without.

Hypothesis 3g: I hypothesize that there will be an interaction between Alcohol/Drug Use and Substance Abuse services. The effect of Substance Abuse Services on Recidivism will be greater for those with higher Alcohol/Drug Use scores than it is for those without them.

Hypothesis 3h: I hypothesize that there will be an interaction between Depressed/Anxious and Mental Health services. The effect of Mental Health Services on recidivism will be greater for those with a high Depressed/Anxious score than for those without one.

Hypothesis 3i: I hypothesize that there will be an interaction between Depressed/Anxious scores and Life Skills services. The effect of Life Skills Services on recidivism will be greater for those with elevated Depressed/Anxious scores than for those without them.

Analysis 3: Logistic regression was employed with recidivism serving as the dichotomous criterion variable. Separate variables were created for each of the service types that served as predictor variables in the model; this varied according to the hypothesis being tested. The above hypotheses were tested by examining the interaction term between the MAYSI-2 dimension and the services of interest. SDM score, offense severity, and other background variables were controlled for in the models.

Question 4: Do recidivism rates differ between those with and without mental health concerns? While some tools have been found to effectively identify need among minority juvenile offenders, research still shows that although African American youth are more likely to be referred to mental health services through the juvenile justice system, they are still less likely to be referred for mental health services in

comparison to their Caucasian peers while placed in those settings (Barksdale, Azur, & Leafe, 2010). Ultimately, if the needs of these youth are not being met then their poor choices and behaviors are likely to persist and recidivism is more likely to occur. In fact, juvenile justice research has repeatedly demonstrated that the lack of attention given to the mental health problems of juvenile offenders is likely to result in recidivism and future adult offending (Lexcen & Redding, 2000; Lewis, Yeager, Lovely, Stein, & Cobham-Portorreal, 1994).

Hypothesis 4: I hypothesize that there is a higher incidence of recidivism for those African American male juveniles with mental health supports than for those without mental health supports when controlling for severity of charge and risk level.

Analysis 4: Logistic regression was employed with recidivism serving as the dichotomous criterion variable. While mental health concerns served as the primary predictor of interest in this model, a few additional factors were also entered to help control for the inherent differences between groups. SDM, Severity of Charge, number of placements, Age at Commitment.

Question 5: Do recidivism rates differ between those placed according to the placement matrix and those who are not? The idea here is to ensure that youth are appropriately being placed and consequently receiving services that meet their needs. Research suggests that recidivism is most effectively prevented when treatment targets the youths’

specific risk factors (Andrews et al, 1990; Schumacher & Kurz, 2000). Ultimately, each youth's SDM scores factor in their unique risk and protective factors. If these unique needs are not being accounted for during placement, it may lend itself to higher recidivism rates.

Hypothesis 5: I hypothesize that there will be a lower incidence of recidivism for those placed according to the placement matrix than there is for those with similar scores who were placed with overrides.

Analysis 5: To examine this question, I looked at recidivism rates of youth placed in accordance to the placement matrix and those that were not placed according to the matrix. A logistic regression was run where recidivism served as the dichotomous criterion variable. While the variable of interest reflected whether or not youth were placed according to the placement matrix, MAYSI-2 scores and the SDM score were entered and controlled for.

Anticipated Implications

Though overrepresented in the justice system, minorities are frequently under identified for mental health services (Cohen, 1991; Drakeford & Garfinkel, 2000; OJJDP, 1999b). However, given that the DC juvenile justice system is nearly 100 percent African American, unlike most research samples, the sample of participants in the current research is likely to have a greater number of African American youth that have been identified as in need of mental health support than samples from less racially disproportionate juvenile justice systems. As a result, this research may provide the

opportunity to get a clearer sense of how outcomes for this population vary as a function of the services that they receive and the programs that they are placed in. A better understanding of how recidivism varies as a function of these programs and services can in turn inform improvements in service delivery and program placement for the greater African American juvenile justice population.

Chapter Four: Results

Descriptive Information

The final sample of participants consisted of 417 youth. An examination of Table 1 indicates that of those committed during the observation period, the youngest was 12 years of age while the oldest was 20 years of age. The average age of the youth committed to DYRS during the observation period was 16.41 years (SD=1.35). Among the 411 youth that had placement data, the mean number of placements per youth was 12.08; however, the number of placements per youth ranged from 1 to 49. An average of 8.82 (SD= 5.56) types of services were delivered to each participant, but similar to the placement variable, there was a wide range in the number of services provided. While 45.6% of the youth were rearrested during their recidivism period, only 21.1% were convicted of the crimes that they were arrested for (Table 2). As it relates to youths' MAYSI scores, data were missing for 76 participants (18.2%). Additionally, 26.6% of the youth were found to have MAYSI-2 scores that fell in either the *Caution* or the *Warning* areas of concern (Table 2).

Table 1

Descriptive Statistics for the Sample of African American Youthful Offenders (N = 417)

	N	Minimum	Maximum	Mean	SD
Age at Commitment(years)	417	12	20	16.41	1.35
Age at First Offense (years)	366	10	17	14.67	1.50
SDM Risk Score	410	-3	17	5.99	3.37
Number of Prior Adjudications	367	0	7	.98	1.11
Number of Placements	411	1	49	12.08	7.91
Number of Services	395	1	30	8.82	5.56

Table 2

Frequency Information for the Sample of African American Youthful Offenders (N = 417)

	N	Frequency	Percent
Recidivism	417	417	100
0 (No)	-	329	78.9%
1 (Yes)	-	88	21.1%
Re-Arrest	417	417	100%
0 (No)	-	227	54.4%
1 (Yes)	-	190	45.6%
Elevated MAYSI	417	417	100%
0 (No)	-	230	67.4%
1 (Yes)	-	111	32.6%

Analysis

Recidivism served as the dichotomous criterion variable for each of the logistic regression models in this research project. Recidivism was dichotomized as (1) juveniles with a documented conviction during the follow-up period and (0) juveniles with no documented conviction during the follow-up period. Prior to running the logistic regression models, preliminary diagnostics were run to assess leverage and deviance

residuals (deviance D). The likelihood ratio chi-squared test was run from step to step of the model to evaluate its improvement of fit with the addition of predictors. The odds that recidivism will or will not happen at a given level of the predictor while holding all other predictors constant as well as an evaluation of the statistical significance of the incorporated predictors was also conducted. In addition, the Hosmer & Lemeshow Test was run to evaluate how well the generated model fits the data.

Regression diagnostics were conducted per recommendations by Tabachnick and Fidell (2007). Histograms were examined to inspect the shape of the variable distributions (Tabachnick & Fidell). With the exception of number of prior adjudications, number of services, and the number of placements variables, which were marginally skewed right, all other histograms were found to be normal. In the data set, no cases exceeded Cook's D values of 1.00. Sample size was adequate per Tabachnick and Fidell's recommendations ($N > 50 + 11(m)$ where m equals the number of independent variables) = 127, N in the current study is 417. Last, data were assessed for multicollinearity and singularity; neither multicollinearity nor singularity was a concern. Regarding multicollinearity, independent variables were correlated with one another at less than .40.

Given that listwise deletion was used for all regression analyses, missing data on some of the variables presented a few challenges. After running frequencies for the predictor variables it became clear that there was a lot of missing data (103 cases had missing data for at least one variable of interest). By and large, the source of the missing data came from either incomplete youth profiles on the SDM measure or the absence of

scores on the MASYI-2 screener. Given that so many lines of data were missing, items pulled from the SDM profile (Age at First Offense, Number of Prior Adjudications, and Family Criminality) were removed from the model, in order to increase the number of useable cases for analysis. Unlike items pulled from the SDM profile, items generated from the MASYI-2 screener could not be deleted due to their centrality in many of the research questions.

In addition to descriptive statistics and frequencies, additional diagnostics such as residual and leverage analyses were also run for each of the variables in each of the separate analyses. Frequency analysis revealed that there was not sufficient spread among some of the continuous variables, in particular, the dimension were truncated. After further review and consideration, I concluded that I was more interested in looking at the distinction that test developers made between scores that indicate clinical significance and those that do not. Consequently, each of the dimensions scores were converted into two groups: (1) Participants with a score below the elevated range and, (2) Participants with scores in the caution or warning range. Nevertheless, even with these adjustments, the frequency and percentage of participants in the cells was sometimes low. In all, this affected the statistical power of the analysis, making it difficult to detect true population effects.

Centering of Predictors

In order to create interaction terms between relevant categorical and continuous variables, all of the continuous predictors involved in interaction terms within the regression models were centered. Researchers recommend that variables be centered

prior to creating interaction terms (Cohen, Cohen, West, & Aiken, 2003). Ultimately, multicollinearity between the predictor variable and their cross-product is reduced by doing so and allows for a more accurate interpretation of the regression coefficients. After the predictors were centered, interaction terms were created for analyses using select centered MAYSI-2 dimension scores and select service types.

Questions and Results

Question 1: Do recidivism rates of African American males vary as a function of their initial setting placement?

Hypothesis 1. I hypothesize that recidivism rates will be lower for those youth placed in their home settings than for youth placed in either the community group home setting or the secure setting.

Table 3

Recidivism and Placement Table

Placement	Recidivism (Yes)		Total
	Percent	Frequency	
Home	23%	6	26
Community	19%	8	43
Secure	22%	74	336
Other	0%	0	6
			411

Placement*Recidivism: Valid Cases (N=411, 98.6%); Missing (N=6, 1.4%); Total (N=417, 100%)

A Chi-Square test was run to answer this question. Results from the Pearson Chi-Square test suggest that there is not a statistically significant association between initial placement setting and recidivism ($\chi^2_{(3)}=1.95, p = .58$). This suggests that youths' initial placement setting is not significantly related to recidivism (see Table 3). Ultimately, youth placed in their homes appear to recidivate at rates that do not significantly differ from the recidivism rates of their peers in secure settings.

Question 2: Are youth in need of Mental Health according to the MAYSI-2 receiving such support?

Hypothesis 2. I hypothesize that youth identified as in need of mental health support according to the MAYSI-2 are substantially less likely to receive it in the current juvenile justice system.

Two separate Chi-Square tests were run to answer this question. Given that numerous youth are assigned to multiple placements and services throughout their commitment to DYRS, two separate mental health support variables were created. One variable reflects whether youth were assigned to a placement where they received mental health supports during their initial placement while the other reflects whether youth ever received mental health supports during their initial or any of their subsequent placements with DYRS. Results from the first Pearson Chi-Square test (MH during initial placement) suggest that there is not a statistically significant association between initial mental health service provision and recommendation criterion ($\chi^2_{(2)}=2.04, p = .36$). This suggests that having a recommendation for mental health support is not related to youth receiving it

during their initial placement with DYRS (see Table 4). Over 75% of those with a DYRS recommendation did not receive supports when initially placed in the system. In hopes of finding additional information, a simple logistic regression analysis with recommendation as the sole predictor was run as well. As the chi square analysis revealed, the effect of recommendation on mental health support was not observed. Consequently, when recommendation was entered into the model was not significant ($\chi^2(1) = 1.94, p = .16$).

Table 4

Mental Health Programming (FIRST PLACEMENT) by Recommendation Frequency Table

	Mental Health Support (Y)		Total
	Percent	Frequency	
No Recommendation Test Developer	14%	33	230
Recommendation Test Developer & DYRS	19%	13	70
Recommendation	23%	9	40

Results from the second Chi-Square (MH during any placement) were unable to be generated, as there was not enough variance between the different levels on the recommendation accuracy variable. For similar reasons a logistic regression analysis was unable to be run as well. Differently than the first Chi-Square analysis, percentages in the matrix indicate that the proportions of youth referred for services are similar across each level of the variable. In sum, most youth that need mental health supports (97.6%) do appear to receive it at some point during their commitment. Of note, even youth that do

not meet criteria appear to end up receiving supports during at least one of their placements with DYRS (Table 5).

Table 5

Mental Health Services (EVER) by Placement Recommendation Frequency

	Mental Health Support (Y)		Total
	Percent	Frequency	
No Recommendation	100%	230	230
Test Developer Recommendation	100%	70	70
Test Developer & DYRS Recommendation	97.6%	40	41
Total	~100%	340	341

Question 3: Do MAYSI-2 dimension scores moderate the relationship between service type and recidivism?

Hypothesis 3a. I hypothesize that there will be an interaction between Thought Disturbance and Mental Health services. The effect between Mental Health Services and Recidivism will be larger for those with elevated Thought Disturbance scores than for those without.

Table 6

Thought Disturbance by Mental Health Services by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Thought Disturbance			
Mental Health Services	0%	0	9
No Mental Health Services	29%	7	24
No Thought Disturbance			
Mental Health Services	24%	17	71
No Mental Health Services	24%	56	232

Table 7

Full Logistic Regression Model

Independent Variables	B	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Items						
SDM Risk Score	.07	.10	1.070			
Severity of Offense	.30	.10	1.349			
Number of Services	..17	.29	1.188			
Age at Commitment	..34	.00**	1.409			
Number of Placements	.54	.00***	1..722			
Step	-	-	-	30.19	.000***	337.00
Block 2 Items						
Thought Disturbance						
Score	-.11	.819	.897			
Mental Health Services	-.39	.262	.675			
Step	-	-	-	1.37	.503	-
Model	-	-	-	31.57	.000***	335.63

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

A preliminary analysis reveals that some of the cell sizes were low or empty (see Table 6). Consequently, the predictors are unstable and do not afford the degrees of freedom that are necessary to include the interaction term in the model. After the variables being controlled for were entered into the model, the terms that comprised the hypothesized interaction were entered on the subsequent step (see Table 7). Further review of the covariates revealed that the standard error of the estimate for the interaction term was observed to be extremely high; this was due to an empty cell and the absence of data needed in order to run this analysis and responsibly interpret the results. Various ways to handle empty cells when running logistic regression were explored, but none of the options were appropriate for this case so the interaction term was not included in the model.

Given that there were not enough degrees of freedom to include the interaction term in the model an alternative approach was taken to examine its value. Among those with a thought disturbance, I used the Fisher's Exact Test to compare recidivism rates for those with and without mental health services. In Table 6 you can see that the likelihood of recidivism increases from 0% (receiving MH services) to 29% (not receiving MH services) for youth with Thought Disturbance. This difference is not statistically significant ($p=.081$), but is clearly of a magnitude worth exploring in future research.

Number of Placements and Commitment Age were statistically significant in the positive direction at each step of the model (see Table 7). Ultimately, as youths age and the number of placements they were referred to goes up by their respective units, there is an increase in the odds of recidivism. To my surprise, Offense Severity and SDM Risk

Score were not significant. However, because of their apriori relevance to the model and their substantiation in the literature, I opted to leave them in as predictors.

Taken together, preliminary diagnostics reveal that although the predictors in this particular model may not be the best, they are a reasonable fit to the model’s estimates and able to be interpreted. An analysis of the residual plot revealed that the combination of predictors in this model may not be working well, as a number of the points fell above 1.96 or two standard deviations away from the center. Furthermore, a review of Cook’s Distance values suggests that while the greater majority of the cases were central to one another, there were a few data points with greater spread. They were each independently assessed and were not greater than 1 so leverage does not appear to be a concern. Finally, Hosmer and Lemeshow Tests indicate that the proposed model is plausible given the data.

Hypothesis 3b. I hypothesize that there will be an interaction between Thought Disturbance and Education services. The effect of Education Services on Recidivism will be smaller for those with elevated thought disturbance than for those without.

Table 8

Thought Disturbance by Education Services by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Thought Disturbance			
Education Services	0%	0	7
No Education Services	27%	7	26
No Thought Disturbance			
Education Services	29%	26	90
No Education Services	22%	47	213

Table 9

Full Logistic Regression Model

Independent Variables	<i>B</i>	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Items						
SDM Risk Score	.067	.10	1.069			
Severity of Offense	.307	.09	1.359			
Number of Services	.089	.60	1.094			
Age at Commitment	.363	.002**	1.438			
Number of Placements	.547	.000***	1.728			
Step	-	-	-	30.20	.000**	337.00
Block 2 Items						
Thought Disturbance Score	-.130	.783	.878			
Education Services	.096	.771	1.100			
Step	-	-	-	.16	.921	-
Model	-	-	-	30.36	.000***	336.84

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

Similar to the previous analysis, examination of crosstabs output revealed cells that were low and others that were empty (see Table 8). Thus, with reduced power due to smaller cell sizes and reduced degrees of freedom on account of there being empty cells, the model's ability to accurately demonstrate the interaction between thought disturbance and educational services was compromised and unable to be run. Thus, there were not enough degrees of freedom to include the interaction term in the model. Just as was done with the first analysis associated with this research question, control variables were entered on the first step. For those with a thought disturbance, I used the Fisher's Exact Test to compare the proportion of youth recidivating between those with and without

education services. In Table 8 you can see that the likelihood of recidivism increases from 0 (receiving education services) to 27% (not receiving education services) for youth with Thought Disturbance. This difference is not statistically significant ($p = .154$), but may also be worth exploring in future research.

Consistent with the earlier model, an examination of the covariates in the full model showed that Commitment Age and Number of Placements were significant at each step in the model. Unless otherwise indicated, so as to be concise, the significance of these variables was observed for each of the hypotheses associated with this research question and will no longer be directly referenced in the results section.

Preliminary diagnostics indicated that the combination of predictors in this particular model may not have been working well given the disbursement of the residuals. While this may be so, Hosmer and Lemeshow Test's suggested that we fail to reject that there is no difference. Thus, model estimates do fit the data at an acceptable level. Cook's Distance and Leverage that leverage is not a concern. Overall, diagnostics for this and each of the subsequent analyses associated with this research question indicate that the data are a reasonable fit to the model estimates and able to be interpreted.

Hypothesis 3c. I hypothesize that there will be an interaction between Thought Disturbance and Mentorship services. The effect of Mentorship Services and Recidivism will be smaller for those with elevated Thought Disturbance than for those without it.

Table 10

Thought Disturbance by Mentorship Services by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Thought Disturbance			
Mentorship Services	17%	4	24
No Mentorship Services	33%	3	9
No Thought Disturbance			
Mentorship Services	24%	62	256
No Mentorship Services	23%	11	47

Table 11

Full Logistic Regression Model

Independent Variables	B	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Items						
SDM Risk Score	.063	.13	1.065			
Severity of Offense	.303	.10	1.354			
Number of Services	.226	.19	1.253			
Age at Commitment	.372	.001***	1.451			
Num. of Placements	.545	.000***	1.725			
Step	-	-	-	30.20	.000**	337.00
Block 2 Items						
Thought Disturbance Score						
Mentorship Services	.666	.434	1.947			
Step	-.417	.345	.659			
Model	-	-	-	1.88	.391	-
Model	-	-	-	32.08	.000***	335.13
Block 3 Items						
TD*Ment Services						
Step	-1.161	.263	.313			
Model	-	-	-	1.23	.27	-
Model	-	-	-	33.31	.000***	333.90

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

After the variables being controlled for were entered into the model, the separate terms that comprised the interaction and the interaction term itself were entered on the two subsequent steps (see Table 11). This entry pattern is constant across each of the nine hypotheses tested for this particular research question (see Table 11). While the final step of the model was not statistically significant, the full model was ($\chi^2(1) = 17.50, p = .014$). This suggests that although the addition of the interaction term did not significantly improve the model's ability to predict recidivism, driven by the predictors entered on the first step, the full model does continue to significantly predict the likelihood of recidivism. Loaded on the final step of the model, neither the interaction term ($B = -1.007, p = .316$) nor the step it was entered on were significant ($\chi^2(1) = .989, p = .32$). While the effect of the interaction was large, the interaction was not significant. Nevertheless, given how few cases there were in this model, the interaction effect would be interesting to observe in a scenario where there were more cases and greater power. Additionally, neither of the two terms that comprised the interaction was significant. While the error of estimate was within an acceptable range, it is still likely that a lack of power has impacted our ability to see the effect of the predictors or interaction term. Preliminary diagnostics revealed similar residual plots, leverage evaluations, and Hosmer Lemeshow Test outcomes as the prior two analyses.

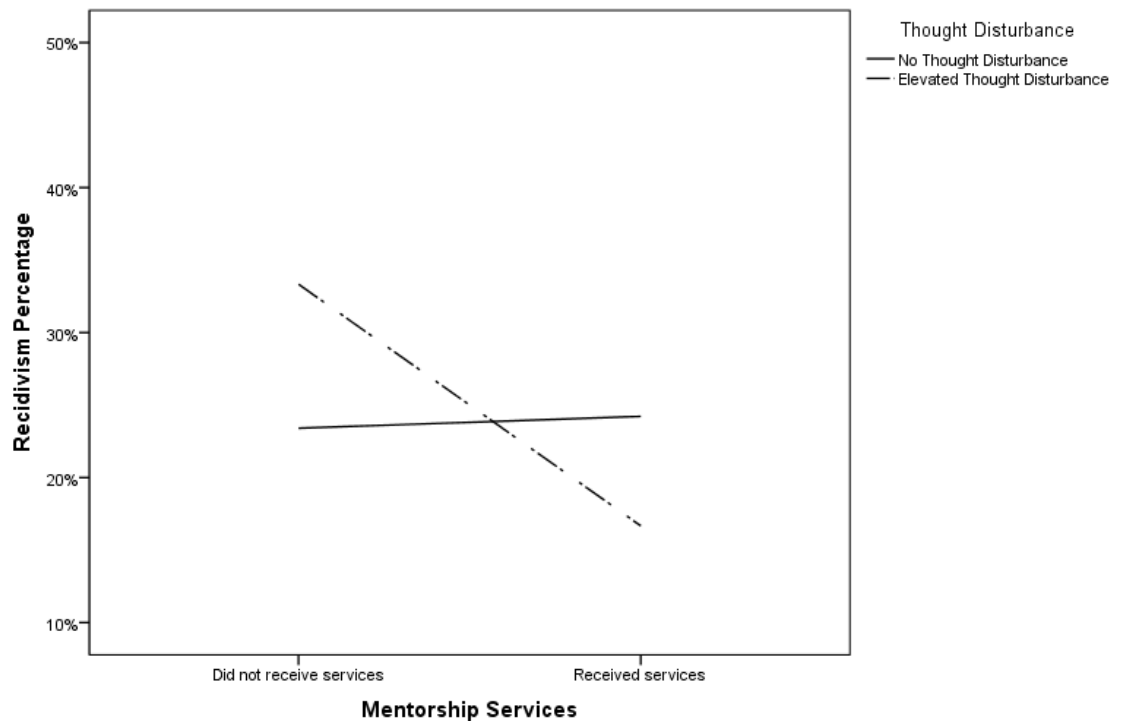


Figure 2. Thought Disturbance by Mentorship Services by Recidivism Frequency Plot

As was indicated above, cell sizes in this analysis were small (3-4 participants). The low power of this model weakened my ability to detect an effect (Table 10). So as to get a sense of the potential interaction and effects we might anticipate seeing between the predictors of interest and recidivism in a scenario with greater power, I plotted the cell values of the observed data. As you can see an interaction between Thought Disturbance and Mentorship was observed. Nonetheless, patterns in the observed data do not fully support my hypothesis in so far as the effect of Mentorship on Recidivism appears stronger for individuals with indicated Thought Disturbance (Figure 2). Again, we cannot conclusively say that this is how the data would behave if power were sufficient, but the patterns suggest that re-running this analysis with a larger sample size and greater power

would be worth exploring. Just as I did above, for each of the subsequent analyses with cell sizes above 0, I plotted the observed data.

Hypothesis 3d. I hypothesize that there will be an interaction between Suicide Ideation and Mental Health services. The effect of Mental Health Services on Recidivism will be greater for those with elevated Suicide Ideation than for those without it.

Table 12

Suicide Ideation by Mental Health Services by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Suicide Ideation			
Mental Health Services	33%	2	6
No Mental Health Services	43%	3	7
No Suicide Ideation			
Mental Health Services	20%	15	74
No Mental Health Services	24%	60	249

The initial intention of this analysis was to explore how recidivism varied as a function of the MAYSI-2 dimension of Suicide Ideation, Mental Health Services, and their interaction. However, given the gravity of outcomes concerning Suicide Ideation, running this analysis with low cell sizes and the resulting low power would not be ethically responsible, as the risk for misinterpretation is high. Consequently, I will not present the outcomes of the model estimates associated with this analysis or the subsequent two analyses associated with hypothesis 3e and 3f which also involve Suicide Ideation (See Tables 13 and 14).

Hypothesis 3e: I hypothesize that there will be an interaction between Suicide Ideation and Mentorship services. The effect of Mentorship services on Recidivism will be smaller for those with elevated Suicide Ideation than for those without Suicide Ideation.

Table 13

Suicide Ideation by Mentorship by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Suicide Ideation			
Mentorship Services	40%	4	10
No Mentorship Services	33%	1	3
No Suicide Ideation			
Mentorship Services	23%	62	270
No Mentorship Services	25%	13	53

Hypothesis 3f: I hypothesize that there will be an interaction between Suicide Ideation and Education services. The effect of Education services on Recidivism will be smaller for those with elevated Suicide Ideation than for those without.

Table 14

Suicide Ideation by Education by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Suicide Ideation			
Education Services	33%	2	6
No Education Services	43%	6	7
No Suicide Ideation			
Education Services	26%	24	91
No Education Services	22%	51	232

Hypothesis 3g. I hypothesize that there will be an interaction between Alcohol/Drug Use and Substance Abuse services. The benefit of Substance Abuse Services on the reduction of Recidivism will be greater for those with higher Alcohol/Drug Use scores than it is for those without them.

Table 15

Alcohol/Drug Use by Substance Abuse by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Alcohol/Drug Use			
Substance Abuse Services	40%	2	5
No Substance Abuse Services	23%	6	26
No Alcohol/Drug Use			
Substance Abuse Services	26%	15	58
No Substance Abuse Services	23%	57	247

Table 16

Full Logistic Regression Model

Independent Variables	β	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Steps						
SDM Risk Score	.068	.10	1.070			
Severity of Offense	.302	.10	1.352			
Number of Services	.117	.48	1.124			
Age at Commitment	.359	.002**	1.431			
Number of Placements	.542	.000***	1.719			
Step	-	-	-	30.20	.000***	337.00
Block 2 Steps						
Alcohol/Drug Use						
Score	-.046	.93	.955			
Substance Abuse Svs	-.073	.85	.930			
Step	-	-	-	.016	.99	-
Model	-	-	-	30.22	.000***	336.99
Block 3 Steps						
AD*SA Services	.358	.75	1.431			
Step	-	-	-	.103	.75	-
Model	-	-	-	30.32	.000***	336.89

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

Consistent with the previous analyses, low cell sizes and the consequent low power of this model was likely to impact the model estimates and limit their stability (see Table 15). The addition of the interaction on the final step of the model did not result in significance ($\chi^2(1) = .044, p = .84$). As shown in Table 16, neither of the interaction's

components nor the interaction was significant. Preliminary diagnostics did not reveal any new or unique information regarding this model or its set of predictors.

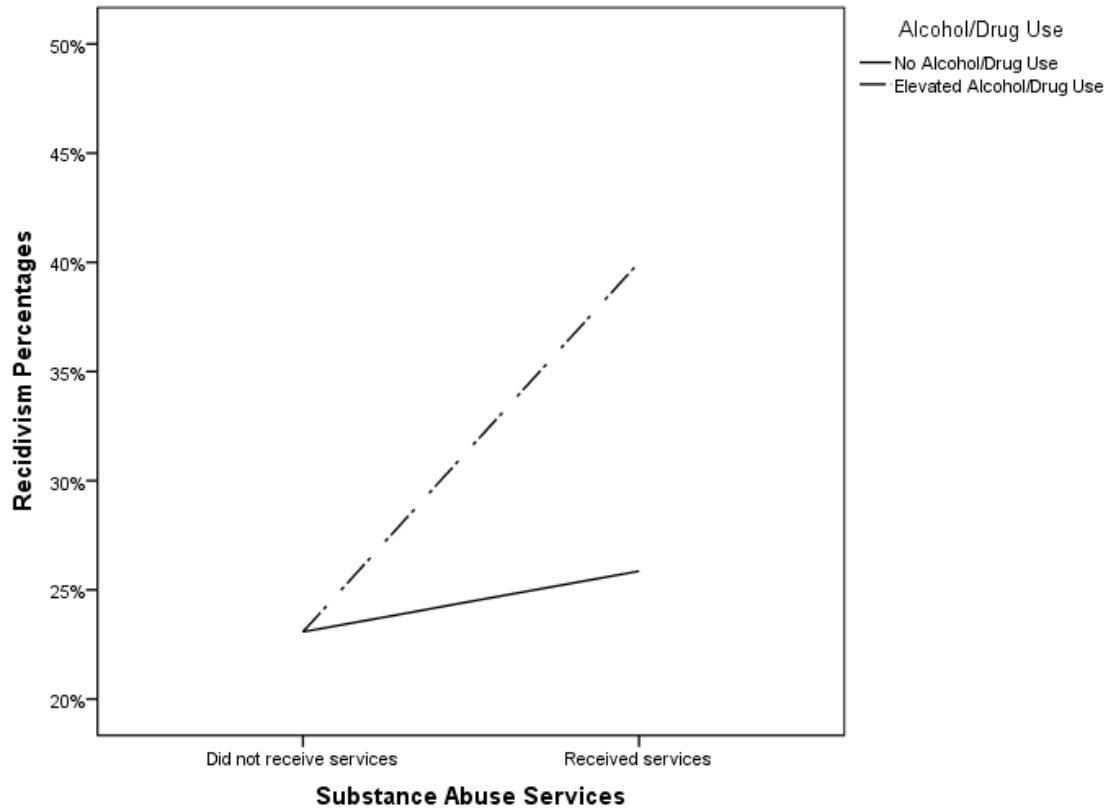


Figure 3. Alcohol/Drug Use by Substance Abuse by Recidivism Frequency Plot

The plot of the observed data suggests the presence patterns that are worth exploring with a larger data set. Though the hypothesized interaction was observed the effect of Substance Abuse services for those with and without elevated Alcohol/Drug use scores was not seen with the observed data (see Figure 3). The anticipated effect of services was not observed. Though we cannot speak definitively of the potential outcome,

given the implications of the trends seen among the observed data in this analysis, future research is recommended.

Hypothesis 3h. I hypothesize that there will be an interaction between Depressed/Anxious and Mental Health services. The benefit of Mental Health Services on reducing recidivism will be greater for those with a high Depressed/Anxious score than for those without one.

Table 17

Mental Health Services by Depressed/Anxious by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Depressed/Anxious			
Mental Health Services	21%	3	14
No Mental Health Services	21%	6	29
No Depressed/Anxious			
Mental Health Services	21%	14	66
No Mental Health Services	25%	57	227

Table 18

Full Logistic Regression Model

Independent Variables	β	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Steps						
SDM Risk Score	.068	.10	1.070			
Severity of Offense	.299	.10	1.349			
Number of Services	.172	.29	1.188			
Age at Commitment	.346	.003**	1.413			
Number of Placements	.541	.000***	1.718			
Step	-	-	-	30.20	.000***	337.00
Block 2 Steps						
Depression/Anxiety Score	-.123	.81	.885			
Mental Health Services	-.430	.25	.650			
Step	-	-	-	1.33	.514	-
Model	-	-	-	31.53	.000***	335.68
Block 3 Steps						
DA*MH Services	.265	.77	1.304			
Step	-	-	-	.085	.77	-
Model	-	-	-	31.61	.000***	335.59

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

Just as in all the cases before this, power continued to be an issue (see Table 17). The step with the interaction term on it was not significant ($\chi^2(1) = .147, p = .70$). Table 18 shows that neither the interaction term nor its components were significant in the prediction of the likelihood of recidivism. Though not significant, the beta values of both depressed/anxious categories and mental health services were negative. Diagnostics were consistent with the previous models.

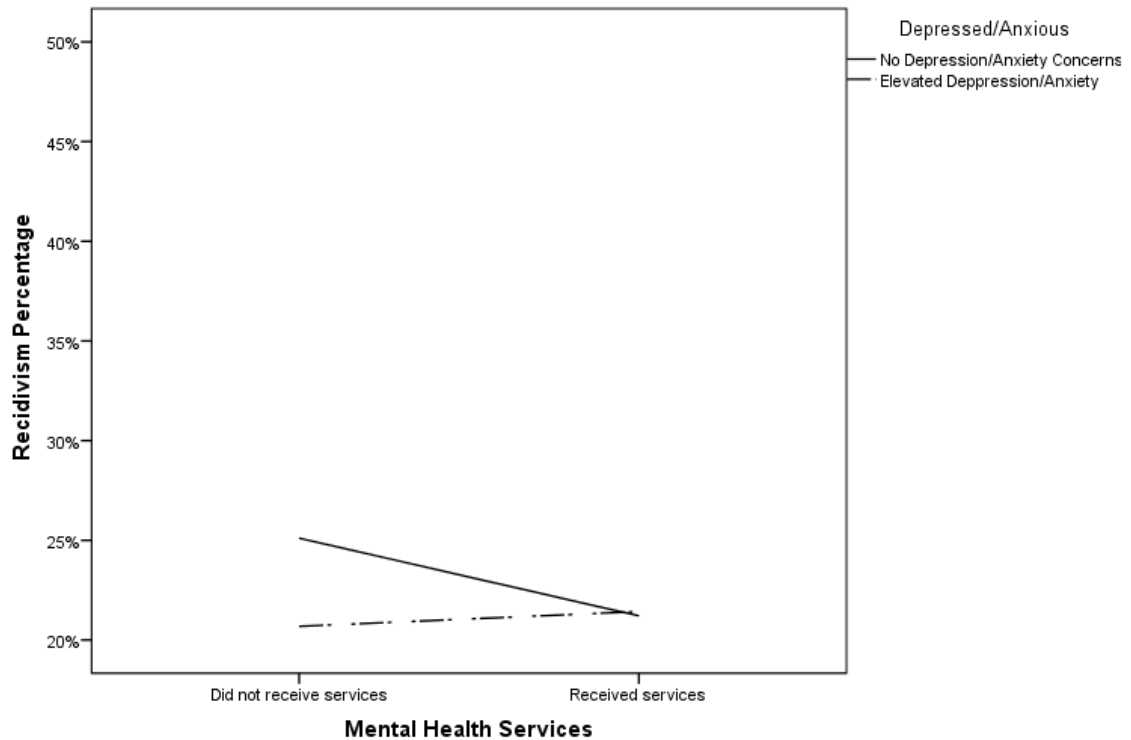


Figure 4. Mental Health Services by Depressed/Anxious by Recidivism Frequency Plot

So as to get a sense of the potential interaction and effects we might see between the predictors of interest and recidivism in a scenario with stronger power, I plotted the cell values of the observed data. While an interaction effect was observed between Mental Health services and Depressed/Anxious scores, the pattern was not consistent with the hypothesized direction (see Figure 4). Recidivism rates were lower for those youth with elevated Depressed/Anxious scores than they were for those youth without elevated Depressed/Anxious scores. Among those with elevated Depressed/Anxious scores, youth who received services recidivated at slightly higher rates than those who did not receive services according to the observed data. Nevertheless, just as in all the cases before this, power continued to be an issue; none of these trends were seen with the

model estimates and cannot be guaranteed if the model were re-run in a scenario where more power was available.

Hypothesis 3i. I hypothesize that there will be an interaction between Depressed/Anxious scores and Life Skills services. The benefit of Life Skills Services on reducing recidivism will be greater for those with elevated Depressed/Anxious scores than for those without them.

Table 19

Depressed/Anxious by Life Skills Services by Recidivism Frequency Table

	Recidivism (Yes)		Total
	Percent	Frequency	
Depressed/Anxious			
Life Skills Services	27%	9	34
No Life Skills Services	0%	0	9
No Thought Disturbance			
Life Skills Services	24%	64	262
No Life Skills Services	23%	7	31

Table 20

Full Logistic Regression Model

Independent Variables	β	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Steps						
SDM Risk Score	.068	..10	1.070			
Severity of Offense	.306	.09	1.358			
Age at Commitment	.360	.002**	1.433			
Number of Services	.110	.53	1.117			
Number of Placements	.539	.000***	1.714			
Step	-	-	-	30.20	.000***	337.00
Block 2 Steps						
Depression/Anxiety Score	-.081	.85	.922			
Life Skills Services	.033	.95	1.033			
Step	-	-	-	.044	.978	-
Model	-	-	-	30.24	.000***	336.96

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

With empty cells, there were not enough degrees of freedom to adequately test the interaction in the model (Table 19). Similar to the above analyses where an interaction term was not included on account of degrees of freedom, I used the Fisher's Exact Test to compare the proportion of youth recidivating between those with and without Life Skills Services. The association between Recidivism and the proportion of youth with and without Life Skills Services among those with elevated Depressed/Anxious scores was not significant on a two-tailed test of significance ($p = .166$).

It is important to keep in mind that it is very likely that low cell sizes continued to have an impact on the model. Although the overall model remained statistically significant ($\chi^2 (5) = 11.68, p = .039$), the final step of the model was not significant ($\chi^2 (2)$

=1.64, $p = .44$) (Table 20). Diagnostics of this regression model were consistent with the diagnostics of the other models.

Question 4: Do recidivism rates differ between those with and without mental health support?

Hypothesis 4. Juvenile justice research has repeatedly demonstrated that the lack of attention given to the mental health problems of juvenile offenders is likely to result in recidivism and future adult offending (Lexcen & Redding, 2000; Lewis, Yeager, Lovely, Stein, & Cobham-Portorreal, 1994). On account of the likelihood that youth receiving mental health supports within DYRS have needs that are not adequately being addressed during their commitment, I hypothesize that there is a higher incidence of recidivism for those African American male juveniles with mental health support than for those without mental health supports when controlling for severity of charge and risk level.

Prior to running a Logistic Regression Model, a Pearson Chi-Square test was run to preliminarily address this particular research question. Generally speaking, results indicate that youth receiving mental health supports are not more or less likely to recidivate. It appears that there is not a statistically significant relationship between Mental Health Support and Recidivism, ($\chi^2_{(1)} = .06, p = .80$). Thus, receiving mental health support is not related to recidivism. While the number of participants in each of the cells varied (see Table 21), the percentages of youth who did (~20%) and did not (~80%) recidivate were strikingly similar across the groups of youth who did and did not receive mental health supports. Consequently, although the full logistic regression model was

significant ($\chi^2(1) = 15.58, p = .02$), the step on which Mental Health Supports was added was not significant (see Table 22).

Table 21

Mental Health Services (FIRST PLACEMENT) by Recidivism

	Recidivism (Yes)		Total
	Percent	Frequency	
Mental Health Support			
Yes	22%	74	342
No	20%	14	69
Total	21%	88	411

Table 22

Full Logistic Regression Model

Independent Variables	β	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Items						
SDM Risk Score	.09	.03*	1.090			
Severity of Offense	.22	.20	1.251			
Number of Services	.05	.04*	1.048			
Age at Commitment	.26	.02*	1.297			
First Placement	-.18	.47	.834			
Step	-	-	-	15.52	.008**	351.69
Block 2 Items						
Mental Health						
Supports	.09	.81	1.097			
Step	-	-	-	.057	.81	-
Model	-	-	-	15.58	.02*	351.63

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

Question 5: Do recidivism rates differ between those placed according to the placement matrix and those who are not?

Hypothesis 5. I hypothesize that there will be a lower incidence of recidivism for those placed according to the placement matrix than there is for those with similar scores who were placed with overrides.

Table 23

Accurate Placement and Recidivism

	Recidivism (Yes)		Total
	Percent	Frequency	
Accurate	26%	36	140
Not Accurate	20%	52	266

Results from the Pearson Chi-Square analysis suggest that there is not a statistically significant association between placement accuracy and recidivism ($\chi^2_{(1)} = 1.34, p = .25$). This suggests that being accurately placed according to DYRS' matrix is not related to youths' recidivism (see Table 23). An examination of the percentages in the matrix shows that 26% of those with an accurate placement recidivated whereas only 20% of those without an accurate placement did so. In total, of those who were not accurately recommended, there was only a roughly 7 percentage point difference between youth who did and did not recidivate.

Table 24

Full Logistic Regression Model

Independent Variables	β	Sig	Exp (B)	χ^2 (df)	Sig	-2 Log Likelihood
Block 1 Items						
SDM Risk Score	.084	.04*	1.088			
Severity of Offense	.132	.57	1.141			
Number of Services	.048	.03*	1.049			
Age at Commitment	.252	.020*	1.287			
Step	-	-	-	14.926	.005**	352.28
Block 2 Items						
Placement Accuracy	.203	.58	1.225			
Step	-	-	-	.304	.58	-
Model	-	-	-	15.23	.009**	351.97

Relationship is significant at the .001 level (2-tailed). *** $p < .001$

Relationship is significant at the .01 level (2-tailed). ** $p < .01$

Relationship is significant at the .05 level (2-tailed). * $p < .05$

As the chi square analysis revealed, the effect of the accuracy of placement on recidivism was not observed. Consequently, when placement accuracy was entered on the final step, that step of the model was not significant ($\chi^2(1) = .30, p = .58$) (see Table 27). The classification accuracy of the full model is 76.3% which suggests a slight improvement in our ability to predict the likelihood of recidivism from the previous step. Overall, there was a slight decrease in the accuracy of the prediction from the empty model (76%). At the final step of the model, the predictor of interest ($B = .203, p = .58$) was not significant. SDM Risk Score, Number of Services, and Commitment Age were statistically significant in the positive direction at each step of the model (see Table 24).

Ultimately, preliminary diagnostics reveal that although the predictors in this particular model may not be the best, they are a reasonable fit to the models estimates and able to be interpreted. A preliminary diagnostic analysis of the residual plot revealed that the combination of predictors in this model may not be working well, as a number of the points fell more than two standard deviations away from the center. Furthermore, a review of Cook's Distance values suggests that none of the cases were greater than 1; thus, leverage does not appear to be a concern. Finally, Hosmer and Lemeshow Tests indicate that the model's estimates do fit the data at an acceptable level.

Chapter Five: Discussion

This study sought to evaluate how recidivism varies as a function of setting, placement, and services for African American males receiving mental health support within the current service delivery model employed by DYRS in the District of Columbia. Ultimately, I explored how recidivism (measured during a 12-month observation period) varied as a function of factors that comprised youths' treatment programs while committed to DYRS. In accordance with ecological theory, I initially proposed that a range of individual, environmental, and systemic factors would impact recidivism. However, due to significant amounts of missing data on items pulled from the SDM, i.e. information on peer relationships and family incarceration, all of the home and community variables ended up being excluded from the models. Nevertheless, despite estimate limits within the models, recidivism did vary as a function of a handful of predictors.

Question 1

While this research is unable to directly shed light on whether home or community placement with supports is as effective at rehabilitating offenders as placement in a secure care facility, it does speak to how recidivism varies as a function of placement level. Based on the current research, there is no clear indication that any

particular placement is differentially resulting in the likelihood of recidivism. Given that placement level is dictated by both level of risk and severity and the fact that more extreme scores or categorizations among these factors typically results in a greater likelihood of recidivism, this is contrary to expectation. Given substantial differences in initial risk levels, the equivalent recidivism rates across each of the groups suggests that each of the placements are working well, meeting the needs of high risk offenders. This information might be of special interest to those who advocate for the deinstitutionalization of juvenile offenders.

Question 2

Also, aspects of this research assessed how recommendations for mental health supports based upon screening tools related to youth actually being assigned to placements where they received mental health support. Ultimately, having a recommendation for mental health support is not related to whether or not a youth receives it. Although youth are more likely to receive mental health support with a DYRS recommendation than they are with the developer recommendation, 75% of those with a DYRS recommendation for mental health support did not receive it during their initial placement with DYRS. This is consistent with Wasserman, McReynolds, Lucas, Fisher, and Santos' 2002 findings; 50% of their 292 participants presented with signs of moderate to severe mental health concerns, but only 15% of the juveniles were actually receiving mental health services. Interestingly enough, when evaluating the reception of mental health support across all placements rather than just a youth's initial placement,

regardless of their mental health recommendation, nearly 100% of youth received support at some point during their commitment to DYRS. Thus, while those recommended to receive supports do not necessarily receive them when initially placed, at some point during what we can infer are a series of unsuccessful placements, youth are likely to eventually receive the recommended mental health supports.

Question 3

Initially, I was interested in testing how recidivism varied as a function of the interactions between elevated mental health factors and assigned services. However, due to notably small cell counts, I was not able to reliably capture that information for a majority of the hypotheses. Although limited by small cell sizes, I was able to plot the percent likelihood of recidivism for the cross-section of the two variables of interest among the observed data. Though I cannot say for sure that the trends found in the observed data would be able to be duplicated with model estimates if cell sizes were larger; reviewing them may be of value given the possibility. Ultimately, there were patterns that were consistent with the hypothesis that are worth exploring in future research.

Question 4

The current research also examined the relationship between receiving mental health supports and the likelihood of recidivism. As it relates to mental health support, youth are not more or less likely to recidivate if they received mental health support. While we are limited in our ability to extrapolate much further than this, it seems that this

is contrary to the research that Lexcen & Redding (2002) summarized which indicates that lack of attention given to mental health problems of juvenile offenders is likely to result in recidivism and future adult offending. Future research may consider exploring whether the current study's findings indicate that there is no greater effect on outcomes when one who needs mental health support receives it or if findings suggest that the mental health support provided is not adequately promoting the type of change that generates a significant impact on recidivism.

Question 5

An inquiry was made regarding the relationship between the accuracy of youths' placement and the likelihood of their recidivism. Accurate placement did not significantly predict recidivism; whether inaccurately or accurately placed, the percentages of youth that recidivated were similar across both groups. Consistent with the findings in the initial validation study and system assessment conducted by the National Council on Crime and the Annie E. Casey Foundation on the Structured Decision Making tool (2012), there continues to be room for improvement as it relates to the liberties taken when applying the placement matrix. According to findings from the current study, over 250 placement overrides were made for the youth within the sample; overrides were made with 65.5% of the sample. Nevertheless, recidivism rates do not significantly vary based on the accuracy of youths' placements.

Predictor Variables

I observed that the prediction of recidivism repeatedly changed as a function of three factors. Though never variables of interests, recidivism did consistently vary as a function of youths' SDM Risk Scores, the number of services that they received, and their commitment age. This is consistent with the literature as well as the expectations dictated within the current project; evidenced by their being controlled in the models they were included in. However, it is interesting to note that neither offense severity nor SDM Risk Score were significant predictors. The non-significance of SDM Risk Score in any of the interaction models might suggest that the validity or scoring of the tool is not working as well as it was initially projected to.

Limitations

This research is characterized by a number of limitations. The data set provided by The Department of Youth Rehabilitative Services captured youth's intake information, mental health screenings, service and placement history, as well as their arrest and rearrests information dating back to 2004 in the District of Columbia. There are two distinct limitations that directly relate to this fact: (1) experimental design; and (2) fit with theory. Given that the data were secondary as opposed to being collected in a randomized controlled experiment that directly captured the information that I was interested in, I was not able to establish causal relationships between any of the predictors and was extremely limited in what I was able to extrapolate from the handful of observations that I was able to make. Furthermore, while a wide breadth of information was collected, it was not specifically designed to measure the strength and explanatory

power of ecological or resilience theories which would allow the researcher to more distinctly evaluate the impact that factors from various aspects of youths' lives has on their outcomes. This point leads to the next limitation; with the exception of re-arrest and re-conviction data, there was not a sufficient amount of educational, disciplinary, or employment data to evaluate outcomes that might alternatively indicate success. Furthermore, given that the data was secondary and did not involve random assignment, it did not allow for cause and effect determinations

One of which was the number of missing values on central study variables was a significant limitation. As a direct result, the test of the full model was based on a substantially smaller number of cases than were estimated beforehand. I employed listwise deletion to improve my ability to adequately run logistic regression, given that this resulted in the exclusion of a number of cases the challenge of missing data was further exacerbated. Consequently, given the resulting sample size, it is likely that the loss of cases had an impact on the statistical findings. Somewhat related, youths' data is currently maintained in DYRS' YES Database by two designated data entry personnel as well as the various service providers in the field. Due to under reporting a number of the cases were too incomplete (i.e., incomplete background information, incomplete and/or missing MAYSI screenings, and incomplete SDM questionnaires) to allow for accurate predictions concerning recidivism varying as a function of the predictors of interest.

Future Research

After further evaluation of the findings, there are some directions that future research might consider pursuing with the current analyses. One task that future research

should pursue is to more closely evaluate the differences between the groups of youth placed among the three setting levels (home, community, 24 hour secure). Perhaps this would allow researchers to better understand the lack of difference in recidivism between the three settings. Similar to the findings referenced above, in the future, researchers should more closely evaluate the differences between the group of youth placed according to the placement matrix and the group of youth placed with an override.

Future researchers should consider running the current models with re-arrest as the dichotomous outcome rather than recidivism for the logistic regression models. Given that re-arrest is more robust and demonstrates more spread, its use in future analysis may allow for higher cell frequencies and greater variance between them. Ultimately, this might allow the power that would be necessary to more adequately evaluate the hypothesized interactions.

Future research should consider expanding this study to include African American females in the juvenile justice system. Of the many individual factors that are thought to predict delinquency, some researchers argue that gender and age are among the strongest (Tatem-Kelly, Huizinga, Loeber, & Department of Justice, 1997; Juvenile Justice Bulletin, 2000). In fact, according Tatem-Kelley, Huizinga, Loeber, and the Department of Justice (1997), males ages 15 to 17 years are at greatest risk for juvenile delinquency (Tatem-Kelly, Huizinga, Loeber, & Department of Justice, 1997). While this may be the case, research also suggests that female incarceration has steadily increased in a number of offense areas since 1991 (OJJDP, 2006). Though they are responsible for committing fewer crimes, statistics show that females have similar profiles as their male counterparts

(OJJDP, 2006). Somewhat related, other research has shown that despite reporting similar amounts of antisocial behavior, African American girls are arrested at higher rates than their Caucasian peers (Chauhan, Reppucci, Burnette, & Reiner, 2010). Given what appears to be steady increases in delinquency amongst females and arrest profiles that differ across racial groups, future research should consider expanding this study to include African American girls. Additionally, a new line of research without racial criteria that focuses on all females and the way that recidivism varies as a function of the services and placements they are assigned to while in juvenile justice custody would be equally as beneficial.

DYRS has undergone some fairly extensive changes in their service delivery model and in the types of service providers that they contract with so as to improve the evidence based support they provide for youth committed to the department. Future research should consider exploring the effectiveness of these changes on the outcome data. How have the new service delivery models and the new service providers impacted recidivism? If positively, to what degree have they improved the District's immediate and long term outcomes?

Ultimately, one goal of the juvenile justice system is to rehabilitate offenders that come into contact with it. Ecological models help us to identify the different levels on which young people may have experienced some form of disruption or inconsistency. However, introducing how ecological and resilience models can cooperatively operate to the field of juvenile justice is likely to strengthen our understanding of how exposure to

various positive or negative experiences can work to enhance or deter the rehabilitation process within young people and their environments.

Overall, concerning resilience and child outcomes, there are factors that positively contribute (assets), some that negatively contribute (risks), and others that are more variable in nature. In a more recent theoretical publication, Masten (2001) conducted yet another comprehensive review of the literature but paints a picture of resilience that somewhat deviates from that of other researchers. By and large, her regard for resilience as an ordinary and common place occurrence was novel. At the conclusion of this review she surmised that the converging themes from the relevant studies suggest that resilience tends to naturally emerge from normative human adaptation systems and that the greatest threat to human development are those elements that interfere with these protective systems. Simply put, Masten concluded that the effects of adversity can oftentimes be moderated by common individual or environmental factors:

Resilience does not come from rare and special qualities, but from the everyday magic of ordinary, normative human resources in the minds, brains, and bodies of children, in their families and relationships, and in their communities...

Resilience models and findings also suggest that programs will be most effective when they tap into these basic but powerful systems. (Masten, 2001, p. 235)

Although Masten's (2001) theoretical work alludes to potential opportunities for interventions, Kia-Keating, Dowdy, Morgan and Noam (2009) were more explicit in the suggested application of interventions that flowed logically from the framework that they outlined in their theoretical publication. Through a comprehensive literature review the

authors derived ties and bridged theory between frameworks for models of risk and resilience and models of positive youth development (Kia-Keating et al, 2009). Though typically examined separately, these authors noted that doing so does not fully address developmental or socio-ecological variables. Kia-Keating et al., developed an integrative model of the risk-resilience and positive youth development which featured two pathways, the “Protective” and the “Promoting” pathways (2009, p. 2). At the intersection of these two pathways, mental healthiness is achieved through a cultural-ecological transactional theoretical framework (2009).

This frame of reference encourages understanding adolescent health by way of attending to the contexts, experiences, and opportunities facilitated through adolescents’ interactions with their environments and furthermore, how those experiences influence their developmental trajectories and resilience. What happens when success and failure is a shared experience, a community experience; when young people, though held accountable for their actions, are viewed as a collection of the many people, places, and experiences that they have encountered? Does this change the way we understand them? Does this change the way we approach service delivery and placement with them? Future research should consider assessing the interplay between young people’s school, family, and/or social contexts and the various programs, experiences, and services they receive while they are committed to juvenile justice systems. In particular, the degree to which alternative outcomes and factors such as improved test scores, reduced disciplinary infractions, or level of resilience vary as a function of that interplay. In short, future research should investigate how the introduction of positive experiences and effective

services can work to offset the impact of youths' contexts and prior experiences by enhancing the likelihood of positive outcomes for previously court involved youth.

Summary and Implications

While this research is unable to directly shed light on whether home or community placement with supports is as effective at rehabilitating offenders as incarceration or placement in a secure care facility, it can speak to how recidivism varies as a function of setting. This will be of special interest to those who advocate for the deinstitutionalization of juvenile offenders. Contrary to expectation, as opposed to seeing the graduated percentages that one would expect to see, in the current sample of youth, recidivism did not appear to significantly vary from least restrictive setting to most restrictive setting. Taken with the findings on placement overrides, this might suggest that the decision making that goes into placement determination is not effectively making distinctions between youths' levels of risk as well as it is intended to. Concurrently, this might also indicate that home placement and secure placement similarly impact recidivism outcomes.

It appears that youth are frequently placed outside of the recommendations outlined by the DYRS placement matrix (SDM risk score by Severity of charge) in the District. Nevertheless, despite inconsistent placement recommendations, recidivism does not appear to vary as a function of placement setting: home, community, and 24 hour secure. Based on the current research, practitioners and decision makers may find themselves at a bit of a cross road, as findings demonstrate that although accurate placement within the sample does not significantly relate to recidivism, there were a very

large number of overrides that took place within it. So, despite the fact that 65.5% of the sample was placed with overrides, recidivism still did not vary as a function of accurate placement. The implication being that the overrides were likely to have been executed with some degree of prudence. The challenge with this fact is that it suggests that the placement matrix or one of its' two components (SDM Risk Score and Severity of Charge) are not likely to be as effective at making distinctions between levels of risk among the youth as the system might desire.

Given the observations made with regard to placement recommendations and the absence of a relationship between setting type and recidivism, it is clear that DYRS should consider revising their SDM tool. Relatedly, they might also consider training DYRS employees on the importance of the SDM tool when it comes to youth placement and the need for discretion when opting to override matrix recommended placements. Finally, so as to further reduce the number of unsuccessful subsequent placements while youth are committed to DYRS and to ensure that those who need mental health supports are receiving them sooner rather than later during their commitment, the need for a formal reassessment tool to help determine subsequent placement decisions is critical. Given that youth in this sample were placed an average of 12 times, it seems imperative that such a tool be considered to ensure that youth are appropriately placed early on in their commitments, as opposed to after what we can infer might be a series of unsuccessful placements.

Although low power and insufficient degrees of freedom prevented notable effects and interactions from being seen amongst model estimates that evaluated the

relationships between select MAYSI-2 dimension scores and services, a number of patterns emerged through the observed data that were consistent with the hypotheses and current literature. Taken together, the contrasts between the model estimates and the observed data strongly support the need for further evaluation. It would be extremely interesting to re-evaluate the hypothesized interactions with a sample size that is sufficient enough to garner the power and degrees of freedom necessary in order to appropriately run the analyses and capture any potential effects. Despite the low power in the models, the relatively low effect sizes associated with the services included in the models may have implications for administrators and service providers concerning the effectiveness or clinical relevance of the contracted services.

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Biography

Reston N. Bell graduated from South Lakes High School, Fairfax, Virginia, in 2002. She received her Bachelor of Science in Psychology with a minor in Biology from Xavier University of New Orleans in 2006. She was employed as a Social Service Counselor in a male juvenile prison and then as a Youth Advocate doing community reintegration within the New Orleans juvenile justice system for nearly two years. Reston received her Master of Arts in Psychology and Certificate of Advanced Graduate Studies in School Psychology from George Mason University in 2009.