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## A path analysis on the acquisition of mental health treatment and the effect of that treatment on subsequent offending

Gabriel Jude Saucedo

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A PATH ANALYSIS ON THE ACQUISITION OF MENTAL HEALTH  
TREATMENT AND THE EFFECT OF THAT TREATMENT  
ON SUBSEQUENT OFFENDING

---

A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Criminal Justice

---

by  
Gabriel Jude Saucedo  
June 2013

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Gabriel Jude Saucedo

June 2013

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## ABSTRACT

Research shows that juvenile mental disorders are strongly correlated with crime and delinquency, manifested especially by violent behaviors. Thus, mental health treatment is viewed as an effective and cost-efficient way of reducing offending in this population. Unfortunately, research also indicates that many juveniles, due to various demographic and systemic impediments, do not acquire the mental health treatment they need. Consequently, their symptoms deteriorate to the point they manifest as delinquent.

This purpose of this study was to determine how various demographic and systemic factors interacted to either facilitate or hinder the acquisition of mental health treatment, and if once acquired, what effect did that treatment have on subsequent offending. Consequently, this study employed a path analysis on secondary data from a nationally representative sample of 393 young adults aged 18-19 in order to determine these relationships. The results indicated that the absence of mental health treatment when needed significantly increases subsequent violent behavior, and that females were more likely than males to not receive treatment when needed. Theoretical and policy implications for these findings were provided, as well as study limitations and suggestions for future research. Because this study analyzed data from a nationally representative sample, the generalizability of the results to the U.S. population are very strong, and thus provide future researchers a strong foundation on which to proceed from.

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## CHAPTER ONE

### INTRODUCTION

#### The Problem

Pablo, sixteen, was initially arrested for misdemeanor assault, vandalism, and brandishing a deadly weapon. He was sentenced to three months in a juvenile detention center, but after a month, was sent home to spend the rest of his sentence on electronic monitoring. Pablo however failed to abide by his electronic monitoring conditions, failed multiple drugs tests, as well as failed to show up for reviews on his case. He was ultimately rearrested for assault and sent to a county rehabilitation center. For the next eight months, Pablo attempted to complete a program that should have taken half that time to finish. At one point he was released from the program due to suicidal comments, and was admitted back after being cleared by mental health workers only to run away shortly after. This behavior continued for months, during which time Pablo assaulted another resident at the center when he was ridiculed for being a "psycho" (Burriss et al., 2011).

Approximately *a year* after his first arrest, Pablo's case was screened for possible eligibility for mental health court diversion. As a result of this screening, he was diagnosed with bipolar disorder, a psychotic disorder that, without treatment, will continue to worsen. The juvenile mental health court judge knew that more time in the center would do nothing to improve Pablo's condition.

Thus, Pablo was sent home on electronic monitoring for 90 days, but this time he would have help. Pablo was given access to a therapist in order to work on controlling his turbulent emotional states. Additionally, Pablo was able to see a psychiatrist for medication that would aid in mitigating his symptoms. With this help, Pablo began to take accountability for both his disorder and actions, and began to establish a healthier approach to dealing with his illness. His relationships with his family, teachers, judge, and probation officer improved tremendously. He enrolled in a local high school, went out for the football team, and sought out help when he began to fall behind in his classes. With the help of mental health resources, Pablo was able to turn his life around completely. A critical concern raised by this case however, is that it took a year for him to receive these services. Unfortunately, Pablo's situation is not unique. Rather, it is quite common and is indicative of a failed policy toward mentally ill juvenile offenders all over this country (Burriss et al., 2011).

The objective of this study is to identify just what factors influence whether mentally ill juveniles will acquire the treatment services they need for their respective disorders. It will also examine just how effective those treatment services are at curbing delinquent behavior in juveniles by using a path analysis on data gathered from a nationally represented sample of juveniles.

Demographic variables such as gender, race, age, and socioeconomic status will also be analyzed in order to determine just how much of an influence they have on determining whether a youth gets access to services or not. In essence, the

pathway to mental health treatment will be examined to see how various systemic and demographic factors interact to affect one's access to mental health treatment, and to examine, if once mental health treatment is reached, it will indeed close the path to delinquency.

### Outline of Research

Chapter Two will examine how juvenile mental illness is a very complicated phenomenon. Not all juveniles are the same. A twelve year old for instance is very different from a seventeen year old, and thus their ability to control their symptoms varies significantly. Similarly, many mental illnesses manifest in very different ways. This, in combination with the high amount of mental and emotional development that is endemic in juveniles, makes the distinguishing of mental illness from normal teenage behavior (attitude) difficult, thus serving as a powerful barrier to service acquisition. Additional barriers to services will be examined, specifically, the current policies of both the juvenile justice system and mental health systems. These policies have been shown to deprive mentally ill juveniles all over this country of the services they require for their conditions, thus potentially facilitating delinquent offending (Cuellar, McReynolds, & Wasserman, 2006). Due to budgetary cuts, many mental health systems across the country have reduced the amount of services available to juveniles in the community. This lack of services contributes to the continuing

deteriorating of mental health, often to the point that they begin to manifest the symptoms in delinquent ways (McMackin & Pittel, 2005).

Chapter two will also explore how the juvenile justice system has become, for all intents and purposes, the new mental health system for juveniles, making the criminalization of mentally ill youths all the more probable. Often times, due to shortages of mental health resources in the community, the only way mentally ill juveniles can receive the treatments they need is through involvement in the juvenile justice system, similar to Pablo's case. As demonstrated in this case, even once involved in the system, it is common that many mentally ill youths will still go untreated. However, justice-involved youths still have better chances of receiving services than those not involved.

Minorities, especially African Americans and Native Americans, have been found to exhibit higher rates of mental illness than Caucasians, as well as higher levels of involvement with the juvenile justice system. However, they have also been found to have a lower chance of receiving services than Caucasians, an alarming trend (Burriss, Breland-Noble, Webster, & Soto, 2011). Concluding chapter two will also be a look at the mental health disorders affecting juveniles and how these disorders potentially facilitate delinquent behavior.

The literature reviewed in chapter two established that the juvenile justice system has been transformed into the new mental health system for juveniles, and is allocated a significant portion of mental health resources in order to accomplish its new role in the treating of mental illnesses in offender populations.

This fact raises various questions. How effective are those mental health resources in preventing symptoms of mental illness from manifesting as delinquent? How does this allocation of mental health resources to the juvenile justice system from the mental health system affect the availability of services in the community? What demographic factors affect whether a youth will receive treatment or not? Contained in chapter three are eleven hypotheses that study used to guide its analyses in order to answer these questions.

Chapter four provides a description of the methodology employed by this study. This study was a secondary analysis, which carried numerous benefits including, being able to circumvent the usual research restrictions surrounding juveniles. Juveniles are a very sheltered population, especially in regards to research, and thus access to them is quite difficult to obtain. However, by analyzing existing data, this restriction is negated. Additionally, secondary analysis is extremely cost-effective both in terms of money and time.

The data used here comes from the dataset entitled *Gender, Mental Illness, and Crime in the United States, 2004 (ICPSR 27521)*. This dataset was developed from the *National Survey on Drug Use and Health, 2004 (ICPSR 4373)*. The original survey was designed to capture information about illicit drug, alcohol, and tobacco use among members of American households twelve years and older. The survey used a multistage area probability sample for each of the 50 States and the District of Columbia. The eight states with the largest population (whose combined total represented approximately forty-eight percent

of the total U.S. population aged 12 or older) were designated as large sample states (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas). For these states, the design provided a sample large enough to support direct state estimates. For the remaining states and the District of Columbia, smaller samples were chosen to support state estimates using small area estimation (SAE) techniques.

Data were collected using a computer-assisted process combining “computer-assisted personal interviewing (CAPI) conducted by an interviewer and audio computer-assisted self-interviewing (ACASI)” techniques (National Survey on Drug Use and Health, 2004, ICSPR). A primary strength of this data is its nationally representative sample, making the applicability of the results to the population of juveniles as a whole in America very strong.

The subset used here (*Gender, Mental Illness, and Crime in the United States, 2004*,) contains 3,011 variables. The first 2,690 variables were collected from the 2004 NSDUH, and the remaining 321 variables were created by the principal investigator and are manipulations of the first 2,690 variables. The total sample size these variables were based off of was 55,602 respondents, of which 18,294 were juveniles between the ages of 12 and 17. However the 2004 NSDUH did not collect responses from this population for the mental health portion of the survey.

Consequently, in order to perform the necessary analyses, this study was required to use young adults aged 18-19 as a substitute. While not juveniles

from technical and legal standpoints, they share the same physiological and psychological characteristics of older juveniles. While this limits the applicability of this study's results to younger-aged juveniles, the fact that the sample is nationally representative still means that its findings regarding older juveniles are invaluable. This study's sample size of young adults aged 18-19 was 5,056, of which 393 answered the mental health portion of the 2004 NSDUH. It was the responses from these 393 respondents that multiple path analyses were run on in order to determine just how variables such as race, gender, and socioeconomic status affect their chances of receiving mental health services, and if those services do indeed inhibit delinquent activity.

Chapter five presents the results of the path analyses performed. In order to adequately address the complex relationships involved with the hypotheses, multiple path diagrams were constructed from the pertinent variables, and analyzed using the statistical software SPSS AMOS. While some of the results were as predicted, many others were not. The first analysis found positive and significant direct effects to exist between having been arrested and booked for breaking the law in the past and on both, having received mental health treatment, and not having received mental health treatment when needed. Both these two factors also had positive and significant effects on having attacked someone within the past year with intent to cause harm.

The second analysis performed indicated that there is a positive and significant direct relationship between gender and having perceived a need for

mental health treatment but not having received it ( $p < .005$ ). Given the way that gender was coded, this means that females were more likely to have not received mental health treatment, even though they perceived a need for it. The third analysis found African Americans and Hispanics are more likely to receive mental health treatment when they perceive a need for it. This finding was unexpected since the literature (Burriss, Breland-Noble, Webster, & Soto, 2011) asserts that minorities, which African Americans and Hispanics compose, are more likely to not receive mental health treatment. The final analysis performed revealed that stigma is significantly not an impediment to Hispanics acquiring mental health treatment.

Presented in chapter six is a discussion regarding the findings of this study. The data that was used in the path analyses were generated from responses from a nationally representative sample of 393 young people. These analyses are unique, in that they are the first of their kind to study these areas of the mental and criminal justice systems using such data. While this provides this study with a great advantage over past studies, it nonetheless has limitations stemming from both restrictions accompanying the data used, and the analytical software employed on that data.

Chapter seven concludes this study. It presents a summary of the major findings, a reiteration of the implications the findings have on future policy, and directions for future research. After performing a path analysis on secondary data, it was determined that absence of mental health treatment when needed is



significantly and positively correlated with an increase in attacks with the intent to harm. Females were also found to be more likely to not receive mental health treatment when needed, a finding that may or may not go against the established research which asserts that system-involved females are more likely to receive treatment than males. Finally, the study determined that minorities are not as likely as the research suggests to go without treatment when needed. The system should do all in its power to ensure this trend becomes the norm. It is recommended that future research collect data from a nationally representative sample of young juveniles between the ages 12-16 if possible. Future research should also utilize a survey designed with the main purpose of ascertaining the source and impact of the mental health treatment that is received by its respondents. Finally, future researchers are recommended to research statistical software, and one, that gives its analyses as much freedom and depth as possible, be chosen to carry out the analyses.

## CHAPTER TWO

### A REVIEW OF THE LITERATURE

#### Introduction

Each year in the U.S. over a million youths enter into the juvenile justice system. Once in the system, approximately 670,000 are identified as having at least one mental health disorder in need of treatment (McCoy, 2011). Despite the high number, it is quite probable that this is a conservative estimate since many mentally ill juveniles are not identified upon entering a juvenile detention center due to lack of screening (Shelton, 2005). Some "estimates suggest that between 50% and 70% of juvenile offenders have a diagnosable psychiatric disorder compared with 9% to 21%" found in non-offending youths (Schubert, Mulvey, & Glasheen, 2011, p. 925).

While these figures might suggest a strong relationship between mental illness and juvenile offending, research (Foster, Qaseem, & Connor, 2004) has shown that the reason for the majority of mentally ill juveniles being placed in the justice system has equally if not more so to do with various juvenile and mental health systemic policies than with the actual effects of mental illness. These policies promote the criminalization of mentally ill juveniles by depriving the mental health system of a great deal of its resources in favor of the juvenile justice system. Thus, for many mentally ill juveniles, the only way they can acquire the treatment services they need is through involvement with the juvenile

justice system (McMackin & Pittel, 2005). Subsequent to a discussion on the systemic and demographic factors that affect the acquisition of mental health treatment, a review on the mental disorders affecting juveniles will be presented, as well as how these disorders facilitate offending behaviors in this population.

### Connections Between Mental Illness and Justice System Involvement

Research (McCoy, 2011) has shown that the relationship between mental illness and involvement in the juvenile system is rather complex. Most juveniles in the juvenile justice system are mentally ill. However, the majority of mentally ill juveniles in the country are not delinquent (Grisso, 2008). Why then does the juvenile justice system contain an overwhelming large population of mentally ill juveniles? Several theories attempt to answer this question, and all of them indicate a failed juvenile justice and mental health policy.

### Explanations for System Overlap

Throughout the 1990s, the majority of the nation saw a sharp decline in the public mental health services that were available to juveniles (Grisso, 2008). In an attempt to compensate, many communities began using the resources of the juvenile justice system to fill the gap in services, a strategy that is still active in many states. This has been done to such an extent that it has led many “commentators to assert that juvenile detention centers are often surrogate mental hospitals” for youths (Cauffman, Scholle, Mulvey, & Kelleher, 2005, p. 28). In addition to a reduction in costs, from a fundamental perspective, this

arrangement makes sense to policy makers. Many juveniles manifest the symptoms of their mental disorders in ways that are considered harmful or delinquent, which make their handling by the juvenile justice system (arguably the best institution to deal with unruly and dangerous youths) a logical and appropriate decision.

An additional explanation for why mental illness is so rampant among juvenile offenders within detention centers is the loss of discretion once enjoyed by many criminal justice actors. Prior to the 1990s police, probation officers, prosecutors, and judges had a great deal of discretion in deciding, "whether they would arrest or prosecute youths with mental disorders when they engaged in illegal behaviors, especially if those behaviors involved minor offenses committed by younger adolescents without offense histories" (Grisso, 2008, p. 151). This discretion allowed for the transfer of mentally ill youths away from the stigma and negative influences of the justice system and into the mental health system where they could acquire the services they needed.

The increases in the number and severity of youth crimes in the late 1980s caused a public demand to alter juvenile statutes and increase fixed and determinate sentencing for youthful offenders. Extenuating circumstances, such as the presence of mental illnesses, could no longer be considered when sentencing a juvenile. Thus, rather than being diverted away from the juvenile system, more and more mentally ill youths were becoming entangled in it (Grisso, 2008).

Another explanation is that both the juvenile justice and mental health systems are designed to work in concert to keep troubled juveniles under control. This explanation proposes both of these systems are meant to give formal social controls to juveniles that manifest behavior that make them beyond the ability of any other system in the community to control, including informal control institutions such as families, schools, and religions. The reason for the large overlap between the two systems is because since "adolescent antisocial behavior can be interpreted in either mental health or delinquency terms", "families and communities might call on either the juvenile justice system or the mental health system as a solution to adjustment problems demonstrated by adolescents" (Cauffman, Scholle, Mulvey, & Kelleher, 2005, p. 29). Race-ethnicity, according to this theory serves as the most prominent factor in determining which youths the juvenile justice system services, and which youths get sent to the mental health system. Minorities are predominantly found in the juvenile justice system while Caucasians are found in mental health institutions.

This overlap between mentally ill youths serviced by both systems appears to not only be significant, but growing. In a survey of 4,924 juveniles, "20% of the mental health service recipients had been arrested and 30% of those who had been arrested received mental health services" prior to arrest (Cauffman, Scholle, Mulvey, & Kelleher, 2005, p. 29). Another survey comprised of 645 juveniles that had entered community-based mental health programs found that 21% had past or concurrent involvement with the juvenile justice

system. Thus, both surveys reveal a “consistent 1-in-5” ratio of involvement in juvenile justice for adolescent recipients of mental health services” (Cauffman, Scholle, Mulvey, & Kelleher, 2005, p. 29).

Research (Cauffman, Scholle, Mulvey, & Kelleher, 2005) has shown that the overlap between the mental health system and the juvenile justice system appears to be greatest between fourteen and sixteen years of age. Additionally, African Americans, Native Americans, and Hispanics have higher representations in both mental health and juvenile justice systems than Caucasians have. African Americans however, had high rates of involvement in the justice system regardless of past or present involvement in the mental health system. Latino youths involved in the mental health system are at the greatest risk of eventually becoming involved with the juvenile justice system. Indeed, many past studies have found an alarmingly clear racial bias in referral patterns for mental health treatment among juveniles (Yan & Dannerbeck, 2010).

Additionally, gender also has a strong influence on probability of service acquisition. Females, and Caucasian females in particular, have been found to receive mental health treatment at a greater frequency than both their male and minority-female counterparts. Yan and Dannerbeck (2010) cite higher rates of mental illness detection in females as a cause for this greater level of treatment referral.

Youths sent to the juvenile justice system directly from the mental health system were at a greater chance of being convicted than juveniles that entered

the justice system directly. Factors that affect the decision to transfer juveniles from the mental health system to the juvenile justice system include “male sex, sexual activity, parental history of legal involvement, cocaine use, family history of substance use, history of aggression, or childhood disruptive disorder” (Cropsey, Weaver, & Dupre, 2008, p. 947). Regardless of whether youths ultimately land in the justice system or the mental health system however, they are likely to experience one common phenomenon – lack of (if any) adequate treatment (Bonham, 2006).

#### Failings of the Justice and Mental Health Systems

According to Federal law, being able to receive mental health services upon entry into the system is the right of all mentally ill offenders, whether they are juveniles or adults (Teplin et al., 2005). Courts have consistently held that under the U.S. Constitution’s Eighth and Fourteenth Amendments, it is the state’s obligation to provide appropriate health care to those who come into its custody. Despite this, adjudicated youths in general, and minorities in particular, reported treatment of mental illness to vary from moderate to nonexistent, with considerable disparities in both access to and the quality of care based on race (Burriss, Breland-Noble, Webster, & Soto, 2011). This is especially troublesome since the group that is most likely to be diagnosed as mentally ill (minorities), is the same group that is least likely to receive treatment. The public health system fares no better.

For youths in the general population, fewer than 20% of those diagnosed as having a mental disorder receive treatment in a timely manner (Bonham, 2006). This significant lack in care causes adolescent behaviors normally identified as symptoms of a mental disorder to instead be identified as delinquent, and thus subsequently leads to more referrals to the juvenile justice system, which in turn only serves to compound the problems already being experienced there. This lack of service availability found across both systems is indicative of serious problems with the current policy employed towards mentally ill juveniles in this country.

#### Lack of Treatment

As noted earlier, the juvenile justice system has become the de-facto mental health system for juveniles. Despite this, little in the way of treatment is offered them by the system. Indeed, Teplin et al. (2005) found that while 65% to 80% of youths in the general population go untreated. Juvenile justice youths potentially fare even worse, a significantly troublesome assertion since the majority of the juvenile justice population is mentally ill, as opposed to only approximately 20% of the general population.

One major reason for this is that as many as three quarters of detainees with major affective disorders also have a concurring substance use disorders, a much higher rate than that found in the community. This comorbidity complicates detection, placement, treatment, compliance, and retention. Thus, these youths are less likely to be even identified as mentally ill, let alone receive and stay on



treatment. Aggravating this situation is that “most juvenile justice systems do not systematically screen all youths for mental health needs” which adds further “difficulty to the task of getting the appropriate youths into treatment” (Yan & Dannerbeck, p. 9, 2010). It is no surprise then that on any given day, it is estimated that as many as 13,000 youths with major mental disorders go untreated in the juvenile justice system (Teplin et al. 2005). While the juvenile justice system severely under serves those it’s meant to treat, it nonetheless consumes a large percentage of mental health resources, which as a result leaves the mental health system in a precarious situation.

#### The Revolving Door of Mental Health

Due to such an extreme lack of mental health services available in the community, for most youths, the only way they can obtain mental health services is through involvement in the juvenile justice system. Watson, Kelly, and Vidalon (2009) documented many instances where parents actually asked the police to arrest their children so they could get the mental services they required. Many of these parents were unable to find (or afford) mental resources in the public sector leaving those provided by the juvenile justice system as the only alternatives. The fact that juveniles had to become involved in the justice system to acquire the help they needed is yet another symptom of a flawed policy that does mentally ill youths all over the country a huge disservice by necessitating their criminalization in order to get treatment services.

An example of this revolving door is behavior disorders, which are the most likely reasons a youth will be referred to the mental health system (Stambaugh, Southerland, Mustillo, & Burns, 2009). This leads to the mental health system being inundated with youths manifesting behavior (defiance, aggression) that is for the most part beyond its purview. Further aggravating this is the fact that many of the resources that it once enjoyed have been diverted to the juvenile justice system, the system that is also the most appropriate to handle youths with behavioral issues. Consequently, many youths in the mental health system are referred to the juvenile justice system. However, the justice system is already severely overcrowded, and as a result has consistently demonstrated an inability to effectively treat all the youths that come into its province. Thus, the majority of the youths in the system who manifest lower levels of symptoms are deferred treatment in favor a class of juvenile offender known as “seriously emotionally disturbed” (Grisso, 2008). These juveniles represent approximately only 10% of the mentally ill juvenile population, but their disabilities (often they suffer from multiple mental disorders) are such that they consume nearly half of the system’s resources. Subsequently, this leaves little left in the way of effective resources for the majority of youths whose symptoms are minimal to moderate.

This deferral of treatment has serious ramifications for youths that at the time of their first involvement manifest only minimal symptoms of their disorders (aggression, instability, defiance). Cuellar, McReynolds, and Wasserman (2006) argue that the best way to reduce crime among youths is mental treatment

diversion. The acquisition of mental health resources they say has the potential to significantly lower aggressive and other anti-social behaviors in mentally ill youths that are usually seen as the root of most offending behaviors in this population. The lack of appropriate contact to mental health resources for the majority of adjudicated youths serves as a significant barrier to reducing recidivism among them, since this lack of treatment facilitates the further worsening of symptoms (Burris et al., 2011).

Many also argue against the prime role that the juvenile justice system has been given in dealing with mentally ill youths. Advocates of a mental health focus rather than a justice focus assert that treatment of mentally ill juvenile offenders is most effective when delivered in the community since "mental health staff have the potential to target both mental health needs, as well as other factors which support criminal activity such as criminal attitudes, criminal associates, poor problem solving skills, impulsivity, and substance abuse" (Martin, Dorken, Wamboldt, & Wootten, 2012, p. 2). These advocates assert that the lack of resources and services in the community for mentally ill youths promotes their criminalization because it is often impossible for them to acquire mental health services until their mental state deteriorates to the point of offending and subsequently becoming entangled in the juvenile justice system.

## Juvenile Mental Disorders

It has been established that many juveniles are involved in the juvenile justice system due to factors beyond those associated with their actual mental disorders. Yet mental illness is nonetheless a prominent factor behind delinquency in many juveniles, otherwise the lack of mental health service availability would not be an issue. The term “mental illness” however, covers a range of disorders that manifest themselves in completely different ways making the ascertaining of a specific relationship with delinquency difficult. There are some mental disorders that have no relationship at all with the propensity to engage in offending behavior, yet there are others that have a significant one. Additionally up to two-thirds of mentally ill juveniles suffer from comorbidity, a condition where two or more disorders are present concurrently (Hussery, Drinkard, & Flannery, 2007).

These combinations further increase the difficulty in determining the exact relationship between mental illness and juvenile offending since each respective disorder or their sum effects may add or detract from offending behaviors in different ways. This leads to the development of a very complicated picture regarding the relationship between juvenile mental illness and risk of offending since there are “some disorders decreasing the risk and others increasing it only in combination with other disorders” (Grisso, 2008, p. 145). Some clarity can be

found by examining some of the more prevalent mental health disorders affecting juvenile delinquents.

### Mental Health Disorders

Mental health disorders can be classified as belonging to one of four main general categories of mental illness. These categories are mood disorders, anxiety disorders, psychotic disorders, and disruptive behavior disorders, the last of which research has shown to be the most positively associated with offending behavior (Robertson, Dill, Husain, & Undesser, 2004). It is also the case that within each category, there are some illnesses that greatly enhance their sufferer's propensity of engaging in specific offending behaviors.

Mood Disorders. Mood disorders (also known as affective disorders) consist of various forms of depression that affect 10% to 25% of mentally ill juveniles (Grisso, 2008). Normally when people think of depression they picture extremely melancholy and withdrawn individuals since this is how it manifests itself in adults. However for adolescents, depression has a very different effect in that it promotes anger, irritability, and even belligerency. Irritability is such a common symptom that official definitions of childhood depression allow "depressed mood" to be substituted by "irritable mood" (Grisso, 2008). This condition is potentially problematic since irritable youths are more likely to engage in aggressive behavior (fighting, provoking other youths) that will draw the attention of law enforcement culminating in their entry into the juvenile justice system, where once there, they have a greater likelihood of starting even more

trouble through violent altercations with other youths. Additionally, depressed juveniles' "anger and depression can be directed towards themselves, so that they present an increased risk of engaging in self-injurious behaviors, including suicide" (Grisso, 2008, p. 145).

Bipolar disorder is another illness that is considered a mood disorder. A bipolar disorder can cause strong mood swings ranging from extreme depressive lows to extreme highs of excitement (Hawke & Provencher, 2011). This rapid influx of such different emotions has the potential of promoting behavior in youths (risk-taking, impulsive and random aggression) that would gain the attention of law enforcement (Hawke & Provencher, 2011).

Anxiety Disorders. Anxiety disorders represent the most common type of mental illness affecting both adults and juveniles with 28.8% of the population being diagnosed with one (Hawke & Provencher, 2011). In juveniles these disorders "usually involve fearfulness and a tendency to be withdrawn and to avoid confrontation" (Grisso, 2008, p. 145). Disorders classified into this group include posttraumatic stress disorder (PTSD), phobias, panic disorders, and obsessive-compulsive disorder (OCD) (Hawke & Provencher, 2011).

Due to their nature, these disorders generally do not promote offending behavior since typically they cause youths to be less aggressive and more timid than average (Grisso, 2008). However, youths with PTSD are an exception. These youths have demonstrated a greater likelihood of responding to threats with sudden and intense aggression. Additionally, juveniles that also have a

concurrent disruptive behavior disorder, such as conduct disorder (which increases antisocial tendencies as will be reviewed in a subsequent section) have been found to be even more spontaneously aggressive than youths with only one of either disorders (Grisso, 2008). This combination seems to enhance the symptoms of each and should be especially looked for in any youths entering the mental health or juvenile justice systems.

Psychotic Disorders. Psychotic disorders, also referred to as psychosis, consist of any illness that causes one to basically lose touch with reality. These disorders (such as schizophrenia) cause people to experience delusions, hallucinations, and an overall disturbance of mental functioning (Grisso, 2008). Psychotic disorders are fairly rare before early adulthood and thus are not normally seen in juvenile offenders. However, there are some youths that begin to display early symptoms that usually facilitate thought disturbances, which cause the youths to interpret events in abnormal ways. Some argue that these false interpretations cause a distortion of reality for these youths that leads them to act aggressively against a perceived wrong. Thus “when youths with psychotic features engage in serious delinquencies, one frequently finds that their disturbed thought has played a role in their aggression” (Grisso, 2008, p. 146).

Disruptive Behavior Disorders. Disruptive behavior disorders, especially conduct disorder (CD) and attention-deficit hyperactivity disorder (ADHD), are very closely associated with juvenile offending due to youths with such a disorder

demonstrating significantly elevated rates of physical aggression and lack of impulse control (Grisso, 2008). In fact, evidence of aggression and involvement in delinquencies are used to diagnose CD. Further, the impulsivity that is connected with ADHD often facilitates juveniles “to respond to emotional situations without pausing to consider the consequences” (Grisso, 2008, p. 146). There exists *such* a substantial relationship between offending behaviors and CD and ADHD respectively, that each merits a closer look.

Conduct Disorder. According to Robertson, Dill, Husain, & Undesser (2004), “conduct disorder is the most prevalent diagnosis for juvenile offenders, with rates ranging from 50% to 90%” (p. 66). CD begins in childhood or the teenage years and is defined by a repetitive and persistent pattern of conduct that violates the rights of others and/or the societal norms and rules that are applicable to the offender’s age group (Lacourse et al., 2010). Behaviors manifested by this syndrome include “verbal or physical aggression toward people or animals, destruction of property, deceitfulness or theft, and serious violation of rules”, all of which greatly increase offenders’ chances of gaining the attention of law enforcement and becoming entangled in the system (Lacourse et al., 2010, p. 1386).

Juveniles with CD generally fall into one of two categories. Most youths are non-violent and mainly commit petty crimes and/or property offenses like petty theft, vandalism, and status offenses, such as running away, ditching school, and staying out past curfew (Lacourse et al., 2010). The second group is



comprised of a minority of CD youths that manifest physical aggression and are usually involved in violent acts such as assaults. Normally early development of CD is characterized by non-violent manifestations while CD developed during the teenage years is predictive of more aggressive and violent symptoms (Lacourse et al., 2010). Furthermore, youths that develop PTSD (due to a traumatic experience in their childhood) and then eventually develop CD are likely to engage in significantly increased aggressive and violent behaviors with the combination of PTSD and CD amplifying each disorder's effects (Grisso, 2008).

Attention-Deficit Hyperactivity Disorder. Two-thirds of youths entering the juvenile justice system each year have ADHD (Young, Chesney, Sperlinger, Misch, & Collins, 2009). Not only do youths diagnosed with ADHD demonstrate a high prevalence of offending behaviors but they also manifest high rates of recidivism. Additionally, youths with ADHD have been found to persist in their offending into adulthood making them more prone to becoming life-long offenders (Sibley et al., 2011). ADHD in juveniles has long been correlated "with poor grades, lowered reading and math standardized test scores, higher grade retention, and increased rates of detention and expulsion, which eventually result in lower rates of high school graduation and postsecondary education", which all in turn promote ADHD youths becoming involved in activities that make them more prone to law enforcement attention (Bussing, Mason, Bell, Porter, & Garvan, 2010, p. 596). Without even a high school education after all, there are

extremely limited sources of legitimate income available, leaving only illegitimate (criminal) opportunities to turn to.

Comorbidity. Comorbidity is extremely important in understanding the complex relationship between juvenile mental illness, aggressive behaviors, and subsequent offending. Most mental disorders “that offer only a modestly increased risk of aggression appear to augment the risk when they are found in combination with other disorders” (Grisso, 2008, p. 147). Perhaps one of the most troubling comorbid relationships is that of ADHD and CD. Juvenile offenders that were diagnosed with both illnesses concurrently have been found to possess the highest rates of “delinquent offending across measures of severity, variety, and age of initiation” (Sibley et al., 2011, p. 28). This means that comorbid ADHD and CD youths were more likely to begin offending earlier, engage in a far greater variety of crimes, and initiate a more severe delinquency than any other comparative group of juvenile offenders (Sibley et al., 2011).

The ramifications for comorbid ADHD and CD on a youth’s future are severe. As highlighted earlier, for youths with ADHD “an elevated risk for non-normative delinquency is just one of a slew of probable negative life outcomes, including school dropout, interpersonal difficulties, substance use, and unemployment”, all of which research has shown can be mitigated should clinical intervention and treatment be given as early as possible (Sibley et al., 2011, p. 30). Before treatment can be initiated however, ADHD, CD, and all mental health disorders for that matter, must be recognized for what they are – illnesses.

Further, once they are recognized and diagnosed, the treatment itself must be sought out, accepted, initiated, and maintained. Unfortunately, in addition to the problems of mental health disorders themselves, the identification of juvenile mental health disorders is also associated with many problems.

### Identifying Mental Illness in Juveniles

Adolescence is a time full of physical, mental, and emotional changes that can be very stressful. This stress usually results in the stereotypical unruly and unpredictable teenager. For little or no reason a teenager's mood and behavior can drastically change almost instantaneously. It is not surprising then that research has shown "despite their prevalence, many mental health problems go unnoticed or are only treated when they become advanced" in juvenile populations (McDougall, 2011, p. 49). Distinguishing normal teenage attitude or mood swings from a symptom of a genuine mental health disorder can be difficult. Additionally, many mental illness symptoms often times do not manifest as expected. A layperson for example, would not associate his or her irritable and aggressive teenager as suffering from depression, even though depression in juveniles can indeed manifest in such a way. Watson, Kelly, & Vidalon (2009) found that one major impediment to mental illness identification is that "recognizing that youths are experiencing problems and recognizing they have a mental illness or other mental health problem are not the same thing" (p. 1090).

Further complicating this issue is that not all juveniles experience the same mental disorder in the same way. Some may manifest their symptoms

more severely than others, while also varying in their ability to control the symptoms. Additionally, “some have the disorder persistently across a significant period of time, while others meet the criteria for the disorder for only a short time”, the latter of which will include some that have “recurring episodes of the disorder, while others will experience only one episode” (Grisso, 2008, p. 147). If there is this much abundance of individual differences among youths suffering from *the same* disorder, the amount of variation across *the entire* mentally ill juvenile population is staggering, resulting in an incredibly complex and heterogeneous population that makes accurate and timely diagnosis difficult even for mental health professionals. However as this literature review has demonstrated, even when mental illness is identified, acquisition of treatment resources is very difficult. Additionally, obtainment of this treatment quite often is only through involvement with the juvenile justice system, a dire situation indeed.

## CHAPTER THREE

### HYPOTHESES

#### Summary

It has been established that the juvenile justice system has become for all intents and purposes, the new mental health system for youths, and is allocated a significant portion of mental health resources in order to accomplish its new mandate of treating mental illness in offender populations. This raises an important question. How effective are those mental health resources in preventing symptoms of mental illness from manifesting as delinquent? Additionally, how does this allocation of mental health resources to the juvenile justice system from the mental health system affect the availability of services in the community? What demographic factors affect whether a youth will receive treatment or not?

The following hypotheses were used to determine whether or not past involvement with the justice system facilitated acquisition of mental health treatment, as well as to gauge the effectiveness of that treatment on stemming delinquent behavior. Mental health treatment is defined as both the use of prescription medication for the control of symptoms, as well as both outpatient and inpatient therapy. Delinquent behavior is defined as any attack committed with the intent to cause serious harm.

Hypothesis 1: Having ever been arrested and booked for breaking the law will have a positive effect on having ever received mental health treatment.

Hypothesis 2: Having ever been arrested and booked for breaking the law will have a negative effect on having not received mental health treatment even though a need was perceived.

Hypothesis 3: Having ever received mental health treatment will have a negative effect on having committed delinquent acts in the past year.

Hypothesis 4: Not having received mental health treatment after perceiving a need will have a positive effect on having committed delinquent acts in the past year.

Often times it has been seen that many juveniles refuse to take treatment or engage in mental health services due to the stigma that many people associate not only with mental illness, but with treatment as well (Watson, Kelly, and Vidalon 2009). However, research (Teplin et al. 2005) has shown that many other juveniles are not even given the opportunity to make a choice to engage in treatment because the services are just not available. The following hypothesis will be used to differentiate between the two groups.

Hypothesis 5: The fear of stigma associated with mental health treatment will be a significant factor in why mental health treatment was not received.

Hypothesis 6: Unawareness of the availability of mental health treatment will be a significant factor in why mental health treatment was not received.

Hypothesis 7: The location of the mental health treatment being too far away will be a significant factor in why mental health treatment was not received.

The data analysis also included multiple demographic variables that were potentially significant predictors of whether a mentally ill youths will have access to mental health treatment. The analysis is predicted to show a considerable difference in the availability of mental health treatment based on the juvenile's gender, race, and socioeconomic status. The results of this analysis will help to corroborate past findings that indicate youths of a particular race and gender are at a distinct disadvantage in the obtainment of mental health treatment.

Hypothesis 8: Race will be a significant factor in whether or not a juvenile has access to mental health treatment.

Hypothesis 9: Socioeconomic status will have a negative effect on not having received mental health treatment after a need was perceived.

Hypothesis 10: Males will be more likely to go without mental health treatment after perceiving a need for it than females.



## CHAPTER FOUR

### RESEARCH METHODS

In a previous chapter, a review of the literature on the subject of mentally ill juvenile offenders was conducted that allowed for the creation of various hypotheses, which this study aims to substantiate. However, juveniles are a very sheltered population, especially those involved in the system, and access to them for any research purposes is extremely difficult to obtain (Lynch, 2001). Therefore this study utilized secondary data that contained study-relevant information on juveniles. Using PATH analysis, this study examined the relative direct and indirect effects of gender, race, and socioeconomic status on access and use of mental health services and whether those services affects the probability of subsequent delinquency.

#### Design

As described above, this study used data gathered during the 2004 National Survey on Drug Use and Health. This previous study employed both interviews and a survey to gather data from a national sample of respondents ages 12 and older, making for an extremely diverse sample that can add greatly to the applicability of the results of this study to the general population of the subjects.

### Strengths of Secondary Analysis

The strengths of using secondary analysis, especially since it involves subjects such as juveniles, are manifold. Not only did it allow this study to bypass the usual research restrictions surrounding juveniles, but it also allowed access to a much larger and far more diverse population of juveniles than would have been gained by using any other research method. While these advantages alone were enough to merit its use, there were still numerous other reasons for why secondary analysis was the ideal method for this study.

In their research, Alvarez, Canduela, and Raeside (2012) describe various other advantages provided by secondary analysis. One of the most important, especially for those with limited funds like students, is its cost-effective nature. A study that uses data that has already been collected incurs significantly lower financial costs than a study that collects the data itself. The latter type of study must take the potential costs of travel, supplies, and compensation for its subjects into consideration. Often times it is necessary for researchers to travel to where their sample population is located, which costs gas and/or a plane ticket. Additionally, researchers must then pay for resources with which to gather the data, such as questionnaires, interviewers, and coders. Finally, these studies may also have to resort to an incentive in order to gain cooperation from their sample populations, an incentive that usually requires even more monetary resources. Studies using secondary analysis however have the advantage of not incurring these expenses. This advantage is further magnified because many of

the online databases where data sets are stored allow for free accessibility to those affiliated with academic institutions, such as faculty and students. Since this group conducts the majority of research projects, secondary analysis allows for most research studies to incur no financial cost at all when it comes to collecting data.

Money is not the only thing that is saved by using secondary analysis. Due to the convenience that it provides, secondary analysis allows for studies to gain access to a great deal of information in an incredibly short period of time. Interviews and surveys for example allow for a lot of information to be collected, but they are time consuming both to create and carry out. This restricts the number of research studies that can be created, since each one would take so long to complete. Secondary analysis however, allows for many more researchers to conduct many more studies than they would have if they had to gather the data themselves, thus potentially greatly adding to the knowledge in their respective fields (Alvarez, Canduela, & Raeside, 2012).

Secondary analysis generates numerous and diverse studies. In particular, Alvarez, Canduela, and Raeside (2012) assert that secondary analysis is ideal for studies that are exploratory in nature, such as this one. Indeed, their past research draws "attention to the benefits of secondary data to research the difficult area of adolescent well-being and cite cross-cultural comparisons and the analysis of multiple out- comes as particular advantages", advantages which greatly aided this study (p. 2701).

### Weaknesses of Secondary Analysis

No matter how efficient a particular research method is, it will have its respective weaknesses. Secondary analysis is no exception. Perhaps one of the biggest issues most researchers have is the restrictive nature of datasets. If no study in the past has gathered data on a particular subject or phenomenon, then secondary analysis cannot be conducted because there is no dataset to conduct it on. Thus, researchers that intend on using secondary analysis are limited by the availability of datasets in their particular field of interest. Additionally, even if researchers find datasets regarding their particular research topic, the data may not have been gathered with their specific research questions regarding that topic in mind. Datasets can be extremely flexible in regards to the variety of ways they can be used, but only to a point. Thus, researchers using secondary analysis are further limited in how far the data can be manipulated to meet a specific research goal (Walker & Maddan, 2013).

Another major weakness that many researchers employing secondary analysis encounter is the fact they had no control over how the data was originally collected. A researcher using secondary analysis on a dataset has no way of knowing of any errors that were made in the creation of the dataset except for the ones that the creators list in the dataset's descriptions. By unknowingly using secondary analysis on a flawed dataset whose creators did not adequately explain, researchers run the risk of perpetuating the errors in their study (Alvarez, Canduela, and Raeside, 2012).

Despite these weaknesses, the strengths of secondary analysis far outweigh the weaknesses, especially for a study such as this. Secondary analysis is ideal for research conducted both by those with limited funds, and/or for those whose research involves members of an especially protected population, such as juveniles. Since this study met both of the above criteria, utilization of secondary analysis was the most logical research method choice.

### Data

The data that was utilized in this study came from the dataset entitled *Gender, Mental Illness, and Crime in the United States, 2004 (ICPSR 27521)*. This dataset was in turn generated from the *National Survey on Drug Use and Health, 2004 (ICPSR 4373)*.

#### National Survey on Drug Use and Health, 2004

The National Survey on Drug Use and Health was a study designed to capture information regarding illicit drug, alcohol, and tobacco use among members of American households twelve years and older. Additional information collected by the survey included personal and family income sources and amounts, health care access and coverage, illegal activities and arrest record, problems resulting from the use of drugs, and most importantly for the purposes of this study, information on treatment of mental disorders. This study was sponsored by the Office of Applied Studies (OAS) within the Substance Abuse and Mental Health Services Administration (SAMHSA) and was conducted by

RTI International, Research Triangle Park, North Carolina (National Survey on Drugs and Health, 2004, ICPSR).

Methodology. The primary sampling frame for the study was “the civilian, non-institutionalized population of the United States (including civilians living on military bases) who were 12 years of age or older at the time of the survey” (National Survey on Drug and Health, 2004, ICPSR). The survey sample utilized a 50-State design with an independent, multistage area probability sample for each of the 50 States and the District of Columbia. The eight states with the largest population (whose combined totaled represented approximately forty-eight percent of the total U.S. population aged 12 or older) were designated as large sample states (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas). For these states, the design provided a sample large enough to support direct state estimates. For the remaining states and the District of Columbia, smaller samples were chosen to support state estimates using small area estimation (SAE) techniques. The design also oversampled youths and young adults, so that the sample from each state was relatively equally distributed among three primary age groups: 12 to 17 years, 18 to 25 years, and 26 years or older (National Survey on Drug Use and Health, 2004, ICPSR). The final sample size for the study was 67,760 persons. However, due to the use of disclosure protection procedures, the public use file contains 55,602 records, which is still a large sample.

The data were collected using a computer-assisted questionnaire administration. This means that a “combination of computer-assisted personal interviewing (CAPI) conducted by an interviewer and audio computer-assisted self-interviewing (ACASI)” techniques (National Survey on Drug Use and Health, 2004, ICSPR). This combination was meant to provide participants with an exceptionally private and confidential method by which to answer questions. By doing this, it was hoped that the degree of honesty would increase when reporting on such sensitive topics like delinquent activities, mental illness, and subsequent treatment. In order to help ensure high response rates, participants are given an incentive payment of \$30 (National Survey on Drug Use and Health, 2004, ICPSR).

Strengths and Weaknesses of the Survey. This study possesses two major strengths. First, is that it involved interviews with a nationally representative sample. It also covered a wide-range of topics such as mental illness, treatment, and crime. These strengths permit greater external generalizability, well beyond both the local and even state levels.

It is important to note that this survey has some limitations. First, the data were generated through self-reports, raising possible concerns with honesty and participant recall. Also, this study employed a cross-sectional design. This means that the participants were interviewed only once, with no follow-up interviews. This greatly limits the ability to track changes in one’s status over a period of time. Finally, the study only included the non-institutionalized civilian

population of the United States, leaving just under 2% of the population unaccounted for. People on active-duty in the military and in institutional group quarters were unaccounted for. This may have provided for slightly inaccurate estimates for this study's research goals because included in the latter group are those who are in treatment centers, for various conditions, including mental disorders (National Survey on Drug Use and Health, 2004, ICPSR). However, these weaknesses are counterbalanced by the fact that this study has a wealth of information from such a huge nationally represented sample, making this an ideal dataset to use for any study into the subjects of drug use, crime, and mental illness. Hence the reason why the following dataset, which this current study utilized, was based off of it.

#### Gender, Mental Illness, and Crime in the United States, 2004

Subsequent to the release of the *National Household Survey on Drug Use and Health (NSDUH), 2004* [ICPSR 4373], a researcher modified the original data in order to explore the effects of gender, depression, drug use, and treatment on crime, as well as the effects of interaction with the criminal justice system on subsequent depression and drug use. Building on the data originally gathered through the NSDUH, Melissa Thompson (2004) recoded variables in order to generate measures more amendable to the study of mental illness. These new variables "include depression indices, drug dependence indicators, interactions with gender and other demographic variables, and dichotomous recoded variables relating to types of drug abuse and criminal behavior" (Gender,



Mental Illness, and Crime in the United States, 2004). The methodology of this study employed secondary analysis on data collected in the NSDUH 2004, whose own methodology was earlier described.

### Data Analysis

The underlying point of the present study was to determine how effective mental health treatment is at stemming delinquent activity in mentally ill juvenile offenders. If mental health treatment is found to indeed be an effective curb for delinquent activity, then it is reasonable to conclude that those mentally ill youths who received treatment will show little to no further delinquent behavior after treatment. Inversely, those youths that need mental health treatment but do not receive it are expected to demonstrate a higher degree of offending. To this end, the analytical method that was employed by this study was path analysis. There are many reasons why path analysis was the ideal method for this type of study.

#### The Fundamentals of Path Analysis

This study explored which factors affect juveniles' chances of acquiring access to mental health treatment, which in turn can affect their level of delinquency. Path analysis is by definition a "methodological tool that helps researchers using quantitative (correlation) data to disentangle the various (casual) processes underlying a particular outcome", which in the case of this study is access to mental health treatment and subsequent level of delinquency (Lleras, p. 25, 2005). The main advantage of having used path analysis is that it

allowed this study to specify exactly how the variables interacted, and thus promoted the formation of clear and logical explanations about the processes that influenced a particular outcome. The study was then able to develop policy implications that are especially relevant and accurate, which is one of the primary goals of any research in the social sciences.

Path analysis is from a category of modeling approaches known as structural equation modeling (SEM). These modeling systems are designed to provide comprehensive analyses of the relationships between a set of observed variables, also known as manifest variables, and unobserved, or latent, variables. Path analysis allows the researcher to model, test, and reduce hypothesized relationships among a set of observed variables. By using path analysis, a researcher is able to perform “simultaneous assessment of the strength and direction of the interrelationships among multiple dependent and independent variables” (Clayton & Pett, 2008, p. 284).

Ultimately, the fundamental goal of path analysis is to either test a hypothesized model in its entirety regardless of path importance, or to engage in a process whereby one or more paths in model are systematically removed. These removed paths are deemed to be statistically non-significant. This process allows a researcher to develop a more conservative view, a view that is “able to predict the greatest amount of variance in the outcome variable or variables using the smallest number of predictor variables” (Clayton & Pett, 2008, p.284).

Conducting a Path Analysis. To conduct a path analysis, the first thing that should be done is to create a path diagram that illustrates the relationships that are hypothesized to exist between a set of observed variables. The observed variables are represented by rectangles, while straight lines with arrows at the end represent the hypothesized relationships of the predicted effect between the variables. Within all path analyses, there are what are known as error terms, or residual variances. These error terms are used to account for the effect that other factors may have on the outcome variables, factors that are not predicted or accounted for by the path model. Circles are used to represent error terms with arrows pointing towards the outcome variable they are meant to account for (Clayton & Pett, 2008).

Types of Variables Used in Path Analysis. Variables used in path analysis can often take on more than one role while in a path model. To reflect this, different names are used to describe the variables in a path model. Exogenous variables have a cause that is outside the model. Their job is to explain the other variables and/or outcomes that occur within the model. These variables have no lines (paths) going into them. An endogenous variable on the other hand has at least one path directed into it. Additionally, all endogenous observed variables have error terms attached to them. This is done in order to visualize the assumption that there is an error in measurement associated with the variables, an error that comes from something that has not been accounted for within the model (Clayton & Pett, 2008).

Interpreting Path Analysis Results. Path analysis results are generally displayed in the form of path coefficients. These path coefficients indicate both the strength and direction of the associations between the observed variables. Path coefficients can be displayed in terms of their unstandardized and standardized values. When in standardized form, a path coefficient is similar to a beta weight from multiple regression analyses (Walker & Maddan, 2013). Path coefficients, like beta weights, all have their own standard error. When the standardized path coefficient is divided by its standard error, it results in what is known as a z-statistic, which is then evaluated for statistical significance by comparing it to a critical value a critical value (e.g.,  $z = |1.96|$  if using a two-tailed  $p < .05$ )" (Clayton & Pett, 2008).

### The Path Analyses

Due to restrictions in the statistical software, which will be discussed later, it was not possible to conduct a path analysis that involved all the variables simultaneously. Multiple path models had to be created and analyzed in order to address the hypotheses. Many of the same variables were used in multiple path models, but in different correlations.

### Path Model One: Crime, Treatment, and Offending

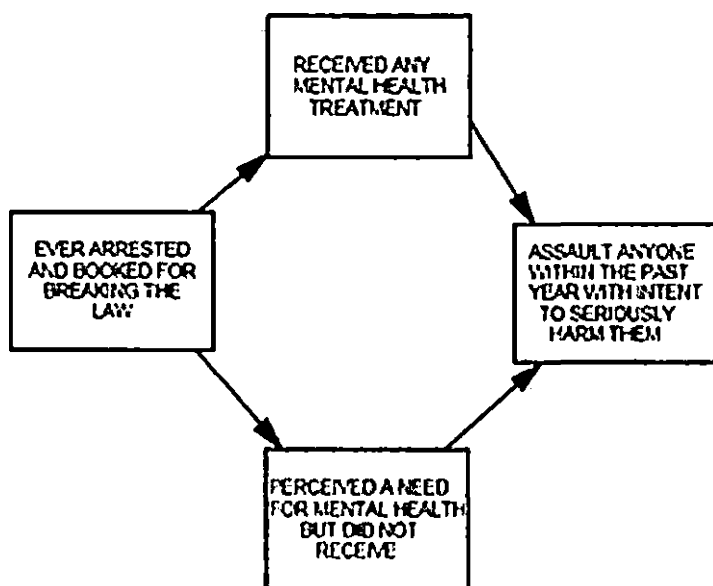


Figure 1.  
Path Model of Crime, Treatment, and Offending

Path model one, which is contained in Figure 1, was created with the purpose of addressing hypotheses one through four. The exogenous variable in the model is 'ever arrested and booked for breaking the law'. This variable has two paths going into the variables 'received any mental health treatment' and 'perceived a need for mental health treatment but did not receive'. These two endogenous variables in their turn both have paths going into the third endogenous variable 'assault anyone within the past year with intent to seriously hurt them'.

### Path Model Two: Gender, Income, and Treatment

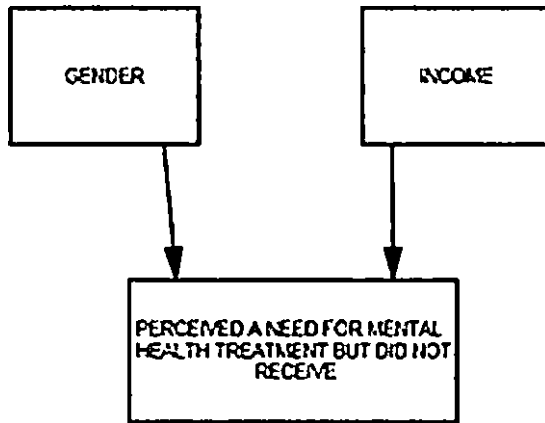


Figure 2.  
Path Model of Gender, Income, and Treatment

The second path model created, contained in Figure 2, was designed to address hypotheses ten and eleven. The two exogenous variables in the model are 'gender' and 'income'. Each has a path going into the endogenous variable of 'perceived a need for mental health treatment but did not receive'.

### Path Model Three: Race and Treatment

Path model three, contained in figure 3, was created to deal with hypothesis nine. The four exogenous variables of this model were the four races that were dealt with by the research. These race variables are 'Caucasian', 'African American', 'Native American', and 'Hispanic'. These variables all have paths going into the endogenous variable of 'perceived a need for mental health treatment but did not receive'.

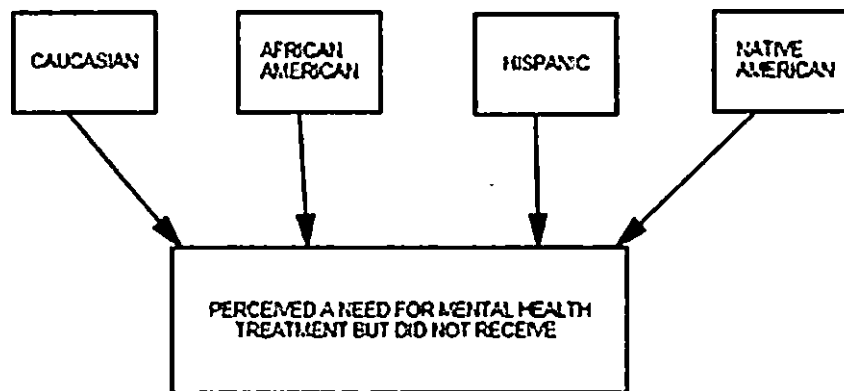


Figure 3.  
Path Model of Race and Treatment

#### Path Model Four: Race and Cause of Lack of Treatment

The final path model, which is contained in figure 4, was created to address hypotheses five through nine. Once again, the exogenous variables are the four race variables of 'Caucasian', 'African American', 'Native American', and 'Hispanic'. All these variables have paths going into the three endogenous variables of 'no mental health treatment unaware of services', 'no mental health treatment too far', and 'no mental health treatment stigma'.

Significant effects by the exogenous variable on the first two endogenous variables can be seen as indicative of a lack of resources in the mental health system which leads to treatment availability being scattered far and wide, as well as little effort being made in the way of educating people in the community on where services can be acquired. Both of these allude to the fact that the mental

health system has little in the way of resources both to supply adequate availability of services, as well as provide awareness of the services it does have.

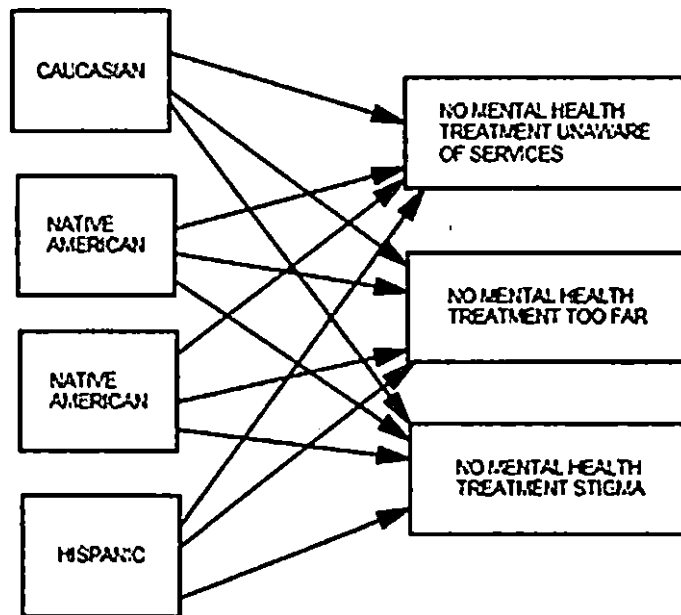


Figure 4.  
Path Analysis of Race and Cause of Lack of Treatment

#### Study Sample

The original sample contained in the dataset utilized by this study was 55,602 respondents, of which 18,294 are juveniles between the ages of 12 and 17. However, the original study was unable to collect mental health-related questions on this juvenile population. Thus, in order to perform the necessary analyses, this study was required to use young adults aged 18-19 as a substitute. Though not juveniles from a legal standpoint, they share the same



physiological and psychological characteristics of older juveniles. As will be discussed later, while this limits the applicability of this study's results to younger-aged juveniles, the fact that the sample is nationally representative still means that its findings regarding older juveniles are invaluable. This study's sample size of young adults aged 18-19 was 5,056, of which 393 answered the mental health portion of the 2004 NSDUH. It was responses from this sample that the analyses were run on, and thus results based off of. The demographic characteristics of this sample are contained in Table 1. The manner by which the variables used in this study were coded are contained in Table 2.

Table 1.  
*Study Sample Demographic Characteristics*

Demographic Variables	Current Study Sample	Total Sample
Gender		
Female	28.8%	49.5%
Male	71.2%	50.5%
Income		
Less than \$20,00	40.2%	38.2%
\$20,000-\$49,999	31.0%	31.3%
\$50,000-\$74,999	13.2%	13.7%
\$75,000 or more	15.5%	16.8%
Caucasian	71.0%	63.5%
African American	8.1%	13.2%
Native American	1.5%	1.3%
Hispanic	11.2%	15.4%

Table 2.  
*Variable Coding*

Variable Name	Coding
Imputation Revised Gender	1=Male 2=Female
Total Family Income Recode	1=Less than \$20,000 2=\$20,000-\$49,999 3=\$50,000-\$74,999 4=\$75,000 or more
Non-Hispanic White	0=Other 1=White NH
Black Non-Hispanic	0=Other 1=Black NH
Native American Non-Hispanic	0=Other 1=Native American
Hispanic	0=Other 1=Hispanic
Ever Arrested and Booked for Breaking the Law	0=No 1=Yes
Did Youth or Adult Attack Anyone With the Intent to Cause Harm Within the Past Year	0=No assault 1=Assault
Any Mental Health Treatment for Youth or Adult	0=No 1=Yes
Perceived a Need for Mental Health Treatment but Did Not Receive	0=No 1=Yes
No Mental Health Treatment Because Did not Know Where to Go	0=No 1=Yes
No Mental Health Treatment Because it Was Too Far	0=No 1=Yes
No Mental Health Treatment Because of Stigma	0=No 1=Yes

## CHAPTER FIVE

### RESULTS

#### Findings

The literature that was reviewed earlier allowed for the formation of various hypotheses regarding the effects of mental health treatment on subsequent offending behavior, as well as regarding how various demographic factors affected access to that treatment. The relationships between these factors however, are very complex. Thus, in order to adequately address these relationships, multiple path diagrams were constructed from the pertinent variables, and analyzed using the statistical software SPSS AMOS. While some of the results were as predicted, many others were not anticipated.

#### Path Analysis One: Crime, Treatment, and Offending

The first model created and analyzed dealt with four variables. The purpose of the analysis was to address hypotheses one through four by determining what the effect of being arrested and booked for breaking the law had on people's ability to receive mental health treatment. The analysis was also meant to examine whether or not the acquisition of mental health treatment discouraged criminal behavior. The literature indicated that many mental health illnesses manifest as aggressive and violent behaviors (Grisso, 2008). Thus, whether or not someone attacked another with the intent of seriously hurting them was used to measure the level of criminal behavior after treatment was

received or not received even after perceiving a need for it. This path analysis is presented in Figure 5. Results are shown in Table 3.

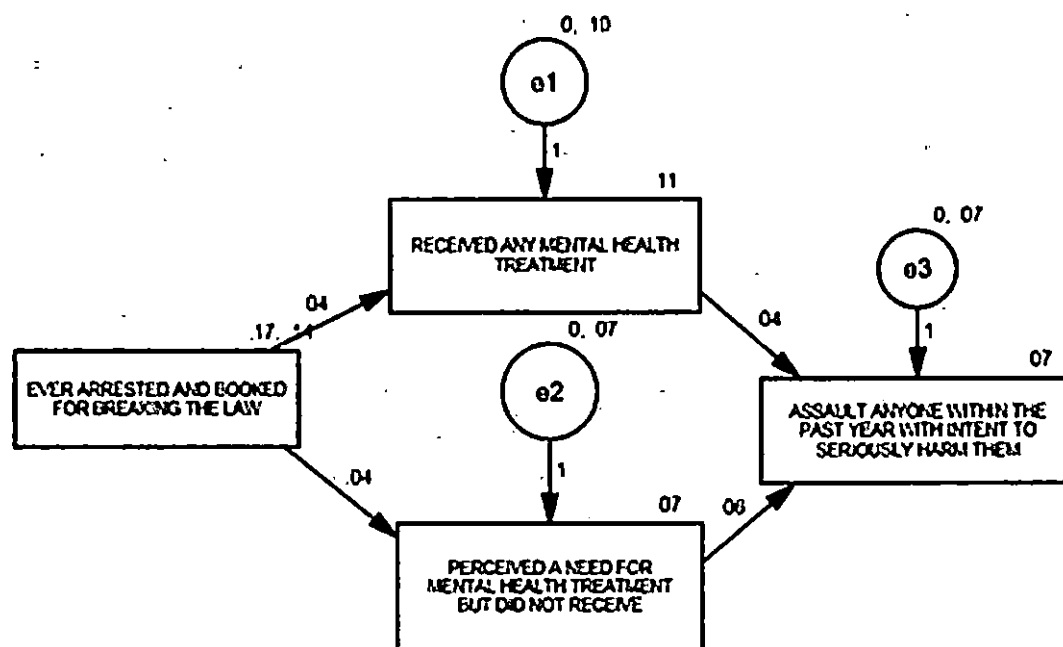


Figure 5.  
Path Analysis of Crime, Mental Health, and Offending

Table 3.  
*Regression Estimates for Path Analysis One*

	Estimates	S.E.	C.R.	P
Model Estimates				
Prior Arrest → Received Treatment	0.043	0.012	3.55	***
Prior Arrest → No Treatment	0.042	0.010	4.11	***
Received Treatment → Attacked	0.042	0.012	3.57	***
No Treatment → Attacked	0.062	0.014	4.39	***
Model Statistics				
Chi-Square	659.05			
Degrees of Freedom	2			
Probability Level	0			

\*\*\*p<.005     n=282

As can be seen, there is a positive and significant direct relationship between having been arrested and booked in the past for breaking the law and having received mental illness ( $p<.005$ ). Yet, there is also a positive and significant direct relationship between having been arrested and booked in the past for breaking the law and having not received mental health treatment, even though a need was perceived ( $p<.005$ ). These results mean that people are both likely to have received mental health treatment after being involved with the criminal justice system, and also not having received mental health treatment even though they perceived a need. These two findings are at odds with each other, the ramifications of which will be discussed later.

The path analysis also revealed that there is a positive and significant direct relationship between mental health treatment not being received, even though a need was perceived, and attacking someone with the intent to cause

harm ( $p < .005$ ). This means that people who needed mental health treatment but did not receive it are likely to attack someone with the intent to cause harm. Yet, there is also a positive significant relationship between having received mental health treatment, and attacking someone with the intent to cause harm ( $p < .005$ ). Once again, these two findings appear to be at odds with each other.

#### Path Analysis Two: Gender, Income, and Treatment

The second path analysis was meant to address hypotheses ten and eleven. It was designed to ascertain the relationships between three variables: gender, income, and whether or not mental health treatment was received after perceiving a need for it. Within this model, the two exogenous variables were 'income' and 'gender', and the endogenous variable was 'perceived a need for mental health treatment but did not receive'. This path analysis is presented in Figure 6. The analysis results are in Table 4.

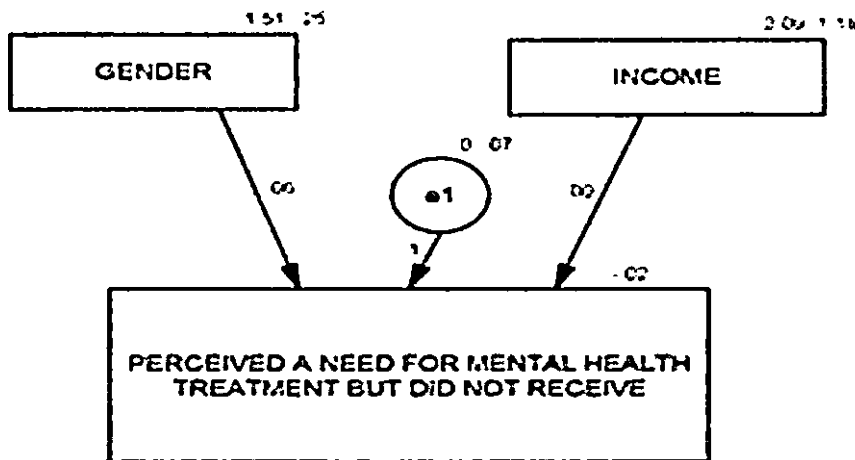


Figure 6.  
Path Analysis of Gender, Income, and Treatment

As the results show, there is a positive and significant direct relationship between gender and having perceived a need for mental health treatment but not having received it ( $p < .005$ ). Given the way that gender was coded, this means that females were more likely to have not received mental health treatment, even though they perceived a need for it. The research (Yan and Dannerbeck, 2010) however, asserts that females are more likely to receive mental health treatment than are males. This discord between what the research says the results should be, and what they actually are, will be discussed in the following chapter.

Table 4.  
*Regression Estimates for Path Analysis Two*

	Estimates	S.E.	C.R.	P
<b>Model Estimates</b>				
Gender → No Treatment	0.064	0.008	8.573	***
Income → No Treatment	0	0.003	0.990	.990
<b>Model Statistics</b>				
Chi-Square	60.552			
Degrees of Freedom	1			
Probability Level	0			

\*\*\*p<.005     n=393

The effect of income on having perceived a need for mental health treatment but not receiving was also examined. It was found not to be significant ( $p>.005$ ). Thus, people's income has no significant effect on their not receiving mental health treatment after having perceived a need for it.

#### Path Analysis Three: Race and Treatment

Path analysis three was created to examine the effect that race has on whether mental health treatment is received after perceiving a need for it, thus addressing hypothesis nine. The four exogenous variables within this model are also the four race variables of this project: 'Caucasian', 'African American', 'Native American', and 'Hispanic'. The endogenous variable for this model is 'perceived a need for mental health treatment but did not receive'. The regression results for the analysis are in Table 5. This path analysis is presented in Figure 7.



Table 5.  
*Regression Estimates for Path Analysis Three*

	Estimates	S.E.	C.R.	P
Model Estimates				
Caucasian → No Treatment	-.010	.008	-1.228	.220
African American → No Treatment	-.049	.011	-4.361	***
Native American → No Treatment	-.006	.033	-.173	.862
Hispanic → No Treatment	-.039	.010	-3.685	***
Model Statistics				
Chi-Square	7025.671			
Degrees of Freedom	6			
Probability Level	0			

\*\*\*p<.005      n=375

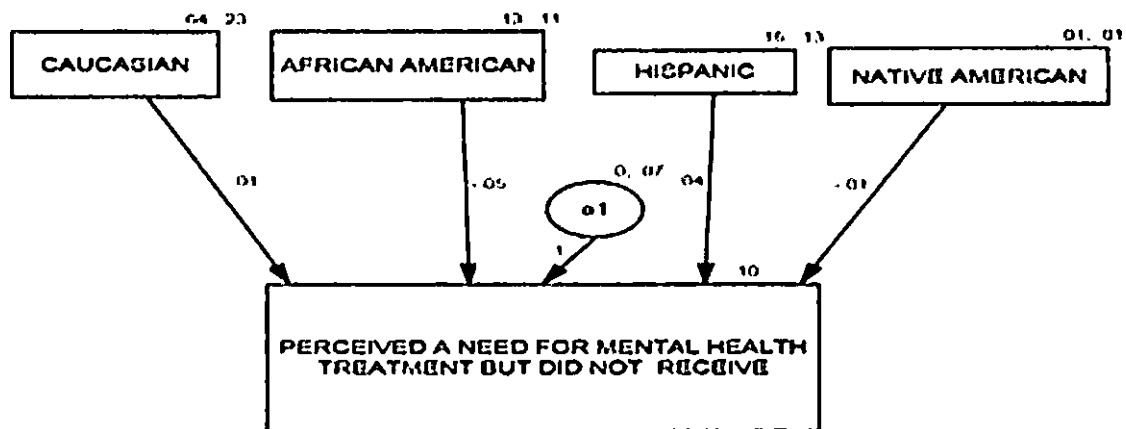


Figure 7.  
Path Analysis of Race and Treatment

The results for this analysis show that the variables 'Caucasian' and 'Native American' have a non-significant effect on 'perceived a need for mental health treatment but did not receive' ( $p > .005$ ). This is interpreted to mean that being Caucasian or Native American has no significant effect on not receiving mental health treatment after perceiving a need for it. The effects of 'African American' and 'Hispanic' however, both have a significant and negative effect on 'perceived a need for mental health treatment but did not receive' ( $p < .005$ ). This is interpreted to mean that African Americans and Hispanics are more likely to receive mental health treatment when they perceive a need for it. According to the literature (Burriss, Breland-Noble, Webster, & Soto, 2011) however, minorities, which African Americans and Hispanics compose, are more likely to

not receive mental health treatment. Once again, the research and the study results are at odds with each other. These disparities will be addressed later on.

#### Path Analysis Four: Race and Cause of Lack of Treatment

The fourth and final analysis ran was designed to deal with hypotheses five through nine, and thus examined the effects that race had on various impediments to the acquisition of mental health treatment. This was done in effort to see if any impediments were significantly affected by a certain race. Once again, the four exogenous variables of the model were the four racial variables 'Caucasian', 'African American', 'Native American', and 'Hispanic'. The endogenous variables were 'no mental health treatment unaware of services', 'no mental health treatment too far', and 'no mental health treatment stigma'. The results of the analysis are in Table 6, and the analysis is presented in Figure 8.

Table 6.  
Regression Estimates for Path Analysis Four

	Estimates	S.E.	C.R.	P
Model Estimates				
Caucasian → Unaware	-.107	.040	-2.663	.008
Caucasian → Too Far	.005	.019	.237	.813
Caucasian → Stigma	-.120	.050	-2.394	.017
African American → Unaware	.125	.057	2.195	.028
African American → Too Far	.031	.028	1.133	.257
African American → Stigma	-.156	.071	-2.190	.029
Native American → Unaware	.083	.170	.491	.624
Native American → Too Far	-.031	.082	-.380	.704
Native American → Stigma	.167	.213	.784	.433
Hispanic → Unaware	0	.053	0	1
Hispanic → Too Far	-.009	.026	-.329	.742
Hispanic → Stigma	-.273	.067	-4.076	***
Model Statistics				
Chi-Square	7026.758			
Degrees of Freedom	9			
Probability Level	0			

\*\*\*p<.005      n=375

The results of the analysis show the only significant effect to be that which 'Hispanic' has on 'no mental health treatment stigma' ( $p<.005$ ). In addition to being significant, the effect is also negative. This can be interpreted to mean that of the three impediments to mental health treatment acquisition that Hispanics face, stigma is significantly not one of them.

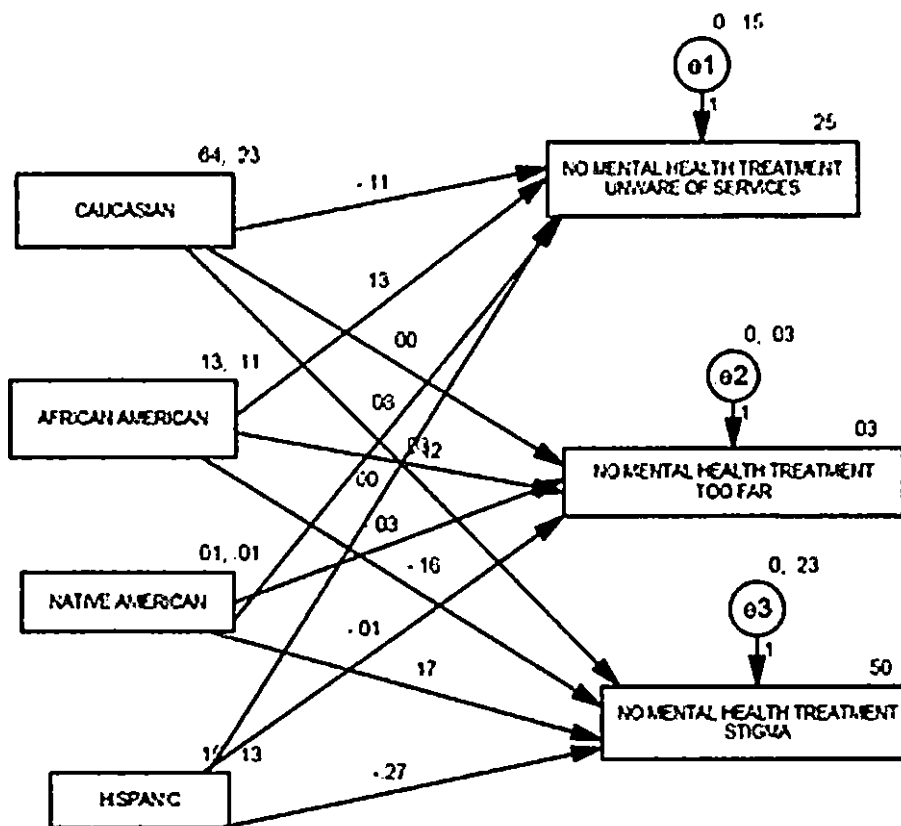


Figure 8.  
Path Analysis of Race and Cause of Lack of Treatment

The path analyses revealed seven different independent variables having significant effects. Due to the nature of the analyses however, these effects could not be compared with each other within the same path model. Table 7. addresses this problem by comparing the total direct effects of these significant variables from the analyses to determine which was greater.

Table 7.

*Total Direct Effects*

Variables	Direct Effect
Prior Arrests on:	
-Received Treatment	0.043
-No Treatment When Needed	0.042
Received Treatment on:	
-Attacked	0.042
No Treatment When Needed on:	
-Attacked	0.062
Gender on:	
-No Treatment When Needed	0.064
African American on:	
-No Treatment When Needed	-.049
Hispanic on:	
-No Treatment When Needed	-.039
Hispanic on:	
-No Treatment Due to Stigma	-.273

## CHAPTER SIX

### DISCUSSION

#### Summary of Results

The data that was used in the path analyses were generated from responses from a nationally representative sample of 393 young people. These analyses are unique, in that they are the first of their kind to study these areas of the mental and criminal justice systems using such data. Even with this in mind however, the results were, for the most part, not what was expected. As the hypotheses predicted, many of the relationships between the key variables were indeed significant, only not in the way that it was anticipated.

#### Crime, Treatment, and Offending

This model had been created and analyzed with the intent of finding out what effect having ever been arrested and booked into the criminal justice system had on the acquisition of mental health treatment. Then, if that treatment had been acquired, what effect did it have on subsequent delinquent acts, acts measured by the number of times a person assaulted someone with the intent to cause harm. The variables that were analyzed in this model were 'ever arrested and booked for breaking the law', 'received any mental health treatment', 'perceived a need for mental treatment but did not receive', and 'assault anyone within the past year with intent to seriously harm them'

Crime and Treatment Acquisition. According to the path analysis, the variable 'ever arrested and booked for breaking the law' had a positive and significant effect on both 'received any mental health treatment' and 'perceived a need for mental health treatment but did not receive'. While at first these two findings may seem at odds with each other, when they are considered more closely in regards to what the literature says, the findings make sense. Teplin and colleagues, (2005), argued that while the criminal justice system is indeed inundated with mental health resources, due to the high population of mentally ill youths it receives, even its wealth of resources are stretched thin. This leaves as many as 13,000 on any given day to go without treatment, even though they may perceive a need for it (Teplin et al., 2005). So the fact the respondents may have indeed been placed at some point in the justice system, was not necessarily a guarantee they would receive treatment, as the research suggested, and the findings demonstrated. Thus, these findings are in line with the literature.

The research can also reconcile the fact for the variable 'ever arrested and booked for breaking the law' also having had a positive and significant effect on whether any mental health treatment was received. Research (Stambaugh, Southerland, Mustillo, & Burns, 2009) shows that many of the juveniles that are referred to the mental health system are eventually transferred to the justice system due to their behavior being beyond the purview of the mental health system. Thus, juveniles that have had involvement with the justice system may have indeed received mental health treatment; only it was received during their



time in the mental health system *before* being sent to the justice system. One of the weaknesses of this study (which will be discussed later) is that there was no variable that allowed for the identification of which system, either the mental health or justice system, was the source of the received mental health treatment.

Treatment and Subsequent Crime. The path analysis also revealed that the variables 'received any mental health treatment' and 'perceived a need for mental health treatment but did not receive' both had a significant and positive effect on the variable 'assault anyone within the past year with intent to seriously hurt them'. These similar effects indicate that people receiving mental health treatment, and not receiving mental health treatment when they need it, have the same effect on their probability of attacking someone with the intent to harm, which is a common manifestation of many untreated mental health disorders (Grisso, 2008). One way in which to explain this similarity is the nature of the data collection.

The original study that generated the data was a cross-sectional study, and thus gathered the data from the respondents at a single point of time in their lives. This may have distorted the manifested effect of mental health treatment on reducing assaults. Respondents may have indeed received mental health treatment, but there is no way of determining when. They could have received treatment several years before, or barely started to receive it the week prior, thus, not giving it enough time to impact their level of assault. Though the past year limit for assaults was meant to reduce this time effect, it did not all together

completely eliminate it. However, this time effect does not come into play when examining the effect that having perceived a need for treatment but not receiving it had on assaults within the past year. This positive and significant effect indicates that lack of mental health treatment when needed does facilitate offending assaultive behavior.

#### Gender, Income, and Treatment

Path model two was meant to analyze the effects that the exogenous variables 'gender' and 'income' had on the endogenous variable 'perceived a need for mental health treatment but did not receive'. Income was found to have a non-significant effect on not receiving mental health treatment after perceiving a need for it. Gender however, had a significant and positive effect. As indicated in Table 1, 'gender' was coded as 1 for male and 2 for female. Given this, the results showed that females were significantly more likely to have perceived a need for mental health treatment, but did not receive it.

This finding however, goes against the research (Yan & Dannerbeck, 2010), which asserts that females are more likely to receive mental health treatment than males. However, that research was based on females in institutionalized settings, such as jails and detention centers. There was no variable in the study that was able to control for this. Using the variable 'ever arrested and booked for breaking the law' in the analysis could have compensated for this weakness. Due to the constraints of the statistical software utilized in the analyses, however, this variable could not be correlated with the

variable 'gender', and still produce accurate estimates on its effects. So, while justice system-involved females may indeed have higher rates of receiving mental health treatment than their male-counterparts as asserted in the research, the results of this study indicate that females not involved with the justice system are significantly more likely to go without mental health treatment than their male-counterparts. However, this could also be explained simply by errors in the data. It is possible that some of these cases were missing data from females when the analyses were performed, and thus could have had an adverse effect on the results regarding females.

#### Race and Mental Health Treatment

The results from this analysis showed which races were more likely to perceive a need for mental health treatment, yet not receive it. Of the four race variables involved in the analysis, only two were found to have significant effects on 'perceived a need for mental health treatment but did not receive'. 'African American' and 'Hispanic' both had negative and significant effects, meaning that they were more likely to receive mental health treatment.

Research (Burriss, Breland-Noble, Webster, & Soto, 2011) indicates that minorities, which African Americans and Hispanics are a part, are not likely to receive mental health treatment. However, as with gender, these findings were based off juveniles in jails or detention centers. The present model did not produce accurate estimations when the variable 'ever been arrested and booked for breaking the law' was correlated with the race variables. Thus, while past

research shows that African Americans and Hispanics involved with the justice system are not likely to receive mental health treatment, the results of this study show those in the general public have a greater chances of receiving treatment.

#### Race and Treatment Barriers

The results of the final path analysis were meant to show which racial groups face the greatest barriers to mental health treatment. The results however indicated that only one significant relationship exists, a negative one between the race variable 'Hispanic' and the barrier variable of 'no mental health treatment stigma'. Thus, of the three barriers to the acquisition of mental health treatment that Hispanics face, this study determined that stigma is not one of them. This means, that the primary reason for Hispanics not receiving mental health treatment was not present in this study. Stigma however, was found to be the least likely reason for Hispanics not receiving mental health treatment.

#### Limitations of the Present Study

Prior to conducting the analyses, it was understood that their primary strength would be that their results would be based of a nationally representative sample of respondents, thus greatly increasing their generalizability. Their limitations going into the study were thought to be ones associated with all forms of secondary analysis. It was only after the analyses were performed however, that several inherent weaknesses, stemming both from the data that was used, and from the statistical software used to perform the analyses, were uncovered.

Thus, while the results are generalizable and applicable at the national level, these weaknesses should be kept in mind when considering them.

### Weaknesses in the Data

The data from *Gender, Mental Illness, and Crime in the United States, 2004 (ICPSR 27521)* carried with it several weaknesses that limited the scope of this study. First, it lacked a variable that allowed for the distinguishing between sources of mental health treatment. It was not possible to determine if the mental health treatment respondents received came from either the criminal justice system, or the mental health system. Similarly, a second weakness is that the data lacked variables identifying the specific diagnosed mental illnesses of the respondents. Consequently, it was not possible to examine how respondents diagnosed with differing mental illnesses, such as depression, bipolar disorder, or ADHD compared with each other in how they interacted with any of the demographic and systemic variables. Also, a key variable that was missing was one accounting for substance abuse.

Fourth, there was a significant disparity between male and female respondents. Females composed approximately 49.5% of the sample, yet accounted for only 28.8% of the respondents for the mental health portion of the survey. There is no accounting for this considerable difference between male and female responses in any of the accompanying dataset documentation. One explanation is that many females refused to answer questions related to mental health, and thus were coded as “-99”, indicating missing data, and eliminated

from the sample. However, another explanation is that data from females were somehow excluded from the main dataset, and thus from the subsequent analyses, which affected the results. Whatever the reason, because of this gender disparity, these results should be viewed with scrutiny.

Additionally, the original study was not able to get juveniles ages 12-17 to respond to the mental health portion of the survey. Thus, the key age demographic of the study was not present. Though this was compensated by the fact that the respondents in this survey were all still teenagers aged either eighteen or nineteen, thus having the same physiological and psychological capacities of most juveniles, it nonetheless prevented this study from analyzing the effects the variables on younger juveniles such as ages 12-15.

Another weakness of the data stems from the fact that the original survey was a cross-sectional study, gathering data from a single point in time in the lives of the respondents. This limited the present study's ability to ascertain a cause and effect when it came to mental health treatment and level of subsequent offending. Though the variables used were able to mitigate this disadvantage to some degree, they were not able to eliminate it entirely. Finally, only the non-institutionalized population of the United States was included in the 2004 NSDUH, the source of this study's data. Many people suffering from mental health illnesses and who were in the process of acquiring treatment would thus not have been included in this sample.

### Weakness in the Analysis

In addition to the weaknesses contained in the data, the analytical software used to analyze the data also contributed a weakness that further limited the scope of this study. The variable of 'ever been and arrested and booked for breaking the law' was unable to be correlated with multiple other variables and still generate accurate estimations. While some of these variable correlations were irrelevant to this study, some were not, and would have greatly enhanced the capacity of this study. Specifically, the variables of 'gender', 'Caucasian', 'African American', 'Native American', and 'Hispanic' were unable to be correlated, though their results would have been very valuable.

This weakness in the analytical software also facilitated another limitation to this study. Due to being unable to correlate multiple variables simultaneously, everything had to be run in small models as opposed to a big one. Thus, this study was unable to determine the relative importance of the associations found.

### Implications

Even with these limitations in mind, the findings of this study still are incredibly important for the formation of a new mental health policy. Unlike past studies cited in the research that could only make assumptions on trends at the national level based on results from small and regional samples, the results of *this* study were generated from a nationally representative sample, and thus *can* be applied at the national level. This allows policy makers to create an improved

situation for those with involvement with both the justice and mental health systems throughout the country.

### Theoretical Implications

The main point that was stressed throughout the literature is that for juvenile offenders with mental illness, mental health treatment diversion is far more effective than simple incarceration in detention centers. This study was able to measure the effect that not receiving mental health treatment when needed had on the level of assaults committed with intent to harm, which is one of the main reasons mentally ill juveniles come into contact with the justice system. The analysis showed a significant and positive effect, which was in clear support of the research. This strengthens the notion that without treatment, mental illnesses can progressively worsen to the point that they manifest as violent and harmful. Thus, the theoretical approach that mental health treatment diversion is far more beneficial to both juvenile offenders and the public is validated, since without treatment, mentally ill juveniles are likely to have their symptoms continue to deteriorate to the point that they attack others with the intent to harm.

### Policy Implications

With the theoretical position of mental health diversion being the better option over just simple incarceration validated, policy changes can be instituted to better accommodate this position. Additionally, changes can be made to ensure mentally ill juveniles not involved in the justice system still have the



access they need to mental health treatment in order to keep their symptoms from deteriorating to the point that they begin violent and criminal behavior.

Females and Mental Health Treatment. As was made evident, both from their lack of participation in the mental health survey, and from those that did participate reporting a lack of mental health treatment, females in general are at higher risk of not receiving mental health treatment on their own initiative. The fact that they chose not to even respond to the mental health portion of the survey, despite its confidential nature, is indicative of a fear of being associated in anyway with mental health issues. Thus, if females are unwilling to even answer a simple survey about mental health items, it is unlikely they would be willing to seek out mental health treatment, even if they themselves perceive a need for it. Education then becomes paramount in motivating these individuals in seeking out this treatment. Informing females about the benefits that they can reap from mental health treatment, and how to go about acquiring it could significantly increase the amount of females seeking out and engaging in mental health treatment.

African Americans and Hispanics. Minorities in the general public were found, at the national level, to not report any lack of needed treatment. It is imperative then that this trend continues, for minorities in the justice system *do* report a lack of treatment. Thus, by engaging in mental health treatment, minorities are going a long way at keeping their mental illness symptoms under control and from manifesting as violent and criminal. This in turn keeps them out

of the justice system, a location where they are likely to go without the treatment they need.

This study determined that at the national level, absence of mental health treatment when needed had a significant and positive effect on the number of attacks respondents committed with intent harm, a main symptom of many mental health disorders (Bonham, 2006). Going without mental health treatment when needed, thus is potentially a strong facilitator of delinquent and criminal behavior in juveniles and young adults. It then should be one of the highest priorities of the government to ensure that this population receives timely and effective mental health treatment. By pursuing a policy of mental health treatment diversion, the bulk of mental health resources would be transferred to where they would do the most good, the mental health system. This would allow mentally ill juvenile offenders to acquire the treatment they need, without becoming entangled in the system.

Additionally, by concentrating the bulk of mental health resources in the mental health system, it would increase the availability of resources to mentally ill juveniles in the general population. Thus, they could acquire the help they need in order to keep their symptoms under control, without having to become involved in the justice system. This would potentially significantly reduce a large portion of the juvenile population in the justice system, since as Watson, Kelly, and Vidalon (2009) found, many mentally ill juveniles become involved with the justice system

merely so they acquire the mental health resources they need, resources unavailable in the community.

## CHAPTER SEVEN

### CONCLUSION

#### Summary

Mental health treatment diversion of mentally ill juvenile offenders has long been championed as both more of a cost-effective alternative to incarceration, as well as a significant reducer of recidivism of violent offending in this population. An obstacle to this alternative however is the due to limited resources, and an incredibly diverse population, both the justice and mental health systems have adopted a revolving door policy where mentally ill juveniles are shuffled from system to system without receiving any quality treatment, if any treatment is received at all. In addition to systemic factors, various demographic factors have also been identified as serving as barriers to the acquisition of mental health treatment. This study was designed to ascertain just how these systemic and demographic factors interacted in the acquisition of mental health treatment, and, once that treatment was received, how well did it reduce violent criminal behavior.

After performing a path analysis on secondary data, it was determined that absence of mental health treatment when needed is significantly and positively correlated with an increase in attacks with the intent to harm. Though having received mental health treatment was found to also be positively and significantly

correlated with an increase in the attacks with the intent to harm, due to the nature of the data, this finding may not be of significance. The analysis also showed gender having a significant and negative effect on not receiving mental health treatment. Females it was found, were more likely to not receive mental health treatment when needed, a finding that may or may not go against the established research which asserts that system-involved females are more likely to receive treatment than males. Unfortunately, restrictions in the analytical software prevented a more thorough investigation from examining if this finding extended to justice-involved females, or was just based off of females in the general public.

The implications of these findings imply that the absence of mental health treatment significantly increased violent and criminal behavior in those juveniles requiring it. Thus, it is imperative that the government allocate the required resources to ensure that mentally ill juveniles are given the chance to receive the mental health treatment they need to prevent their symptoms from deteriorating to the point they begin manifesting aggressive and violent behavior, and thus come into contact with the justice system. Additionally, it was found that females are not as likely to receive mental health treatment on their own initiative, as the research would indicate. The government should thus allocate resources to spread awareness of and knowledge about mental health services to ensure all people, especially women, know the benefits that treatment can provide, and where it can be acquired. Finally, the study determined that minorities are not as

likely as the research suggests to go without treatment when needed. The system should do all in its power to ensure this trend becomes the norm. By actively pursuing a mental health treatment diversion policy at the national level, the country can go a long way in helping all mentally ill juvenile offenders acquire the mental health services they need to effect a positive change in their lives.

For all its strengths of utilizing data from a nationally representative sample, this study has some limitations. Due to the nature of the data, the findings are generalizable at the national level, but when it comes to females, caution should be used. There was a significant difference between the number of male and female respondents for the mental health portion of the survey. Thus, the findings regarding females should be viewed with this response disparity in mind. Second, the data was from a technical viewpoint, not from juveniles. Respondents were all aged 18-19 because information on ages 12-17 could not be analyzed due to the dataset restrictions. Though physiologically and psychologically similar to older juveniles, their experiences cannot be compared to younger aged adolescents. Third, the dataset that was used lacked a variable that would have allowed distinguishing between either the justice or mental health system as the source of the treatment received. Finally, restrictions in the analytical software limited the scope of the study.

## Recommendations for Future Research

Due to the nature of the dataset, and subsequent analysis, many of the findings of this study cannot be compared with past research. This is the first study to conduct a path analysis with these variables on data from a nationally representative sample. One of the main benefits of this study was that it was able to ascertain that at a national level, lack of mental health treatment when needed has a significant and positive effect on violent criminal behavior. The gender of the adolescent also was found to be an important gateway to treatment, with females reporting lower rates of treatment acquisition.

Future research hoping to pick up where this study left off should try to collect data from a nationally representative sample of young juveniles between the ages 12-16 if possible. Relying on secondary data is both problematic and restrictive. When expanding on this type of research, primary data is ideal. Though the barriers to this collection are manifold, the research benefits of such collection are equally numerous. A survey, designed with the main purpose of ascertaining the source and impact of the mental health treatment received, should also be utilized. Finally, statistical software should be researched, and one that gives its analyses as much freedom and depth as possible, chosen to carry out the analyses.

This study on the demographic and systemic factors that affect the acquisition of mental health treatment, and the effects of that treatment on subsequent offending, yielded several key findings. Future researchers should

use these findings as foundations on which to expand the research on the acquisition of juvenile mental health treatment and its subsequent effects. The findings of this study suggest that the absence of mental health treatment facilitates violent criminal behavior, and thus stresses the need to ensure all mentally ill juvenile offenders, of all races and both genders, receive the chance to turn their lives around with such treatment, as Pablo did.



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