ABSTRACT

Title of Thesis:	THE IMPORTANCE OF MENTAL HEALTH TREATMENT: MENTAL ILLNESS AND JUSTICE SYSTEM INVOLVEMENT AMONG JUSTICE-INVOLVED YOUTH
	Tara Kelly, Bachelor of Arts, 2025
Thesis Directed By:	Associate Professor Wade Jacobsen, Department of Criminology and Criminal Justice

Limited research has been done on how mental health treatment impacts the association between adolescent mental illness and adult justice system involvement, particularly among adolescents who have already entered the juvenile justice system. We know that mental health treatment is important, but more research needs to be done to emphasize its effectiveness when provided to certain populations. The current study explores the effect that mental health treatment can have on an adolescent's likelihood of adult justice system involvement. It is unfortunately the case that many juvenile facilities across the country do not have the proper support, staff, or funding to provide these youth with the resources they need. This research aims to showcase how important it is to prioritize mental health treatment in order to reduce recidivism. This study used data from the Pathways to Desistance dataset, a longitudinal study of justice-involved youth. It used variables on adolescent mental illness, adult justice system involvement, and mental health treatment. Results were obtained by using Stata software to run linear regression models. Results showed that adolescents who reported having mental illness did

not have significantly different expected probabilities of adult arrest compared to those who did not report mental illness. The analysis also showed that among adolescents who reported having mental illness, receiving mental health treatment was associated with a negative but insignificant change in predicted values of adult justice system involvement. While the results from this study were not statistically significant, they still offer important implications for future research.

THE IMPORTANCE OF MENTAL HEALTH TREATMENT: MENTAL ILLNESS AND
JUSTICE SYSTEM INVOLVEMENT AMONG JUSTICE-INVOLVED YOUTH

by

Tara Kelly

Thesis submitted to the Department of Criminology and Criminal Justice at the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Bachelor of Arts
2025

Acknowledgements

First and foremost, I want to thank Dr. Wade Jacobsen and Sylvia for their support and guidance throughout the length of this program. You both never failed to go out of your way to help us and answer our many questions. I couldn't have done this without your understanding and assistance, thank you! I also want to thank my mom and dad, Deirdre, Maura, Uv, and my friends for their unwavering support. You all have been there for me through everything and have shaped me into the person I am today. Whether I needed someone to listen to my rambling on this topic or needed a laugh, you were all there for me. Finally, I want to thank the other members of the 2025 Honors Cohort. The encouraging and supportive environment we created made this program so much easier and I am thankful for you all. This program has been simultaneously one of the most challenging and most rewarding experiences of my undergraduate career, and I will forever be grateful for the skills and relationships I gained along the way.

Table of Contents

List of Tables

List of Figures

Introduction

There has been a long-established relationship between mental illness and adolescent involvement in the criminal justice system. Research shows that over half of all incarcerated adolescents have at least one mental disorder (Atkins et al., 1999). This is a stark comparison to the prevalence of adolescent mental illness in the general population, which is about 20% (Schwarz, 2009). The juvenile justice system was initially created in hopes of rehabilitating adolescents and separating them from adult offenders. However, throughout time, and especially due to the heightened attention on adolescent offenders in the 1980s, the system has become a punitive environment that criminalizes adolescents (Underwood & Washington, 2016). Today, the juvenile justice system is still failing to provide all adolescents with the proper treatment and services they need. With the reduction of mental health services over the past few decades, many juvenile offenders enter the justice system even when they have severe mental disorders (Grisso, 2008). This is often because there is no other disposition option after the shutdown of so many mental health facilities. It is unfortunately the case that many juvenile facilities across the country do not have the proper support, staff, or funding to provide these youth with the resources they need (Corbit, 2005). This leads to a cycle of mental illness and adolescent offending that is difficult to escape (Mallett, 2014). When dealing with this relationship between justice-involved adolescent mental illness and offending, it is vital to understand the role treatment can play. If treatment is found to reduce a justice-involved adolescent's chance of reoffending, it needs to become more available to the youth who need it. Expanding mental health resources for adolescent offenders across the country could have significant impacts (Erickson, 2012). The current study aims to add on to research like Ericksons, addressing the

question of how mental illness and its treatment can affect the trajectory of a justice-involved youth's life. It plans to emphasize the importance of mental health treatment when it is provided to the individuals who need it within the justice system.

This study will address the topic of mental illness among justice-involved adolescents by examining the relationship between mental illness and adult justice system involvement. It will examine whether adolescent mental illness can predict adult justice system involvement among justice-involved youth. Further, it will explore the effects that mental health treatment has on a justice-involved adolescent's likelihood of future justice system involvement. Treatment plays an important role in how an adolescent develops and could possibly be an important factor in whether justice-involved youth with mental illness experience further contact with the justice system. For example, past research has shown that justice-involved adolescents who enter a mental health diversion program have lower chances of recidivism than those who do not (Evans Cuellar et al., 2006). The current study aims to build upon this research and examine if treatment affects the likelihood of continued justice system involvement among justice-involved youth. This body of research is important because it is necessary to identify and understand the factors that lead to further crime among justice-involved adolescents. By establishing what may drive some justice-involved adolescents to recidivate and some to desist from crime, we can figure out what resources actually work and suggest that they be provided to those who need them. There is a strong potential to mitigate the effect of mental illness as a risk factor for future crime by providing justice-involved mentally ill adolescents with treatment. This information can also inform policy and practice by showing how future offending behavior changes based on whether a justice-involved youth received mental health treatment. This could therefore exhibit how impactful mental health treatment can be for justice-involved youth.

This study will explore the relationship between adolescent mental illness among justice-involved youth and adult justice system involvement by asking the following research questions. Among justice-involved youth, is mental illness associated with adult justice system involvement? How does receiving mental health treatment impact this relationship? These questions will be answered through an analysis of data from a longitudinal study of justice-involved youth. This research is important because it will allow us to further understand the role of mental health on the risk of subsequent justice involvement as youth develop from adolescents to young adults. Limited research has been done on the extent to which mental health treatment impacts this association, especially among adolescents who have already entered the juvenile justice system. This is an especially important population to study because mental health treatment has the potential to help them desist from crime. This would have positive impacts not only for the adolescents themselves, but the general public as a whole. Lowering crime is a common goal for US policymakers, and research like this aims to exhibit just one way we can do this while simultaneously helping the justice-involved youth in our country. This study will add to the literature and reinforce the importance of mental health treatment within the juvenile justice system.

Background

Mental Illness and Justice System Involvement

A Strain Theory Perspective

There are several reasons why justice-involved youth with mental illness may be at a greater risk of further delinquency, one such reason being explained by general strain theory. General strain theory explains crime by positing that negative life circumstances and emotions lead to delinquency (Agnew, 1992). It says that when an individual is prevented from achieving positive goals, positive stimuli are removed from their life, or negative stimuli are introduced to them, negative emotions occur, and the individual has a greater chance of engaging in delinquency. This is because the individual uses delinquency as a coping mechanism for their negative emotions, using crime as an attempt to alleviate strain (Agnew, 1992). Most types of mental illness cause negative emotions to occur, which Agnew says can in turn predict higher levels of strain. Research has shown that emotions like anxiety and aggression, which are often symptoms of mental illness, can actually cause strain in the way that general strain theory predicts (Aseltine et al., 2000). This implies that it causes the type of negative emotions that the theory posits. When individuals are introduced to strain, Agnew, a strain theory criminologist, said that it increases the likelihood of negative emotions and therefore increases the risk of engaging in delinquency (Agnew, 1992). He posits that when individuals are not able to reach their goals because of the strain in their lives, delinquent acts may take place. When it comes to mental illness, both stigma and the symptoms of mental disorders can sometimes affect an individual's ability to fully reach their goals (Rüsch et al., 2020). This type of strain can lead to delinquent behavior, especially among adolescents who are committing violent acts (Aseltine et

al., 2000). This theory informs the current study's hypothesis that adolescent mental illness among justice-involved youth can predict adult justice system involvement. Strain theory illuminates how the negative emotions associated with mental illness can lead to further delinquency (Aseltine et al., 2000). The framework of strain theory suggests that if adolescents are treated for their mental illnesses, the chances that their negative emotions lead to delinquency may decrease (Agnew 2006). This information helps us to understand why so many adolescents in the juvenile justice system experience mental illness.

A Criminalization Perspective

Another possible explanation for the overrepresentation of adolescents with mental illness in the justice system is the criminalization hypothesis. This theory says that individuals often do not receive the mental health treatment they need, which drives them toward the criminal justice system (Peterson et al., 2010). This is by way of criminalization, which leads symptoms of mental illness to become criminal offenses in and of themselves (Junginger et al., 2006). This posits that symptoms like talking to oneself and being reactive could in fact be the reason some mentally ill individuals are picked up by the police. For adolescents, these symptoms of mental illness could lead to their actions being criminalized and associated with violence and danger, therefore increasing their likelihood of justice system involvement (Hirschfield et al., 2006). Support for this theory is mixed, with some research finding that only a small population of arrests can be explained by this hypothesis (Peterson et al., 2010). In addition, not all research has found significant support for the theory (Engel & Silver, 2001). The current study aims to test this theory by defining justice system involvement as whether an individual was picked up by the police. This allows us to capture not just people who committed a crime and were arrested/incarcerated, but also people who may have been picked up by the

5

police due to criminalization or biased suspicions. This broad definition gives the study a wider scope and will allow us to capture all types of justice system involvement. The current study aims to build on this prior research and ascertain if mental illness among justice-involved youth can predict later justice system involvement.

Mental Health Treatment and Justice System Involvement

A Strain Theory Perspective

Mental health treatment may function as a moderator in the relationship between adolescent mental illness and adult justice system involvement. Prior research has found that when adolescents go through mental health diversion programs (a form of mental health treatment), they have a lower probability of being re-arrested later (Evans Cuellar et al., 2006). This informs the current hypothesis that receiving mental health treatment will reduce the likelihood of adult justice system involvement among justice-involved youth suffering from mental illness. Strain theory can be used to explain why we may see this relationship. Strain theory says that factors such as effective problem-solving and social skills can increase the likelihood that an individual will cope with strain and hardships in a legal manner (Agnew 2006). It says that individuals who do not have these skills may be more likely to cope with strain through criminal behavior. Mental health treatment can serve as an alternative, legitimate coping mechanism by teaching adolescents positive coping skills that will help them respond to strain in a positive manner. Certain treatments that teach positive coping skills have been found to mitigate the effects of strain at times (Sealock & Manasse, 2012). Other research has found that courses that teach coping skills among incarcerated adolescents reduce levels of mental illness (Rohde et al., 2004). This implies that by teaching incarcerated youth proper coping skills

through mental health treatment, they can learn to deal with strain in a legal manner, therefore reducing further justice system involvement. This prior research supports the current hypothesis that mental health treatment will reduce justice system involvement, possibly through the reduction of strain in an individual's life.

Strain theory can also explain how mental health treatment may reduce justice system involvement through its explanation of the effects of negative emotions. Its framework implies that not only can treatment help individuals cope with negative emotions, but it can prevent negative emotions from occurring in the first place. Strain theory says that negative emotions lead to delinquency. Such negative emotions are often associated with mental illness and can manifest into aggressive or impulsive behavior (Girasek et al., 2022). Mental health treatment can help to reduce these negative emotions and therefore reduce the aggressive behavior that can lead to justice system involvement. Different types of mental health treatments have the potential to stop negative emotions from occurring before the individual gets to the point of needing a coping mechanism. Cognitive behavioral therapy, contingency management, and medication have all been found to help with impulsive aggression in adolescents (Moeller et al., 2001). Based on this research, it follows that if more justice-involved adolescents received these types of treatments, it could be possible to reduce their likelihood of involvement with the justice system. Research has also found that mental health treatments that teach individuals emotion regulation skills can help to prevent negative emotions that stem from mental illness from becoming too intense (Berking et al., 2012). This shows that by providing mentally ill adolescents with mental health treatment, we could reduce the chance that their negative emotions would become intense enough to cause delinquent behavior. This prior research and the

7

framework of strain theory both inform the current hypothesis that mental health treatment will reduce the justice system involvement of mentally ill adolescents.

A Criminalization Perspective

Analyzing this hypothesized relationship through a criminalization perspective is also helpful in framing my hypotheses. As stated, the criminalization hypothesis posits that individuals with mental illness may be more likely to become justice-involved because they may engage in actions that are criminalized by society (Junginger et al., 2006). Mental health treatment could be one possible solution to this. Research shows that taking a criminalization approach to mental health treatment is necessary in reducing the likelihood of arrest among those with mental illness (Fisher & Wolff, 2006). This implies that the implementation of tailored and individualized mental health services can reduce the types of criminalized behaviors these individuals may engage in. Based on this theory, with proper treatment individuals can find relief from their symptoms and reduce the chance that criminalization will lead them to the justice system.

Current Study

This study hypothesizes that adolescent mental illness among justice-involved youth will be associated with greater adult justice system involvement. Further, it hypothesizes that mental health treatment will weaken this association. This study will build on prior research in many ways. There has been extensive research on the prevalence of mental illness in the juvenile justice system, but much less on whether mental illness can predict adult justice system involvement. There must be more studies on how mental illness and its treatment can change the trajectory of adolescent experience in the justice system. An increase in studies like this can enforce that resources and proper treatment be provided to adolescents in the justice system in hopes to prevent further crime. We can therefore work to reduce both delinquency and rates of mental illness within our juvenile justice system. There is also prior literature that is contradictory, some finding that mental illness can predict criminality (Copeland et al., 2007), and some finding that it cannot (Colins et al., 2011). Criminality in this case is used to refer to committing a criminal offense. The current study will work to reconcile these findings and provide another test of this relationship. It will add to the limited information we have on this relationship and provide another view on whether mental illness can predict adult justice system involvement. Further, by studying the effect of mental health treatment on justice system involvement, this study hopes to emphasize the importance of proper treatment. As stated earlier, many adolescents in the justice system do not receive the resources and mental health treatment that they need (Corbit, 2005). This study hopes to illuminate how important treatment is when an adolescent with mental illness enters the justice system. With the information from this study, I hope to make suggestions about the importance of providing mentally ill juvenile offenders with the treatment they deserve.

Data and Methods

Data

To test my hypotheses, I used data from the Pathways to Desistance dataset (Mulvey, 2016). This was a longitudinal study that followed juvenile offenders from 2000 to 2010. There were 1,354 adolescents in their sample, with 654 of them from Phoenix, Arizona, and 700 of them from Philadelphia, Pennsylvania. When the study began, the adolescents were between the ages of 14 and 19 and had been found guilty of either a felony, misdemeanor property offense, sexual assault, or weapons offense (Mulvey, 2016). The data were collected through interviews and were self-report data. The interviews were in person and involved a study administrator reading the questions aloud and the participants entering their responses on a computer to ensure privacy. The answers were validated through interviews with individuals close to the adolescent and official court and arrest records. After the baseline interview, the individuals were followed up with every 6 months for the next three years, then on an annual basis every year thereafter. This resulted in a longitudinal dataset with eleven waves over seven years.

Analytic Sample

The analytic sample of this study consists of data from 1,354 participants (N) over 11 waves (t). This leaves us with a total of 14,036 responses (Nt) after removing invalid data on the outcome and control variables. 4,372 of these observations were from when the participants were adolescents. Individuals were excluded from the sample if their data on the outcome variable question was missing, they missed the interview, they answered that they did not know, or they refused to answer. The unit of analysis in this study is person-year, which gives us a total of 14,036 valid responses over 11 waves.

Measures

Outcome Variable

The dependent variable of this study is adult justice system involvement, which measures whether the participant had been picked up by the police since the last interview period. Data on this variable will be utilized at all waves in which the participant is an adult. Justice system involvement was measured with responses from a survey item asking participants whether "Police picked you up and accused you of something in the recall period" (Mulvey, 2016). It is a binary variable with possible responses being either "yes" or "no" (1 = yes, 0 = no). A binary marker variable was then created that marked whether the individual had ever been picked up by the police at any time past the age of 17. This was used to measure if the individual had ever been justice-involved specifically as an adult. If the participant answered yes to the justice system involvement question at any time as an adult, they were marked as 1. If they never answered yes as an adult, they were marked as 0. This specific measure of justice system involvement is used for this study because it captures a wider scope of justice system involvement. It measures not only whether the participant has been arrested or incarcerated, but also if they have had any experience being picked up by the police and accused of a crime. This broad definition will allow us to measure if mental illness is associated with not only incarceration, but any type of justice system involvement, something other research has not fully measured.

Explanatory Variables

Adolescent Mental Illness

The independent variable in this study is adolescent mental illness, which was measured at all waves in which the participants were under eighteen. This is because the study is specifically interested in adolescent mental illness. Mental illness was measured through a constructed variable that combined two existing variables, BSI clinical significance and CIDI results. The BSI variable was a binary variable that measures if participants reached clinical significance on two or more BSI subscales. The Brief Symptom Inventory (BSI) is a scale with nine subscales that tests the presence of psychiatric symptoms (see Appendix). This variable is a marker variable that tracks which individuals reached clinical significance on the BSI subscales. Participants who were clinically significant on two or more subscales were coded as 1 for "yes," and participants who were not clinically significant on two or more subscales were coded as 0 for "no." Two or more subscales are used as a threshold because this is how the Pathways to Desistance study measured clinical mental health status (Mulvey, 2016). If the individual reached clinical significance on two or more subscales, they could reliably be assumed to have a mental illness. The BSI has been found to be a reliable measure of psychopathology in prior research (Wieland et al., 2012).

The second variable used for the mental illness variable was one that measured the participants' results on the CIDI. The CIDI stands for Composite International Diagnostic Interview, a structured interview that is used to assess several different mental disorders (Mulvey, 2016). In the Pathways to Desistance data, they used the CIDI to test for eight disorders. For the purposes of this study, the results on the modules regarding major depressive disorder, dysthymia, manic episodes, and posttraumatic stress disorder were used. Results from

these individual tests were combined to make an overall binary CIDI variable, where participants were marked as a 1 if they had ever reported any of these mental illnesses as an adolescent, and 0 if they had never reported any of these mental illnesses as an adolescent. The CIDI is a reliable and commonly used instrument to assess the presence of mental health disorders (Wittchen, 1994).

As previously stated, the variable that was used to measure adolescent mental illness in this study was constructed from the combined results of these BSI and CIDI questions. This was made into a binary variable with possible responses being either "yes" or "no" (1 = yes, 0 = no). Participants were marked as a 1 if they were a 1 on either the BSI variable, the CIDI variable, or both at any wave in which they were under 18. This signified that yes, this participant reported suffering from a mental illness at some point during the study when they were an adolescent. The participants were marked as a 0 if they were a 0 on both the BSI and CIDI variables at every wave in which they were under 18, signifying that they had never reported a mental illness as an adolescent during the study. Using a combination of BSI and CIDI results to measure mental illness is intended to capture a wider scope of adolescents who reported a mental disorder.

Mental Health Treatment

Another explanatory variable in this study will be mental health treatment. This study hypothesizes that mental health treatment will act as a moderator in the positive relationship between adolescent mental illness and adult justice system involvement. Mental health treatment will only be measured at the baseline wave which will measure the impact of mental health treatment when the participants are all adolescents. The study also did not track mental health treatment at any other wave, so only data from wave 1 for this variable is available. The mental health treatment variable was constructed by combining the results from two separate variables.

The first variable was measured with responses to a survey item asking participants "Ever go to psychologist/counselor/social worker" (Mulvey, 2016). It is a binary variable with possible responses being either "yes" or "no" (1 = yes, 0 = no). This variable is a reliable measure of mental health treatment because it records if the participants have received various forms of mental health treatment in a variety of settings.

The second variable was measured with responses to a survey item asking participants "Ever on prescription medication" (Mulvey, 2016). This measured if adolescents had ever been prescribed a medication specifically for an emotional or behavioral issue. It is a binary variable with possible responses being either "yes" or "no" (1 = yes, 0 = no). This is another important variable to test for because it includes another common source of mental health treatment. The overall mental health treatment variable was then constructed to be a binary variable, marked as 1 if the participant had answered yes to either or both questions, and 0 if the participant had answered no to both questions. By combining the two individual variables into a singular mental health treatment variable, this study can test the impact of multiple sources of mental health treatment and capture the sample more accurately.

Control Variables

There were several control variables for this study. They include socioeconomic status, juvenile offending prior to the baseline survey, alcohol dependency, drug dependency, race, and gender. These variables were controlled for because they are also strong predictors of justice system involvement and have been commonly used as controls in similar research (Copeland et al., 2007). Adolescent socioeconomic status has been found to be associated with delinquency, especially in urban settings (Connolly et al., 2017). This is important to control for in the current study because the participants are from Phoenix and Philadelphia, two large urban areas.

Socioeconomic status is measured through a variable that reported the average of the biological mother and father's education level. Since the participants were all juveniles when this variable was measured at wave 1, parent education status tends to be the best measure of the adolescents' socioeconomic status (Mulvey, 2016). The parents' education level was measured on a scale from 1 to 6, where 1 marks having received some graduate or professional education, and 6 marks having attended grade school or less. Juvenile offending prior to the baseline survey will also be controlled for because offense history is a very strong predictor of future offending (Cottle et al., 2001). To measure juvenile offending, I will use a total offending variety proportion, which shows the percentage of lifetime offenses that the adolescent has committed since the last wave. Participants responded with their involvement in 22 different criminal acts over the past year. Then a proportion was created by dividing the number of acts committed in the past year by the total number of criminal acts committed in the juvenile's lifetime. Variety scores such as this have been found to be valid measures of offending (Testa et al., 2022). Drug and alcohol dependency will also be controlled for in this study because substance use has been found to be a predictor of later criminal offending among juveniles (Mulvey et al., 2010). Drug dependency was measured through a marker variable that marked if individuals met the CIDI diagnostic criteria for drug dependence in the past year (1 = yes, 0 = no). Alcohol dependency was measured similarly, also through a marker variable that marked if individuals met CIDI diagnostic criteria for an alcohol dependency (1 = yes, 0 = no). According to prior research, the use of CIDI diagnostic criteria is a reliable measure of drug and alcohol dependence (Wittchen, 1994). While drug and alcohol dependency are measured through the same measurement tool as mental illness in this study, I am using separate subscales to test all the disorders and therefore there is no overlap. Gender will also be controlled for in this study because males consistently

commit a higher proportion of crime compared to females (Bennett et al., 2005). Gender was coded as 1 for male and 0 for female. Finally, race was controlled for in this study. This variable was constructed by taking the original categorical race variable and making four separate dummy variables for each race classification. The new dummy variables were White, Black, Hispanic, and Other. These variables were coded as 1 if the participant listed that as their race, and 0 if they answered that was not their race. By making four separate dummy variables, this study can perform statistics with each individual race while having a reference category. Overall, the controls in this study can reduce the likelihood that extraneous variables will impact the measurement of the outcome variable, adult justice system involvement.

Methods

The current study's hypotheses were tested by running a set of linear regression models using Stata software. The predictor variable is adolescent mental illness and as previously stated, the outcome variable is adult justice system involvement. Regression analyses allowed me to test if adolescent mental illness is associated with future justice system involvement. All waves from the dataset were used to collect information on the variables of interest and the entire analytic sample was utilized. The data from the Pathways to Desistance dataset were downloaded into Stata and all waves of the dataset were combined for each variable. This allowed me to see the results across waves for each variable, showing how they change over time. Descriptive statistics were first run to learn about the sample, including the means and standard deviations of each variable of interest (see Table 1). Then the linear regressions were run to produce the results. I chose to run linear probability models because my outcome variable is binary. First, a simple bivariate regression was used to analyze the relationship between adolescent mental illness among justice-involved youth and their subsequent justice system involvement. Next a

16

multivariate regression was run with the same explanatory and outcome variables, adding in several control variables. Finally, an interaction term was included in the regression model to see if the results differ by the presence or absence of mental health treatment. This tests if mental health treatment, the predicted moderator, has an effect on the relationship between adolescent mental illness and adult justice system involvement. Using these methods I expect to find that adolescent mental illness among justice-involved youth predicts adult justice system involvement and that the presence of mental health treatment weakens that relationship.

Results

Descriptive Statistics

Descriptive statistics were first calculated to get an idea of the demographics and characteristics of the participants. All statistics are reported in Table 1. Regarding the key variables, among the sample 24% of participants had reported suffering from one or more mental illnesses at any point in their adolescence during the study. Further, 68% of the sample had reported involvement in the justice system at any wave in which they were an adult. At wave 1, 39% of the participants had reported ever receiving mental health treatment by either a psychologist, counselor, or social worker, or by taking medication for emotional or behavioral issues. As for demographic information, at the first wave when participants began the study, the average age was 16 years old. The average age across the whole study was 19 years old. Around 86% of the participants were male while roughly 14% were female. Among the sample, 41.43% of the participants were Black, 33.53% were Hispanic, 20.23% were White, and 4.80% were another race/ethnicity. At wave 1, the average parent education status was 4.30, which marks that the average parent education level was having received a high school diploma, a measure of socioeconomic status. Further, at wave 1 the average total offending variety score was 0.15. This means that an average of 15% of the offenses the adolescent had committed in their life occurred in the past 6 months. Around 7% of the sample had an alcohol dependency at wave 1, and around 13% had a drug dependency.

Three of the specific variables of interest in the current study are adolescent mental illness, adult justice system involvement, and mental health treatment. Because this is a longitudinal dataset, these variables can be measured as the participants aged. See Figure 1 for a

18

depiction of how the cumulative proportion of arrest changes as the participants age, based on their mental health treatment status. Results show that as the participants age, the proportion of arrest tends to stay relatively the same whether the individual received mental health treatment at wave 1. Preliminarily, this does not support the current study's hypothesis that mental health treatment is associated with less justice system involvement. However, further regression analysis allowed me to examine this relationship in more depth.

Association Between Adolescent Mental Illness and Adult Justice System Involvement

In the regression stage of this analysis, adolescent mental illness and its association with adult justice system involvement was first tested (see Table 2). Table 2 shows the results of linear probability models of the association between adolescent mental illness and adult criminal justice system involvement. Model 1 shows the probabilities from the bivariate regression without controls and model 2 shows the probabilities from the multivariate regression with controls included. As seen in model 1, when the controls were not included in the regression, adolescents who reported having a mental illness had an expected probability of adult justice system involvement that was .031 lower than the probability for those who did not report mental illness. This was not statistically significant.

However, in model 1, results greatly varied based on how missing cases on the outcome variable, adult justice system involvement, were treated. To see the variance of results, I ran two sets of sensitivity analyses to account for missing cases. In one I assumed all missing cases to be a "yes" on the outcome variable, and in the other I assumed the missing cases to be a "no." This allowed me to gather upper and lower bounds of the estimated probability of adult justice system involvement. When missing cases were assumed to be missing at random or assumed to all be a "no" on the outcome variable, no significant results were found. However, when missing cases

were all assumed to be a "yes" on the outcome variable, significant results were found at the .05 level. Here, individuals with mental illness had an expected probability of adult justice system involvement that was .054 lower than the probability of those who did not report mental illness. This has interesting implications for how much results vary based on how the missing cases in the data are treated, which will be discussed in length shortly.

Next, the likelihood of justice system involvement based on mental illness was analyzed with the controls included to test the robustness of the association (see Table 2). This was done by running a simple regression again with all of the controls. This set of results is depicted in model 2 of table 2. In this analysis, adolescents with mental illness had an expected probability of adult justice system involvement that was .018 lower than the probability for those without reported mental illness. This, however, was not statistically significant as well.

The Impact of Mental Health Treatment on the Association Between Adolescent Mental Illness
and Adult Justice System Involvement

The next step in this analysis was to examine how the presence of mental health treatment in adolescence impacts the association between mental illness and adult justice system involvement. This was accomplished by adding an interaction term to the regression model, thereby testing the moderation effect of mental health treatment. The interaction term multiplied the mental illness values by the mental health treatment values and allowed me to test the product as an additional variable in the analysis. Results are depicted in Table 3. Additionally, see Figure 2 for a visual depiction. Results from this analysis first showed that there was no statistically significant association between receiving adolescent mental health treatment and adult justice system involvement. Participants who reported receiving mental health treatment had an expected probability of adult justice system involvement that was .024 units greater than

20

those who did not report mental health treatment. However, this result was not statistically significant. This was found when adolescent mental illness was controlled for. The interaction term also showed that while adolescents who reported both having mental illness and receiving mental health treatment were less likely to be justice-involved as an adult than those who did not receive mental health treatment, no statistical significance was found. Individuals who reported both mental illness and mental health treatment had an expected probability of adult justice system involvement that was .081 lower that those who did not. However, since these results were not statistically significant, this result implies that while mental health treatment slightly impacts the association between mental illness and adult justice system involvement, the current study cannot find support for its specific role.

Discussion

With the disproportionate levels of mental illness among justice-involved youth, research is necessary for us to understand how we can help this population. Studies show that mental illness among incarcerated adolescents leads to a cycle of recidivism and further mental health issues (Mallett, 2014). It is imperative that as a society we take steps to end this cycle and help the adolescents in our justice system. One such way to do this is by providing adequate mental health treatment, something that has the potential to lead to desistance from crime (Evans Cuellar et al., 2006). The current study works to expand on prior research and advocate for mental health treatment among mentally ill justice-involved youth.

My study first hypothesized that among justice-involved youth, adolescents with mental illness would be more likely to report justice system involvement as an adult than those who did not suffer from mental illness. The results of this study did not support this hypothesis. The results of the simple bivariate regression showed that adolescents who reported mental illness reported slightly lower levels of adult justice system involvement. However, this result was not statistically significant. This is inconsistent with previous literature and implies that limitations of the current study may have had a strong impact (Coker et al., 2014). Prior research has largely established that there is an association between mental illness and justice system involvement (Zajac et al., 2015). It has also shown that mental illness can be a risk factor for recidivism among justice involved youth (Cottle et al., 2001). Therefore, the results from the linear regression do not support the current study's hypothesis or prior research.

However, one interesting result I found was a significant negative association between adolescent mental illness and adult justice system involvement when missing cases on the outcome variable were treated as if they all had responded "yes." While no conclusive claims can

be made about this result because of the variance in the sensitivity analyses, it enforces how important it is to treat these missing cases carefully. This finding, if replicated in future research, has interesting implications for the study of mental health treatment among mentally ill justice-involved youth. My findings indicate that if all the participants who were missing on the outcome variable really were arrested, they had a lower likelihood of adult crime. This is contrary to prior research (Cottle et al., 2001) and indicates that we still need more research on this intricate relationship. The results of this analysis were clearly very dependent on these missing cases, and more research is needed on how exactly to tease this out. However, since this one significant result was only present in the bivariate model without controls, it implies that the association may have been due to factors other than adolescent mental illness.

When the control variables were added in and a multivariate regression was run, adolescents with mental illness had a predicted level of adult justice system involvement that slightly lower than those without mental illness. However, this too was not statistically significant. These results are partially consistent with prior research. While there is literature that says mental illness can predict future recidivism, some research has found a lack of association (Colins et al., 2011). The current study's findings are consistent with research such as this, implying that there may in fact be no relationship between mental illness and recidivism. However, many studies on adolescents suggest that the current study's lack of significant results may be due to limitations of the study (Cottle et al., 2001). These limitations will be discussed at length later. Prior research has largely found that adolescent mental illness is oftentimes heavily intertwined with the justice system, with certain diagnoses increasing a juvenile's risk of future justice system involvement (Pullmann, 2019). Numerous studies support this, with most research finding that youth with mental illness have greater odds of criminal involvement (Coker et al.,

2014). In this sense, the current study's first set of results are largely inconsistent with prior research.

The current study also hypothesized that mental health treatment would act as a moderator in the relationship between adolescent mental illness and adult justice system involvement. Results from the second analysis did not support this hypothesis. The interaction term showed that the combination of mental illness and mental health treatment among justice-involved youth was associated with a negative but insignificant change in adult justice system involvement. These results are also largely inconsistent with previous literature. Research shows that mental health treatment programs can effectively reduce recidivism among justice-involved youth (Evans Cuellar et al., 2006). Further, adult mentally ill offenders have also been found to have better recidivism outcomes when they are provided with mental health treatment (Anestis & Carbonell, 2014). Therefore, by most accounts it should be expected to see mental health treatment weaken the relationship between adolescent mental illness and adult justice system involvement. In this way, my results do not support the existing literature (Evans Cuellar et al., 2006). This especially calls for more research on the different types of mental health treatment. Perhaps when measured together, several different forms of mental health treatment do not have one large effect. It should be noted that in future research it may be helpful to study the impact of each type of mental health treatment separately.

I also find it important to note that among the sample, there were more individuals that reported receiving mental health treatment than reported having a mental illness (see Table 1). This has interesting implications for a few reasons. First, it says that perhaps the justice system is providing individuals with mental health treatment when they do not need it. Mental health treatment is not a one-size-fits-all solution, and some adolescents may need a different outlet or

disposition option. The juvenile justice system should be paying attention to what each individual needs instead of loosely acting as though mental health treatment is the ultimate solution. Mental health treatment is still sparse in juvenile justice facilities, but when it is provided, we should ensure it is going to the individuals who really need it. Research shows that mental health treatment may not always work in juvenile justice settings because they are removed from their families (Grisso, 2008). Justice-involved youth may need another option such as educational resources, employment opportunities, substance use treatment, etc. to effectively help them (McKean & Ransford, 2004). Therefore, these results imply that perhaps there needs to be a wide breadth of rehabilitation services for adolescents in the justice system.

Second, another implication of this discrepancy between the rates of mental illness and mental health treatment is that it implies future research needs to be careful with how mental health treatment is measured. In the Pathways to Desistance dataset, the question used to measure treatment asked adolescents if they had ever gone to a psychologist, counselor, or social worker (Mulvey, 2016). Including social workers in this question could have had negative effects on the reported rate of mental health treatment. This is because many adolescents in the justice system have interacted with a social worker in some shape or form, and not just for mental health treatment (McCarter & Menon, 2024). There should be a distinction in the language so that we can accurately differentiate adolescents who received mental health treatment from those who may have gone to a social worker and yet not received treatment.

Limitations

The current study has a few limitations that suggest areas of improvement for future research. First, one limitation was the measurement of mental health treatment. Unfortunately, the Pathways to Desistance data only collected information on mental health treatment at wave 1.

This severely limited my measurement of the variable, leaving treatment information from the following 10 waves unknown. This means that the mental health treatment that the participants may or may not have received in the following years could have had serious effects on them and their justice system involvement. Only having access to treatment information from one wave significantly affects the generalizability of the results. While we can make conclusions about the impact of a couple years of mental health treatment, there are still a few years of missing data that limit the applicability of these results. Second, the limited information on mental illness was another limitation. While the BSI and the CIDI are reliable and widely used measures of mental illness, they only tested for a select number of mental disorders. In future research it would be helpful to have an additional measure of mental illness that would allow us to capture a wider range of disorders that the participants may be suffering from. For instance, information on conduct disorder would be important to account for. Only having information on select types of mental disorders also limits the generalizability of these results. A final limitation of this study is that Pathways to Desistance is a self-report survey, where individuals may choose not to disclose certain things or choose not to answer altogether. This opens up the possibility for social desirability and response biases to have occurred. While this factor does not limit the generalizability of the current study's results, it is still important to take into consideration. However, despite these limitations, the results of this study add a contribution to the literature on mental health treatment among justice-involved youth.

Implications

While the results in this study were not found to be statistically significant, there are still many implications here for future research. First and foremost, my study shows that the relationship between adolescent mental illness and adult justice system involvement is not totally

clear. The discrepancies between my results and that of prior literature indicate that this relationship may not be present for every sample or group of people. We still need more research to tease out exactly when the association between mental illness and justice system involvement may occur. Specifically, I find it important for future research to put enhanced focus on how mental illness is measured. As mentioned, my study was not able to capture every type of mental illness, and some important mental disorders such as conduct disorder may have been neglected. To ensure accurate results, future research should aim to capture a wider scope of mental illnesses. Another implication of my results is that future research should measure the different types of mental health treatment separately. Mental health treatments are all intricate and unique, and each one may have different effects. For example, receiving medication for a mental illness may have a completely different effect on a person than psychotherapy. To tease out the unique impacts of each form of treatment, future research should test them separately. Further, it may be helpful in the future to find a better operationalization of mental health treatment. My study was not able to differentiate individuals who went to psychologists or counselors from those who went to social workers. All of these sources may have had different impacts on the individual, and some may have had no impact at all. Being able to separate all these forms of treatment will allow future research to see what works best for justice-involved youth. Overall, future research on this topic should aim to capture a wide variety of mental illnesses, differentiate between forms of mental health treatment, and be intentional about the operationalization of the variables.

Conclusion

In conclusion, the results of my research shine a light on ways that future research can improve the study of mental illness among justice-involved youth. My findings point out weaknesses in current research on this topic and illuminate paths of change for the future. Additionally, while I was not able to find support for my hypotheses, my research still accomplishes something by putting attention on justice-involved youth with mental illness. These individuals are an underserved population and are often forgotten about in the justice system. Studies such as this work to call attention to their needs and enforce the idea that these individuals deserve our research. Mental health treatment can make such a large impact on youth's lives, and more research is still needed to make changes in how it is implemented in our society and justice system. It is my hope that through studies such as mine, we can figure out the best way for these individuals to treat their mental illness and escape the hands of the justice system once and for all.

Table 1

Descriptive Statistics

Variable	Mean	Standard Deviation	Min	Max
Predictor Variable				
Adolescent Mental Illness	0.24	0.43	0	1
Outcome Variable				
Adult Justice System Involvement	0.68	0.47	0	1
Moderating Variable				
Mental Health Treatment	0.39	0.49	0	1
Control Variables				
Male	0.86	0.34	0	1
Proportion of Offending	0.15	0.15	0	0.91
Socioeconomic Status (Parents Education Level)	4.30	0.95	1	6
Alcohol Dependency	0.07	0.26	0	1
Drug Dependency	0.13	0.33	0	1
White	0.20	0.4	0	1
Black	0.41	0.49	0	1
Hispanic	0.34	0.47	0	1
Other Ethnicity	0.05	0.21	0	1
Demographics				
Age	18.9	2.45	14	26

Note: Pathways to Desistance. This table shows all control variables as they were reported at wave 1. N = 1,354.

Table 2

Linear Regression Models of the Association Between Adolescent Mental Illness and Adult Justice System Involvement

	Model 1: Bivariate Regression			Model 2: Multivariate Regression		
	b		SE	b		SE
Adolescent Mental Illness	-0.031		0.030	-0.018		0.031
Adolescent Mental Illness with Missings as Yes	-0.054	*	0.025	-0.033		0.026
Adolescent Mental Illness with Missings as No	-0.008		0.030	0.005		0.031
Gender - Male				0.275	***	0.038
Race - Black				-0.008		0.035
Race - Hispanic				-0.075	*	0.037
Race - Other				-0.083		0.066
Offending				< .001	***	< .001
Parents Education Level (SES)				0.020		0.014
Alcohol Dependency				0.156	**	0.053
Drug Dependency				0.094	*	0.043
Constant	0.669	***	0.015	0.274	**	0.092

Note: Pathways to Desistance. White was used as a reference category for the race variables. *** p < .001. ** p < .01. * p < .05.

Table 3

Linear Regression and Moderation Models of the Association Between Adolescent Mental Illness, Mental Health Treatment, and Justice System Involvement

Variable	b	SE
Adolescent Mental Illness	0.024	0.044
Mental Health Treatment	0.054	0.031
Adolescent Mental Illness X Mental Health Treatment	-0.081	0.062

Note: Pathways to Desistance.

Figure 1

Cumulative Proportion of Arrest by Mental Health Treatment and Age

## Cumulative Arrest by Mental Health Treatment
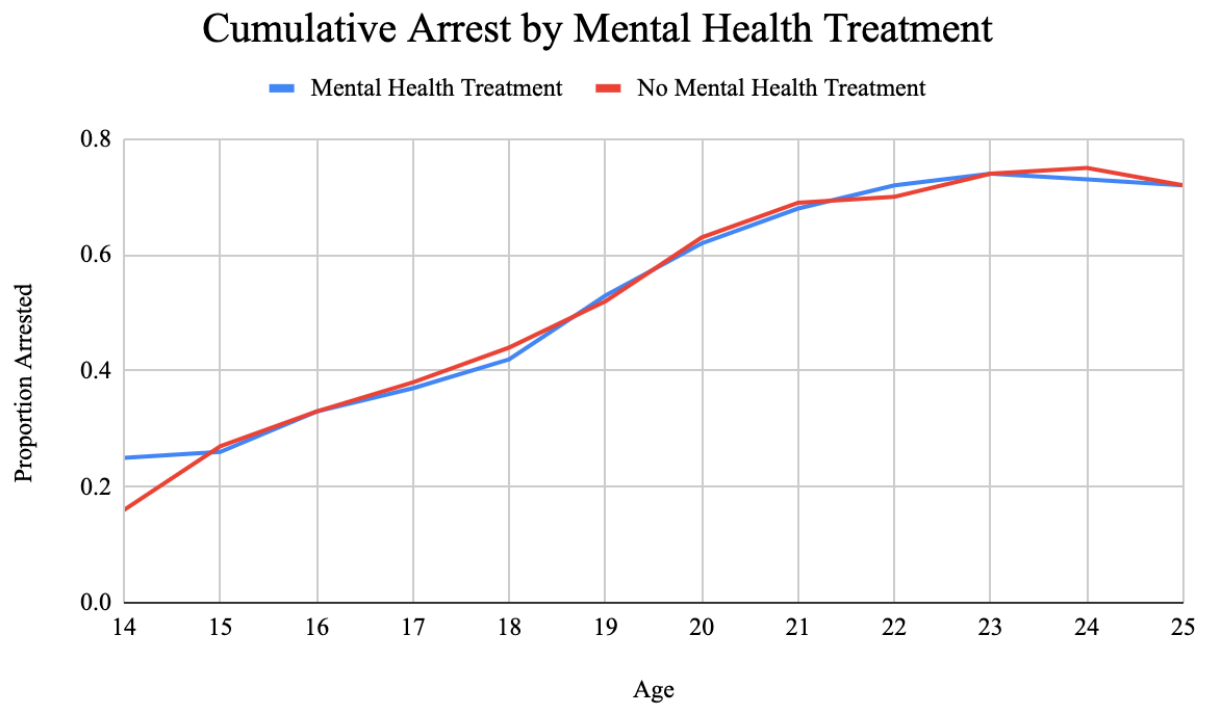
Note: Pathways to Desistance. The downturn in the trend at age 24 is due to a smaller number of participants who reached that age during the study.

Figure 2

Proportions of Justice System Involvement Based on Mental Illness and Mental Health Treatment

Adult Justice System Involvement by Mental Illness and Treatment
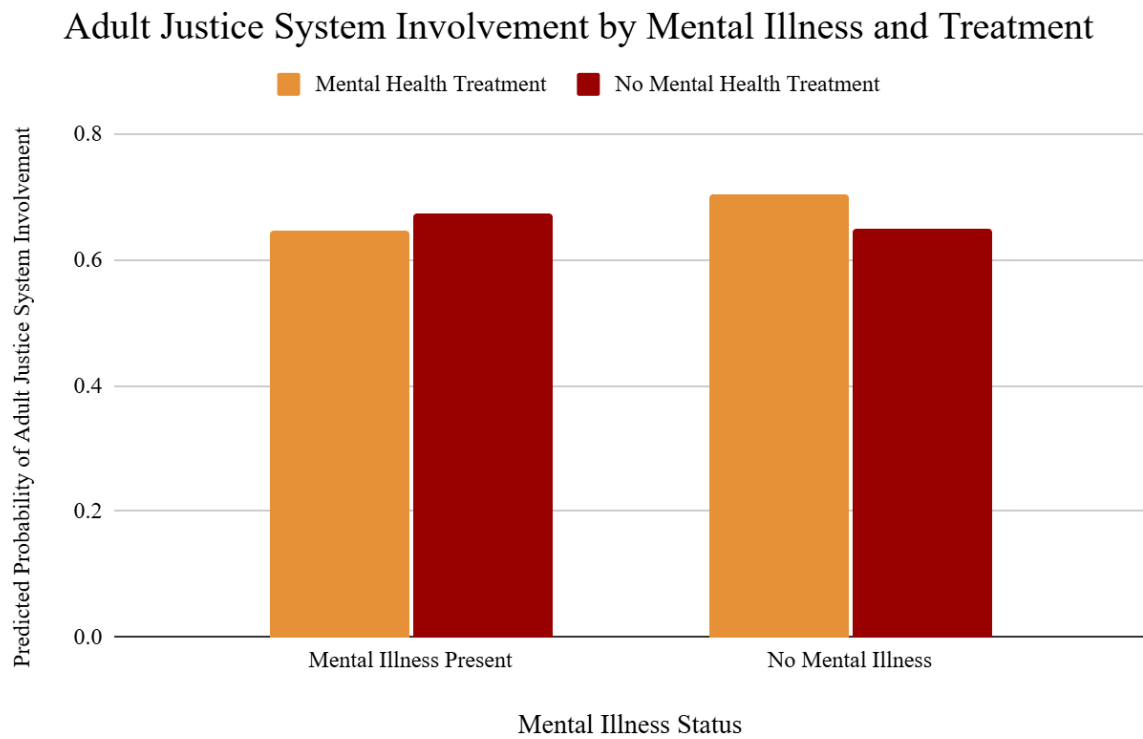
Note: Pathways to Desistance.

Appendix

The BSI subscales assess individual symptom groups including somatization (ex: "Faintness or dizziness"), obsessive-compulsive (ex: "Having to check and double-check what you do"), interpersonal sensitivity (ex: "Feeling inferior to others"), depression (ex: "Feeling no interest in things"), anxiety (ex: "Feeling tense or keyed up"), hostility (ex: "Having urges to break or smash things"), phobic anxiety (ex: "Feeling uneasy in crowds, such as shopping or at a movie"), paranoid ideation (ex: "Others not giving you proper credit for your achievements"), and psychoticism ("The idea that something is wrong with your mind") (Mulvey, 2016). Possible responses to these questions were not at all (0), a little bit (1), moderately (2), quite a bit (3), and extremely (4) (Mulvey, 2016). There are also three additional subscales that assess global psychological distress but were not used in the current study (Mulvey, 2016).

References

Agnew, R. (1992), Foundation for a general strain theory of crime and delinquency.

Criminology, 30: 47-88. https://doi.org/10.1111/j.1745-9125.1992.tb01093.x

Agnew, Robert (2006). *Pressured Into Crime: An Overview of General Strain Theory*. Oxford

University Press USA.

Anestis, J. C., & Carbonell, J. L. (2014). Stopping the revolving door: Effectiveness of mental

health court in reducing recidivism by mentally ill offenders. Psychiatric Services, 65(9),

1105-1112. https://doi.org/10.1176/appi.ps.201300305

Aseltine Jr, R. H., Gore, S., & Gordon, J. (2000). Life stress, anger and anxiety, and delinquency:

An empirical test of general strain theory. Journal of health and social behavior, 256-275.

https://doi.org/10.2307/2676320

Atkins, D.L., Pumariega, A.J., Rogers, K. et al. Mental Health and Incarcerated Youth. I:

Prevalence and Nature of Psychopathology. Journal of Child and Family Studies 8, 193–

204 (1999). https://doi.org/10.1023/A:1022040018365

Bennett, S., Farrington, D. P., & Huesmann, L. R. (2005). Explaining gender differences in

crime and violence: The importance of social cognitive skills. Aggression and violent

behavior, 10(3), 263-288. https://doi.org/10.1016/j.avb.2004.07.001

Berking, M., Poppe, C., Luhmann, M., Wupperman, P., Jaggi, V., & Seifritz, E. (2012). Is the

association between various emotion-regulation skills and mental health mediated by the

ability to modify emotions? Results from two cross-sectional studies. Journal of behavior

therapy and experimental psychiatry, 43(3), 931-937.

https://doi.org/10.1016/j.jbtep.2011.09.009

Coker, K. L., Smith, P. H., Westphal, A., Zonana, H. V., & McKee, S. A. (2014). Crime and

    psychiatric disorders among youth in the US population: An analysis of the national

    comorbidity survey–adolescent supplement. Journal of the American Academy of Child

    & Adolescent Psychiatry, 53(8), 888-898. https://doi.org/10.1016/j.jaac.2014.05.007

Colins O, Vermeiren R, Vahl P, Markus M, Broekaert E, Doreleijers T. Psychiatric Disorder in

    Detained Male Adolescents as Risk Factor for Serious Recidivism. The Canadian Journal

    of Psychiatry. 2011;56(1):44-50. https://doi.org/10.1177/070674371105600108

Connolly, E. J., Lewis, R. H., & Boisvert, D. L. (2017). The effect of socioeconomic status on

    delinquency across urban and rural contexts: Using a genetically informed design to

    identify environmental risk. Criminal justice review, 42(3), 237-253.

    https://doi.org/10.1177/0734016817724200

Copeland, W. E., Miller-Johnson, S., Keeler, G., Angold, A., & Costello, E. J. (2007). Childhood

    Psychiatric Disorders and Young Adult Crime: A Prospective, Population-Based Study.

    American Journal of Psychiatry, 164(11), 1668–1675.

    https://doi.org/10.1176/appi.ajp.2007.06122026

Corbit, K. (2005). Inadequate and inappropriate mental health treatment and minority

    overrepresentation in the juvenile justice system. Hastings Race & Poverty LJ, 3, 75.

Cottle, C. C., Lee, R. J., & Heilbrun, K. (2001). The prediction of criminal recidivism in

    juveniles: A meta-analysis. Criminal justice and behavior, 28(3), 367-394.

    https://doi.org/10.1177/0093854801028003005

Engel, R. S., & Silver, E. (2001). Policing mentally disordered suspects: A reexamination of the

    criminalization hypothesis. Criminology, 39(2), 225-252. https://doi.org/10.1111/j.1745-

    9125.2001.tb00922.x

Erickson, C.D. Using Systems of Care to Reduce Incarceration of Youth with Serious Mental

    Illness. American Journal of Community Psychology, 49, 404–416 (2012).

    https://doi.org/10.1007/s10464-011-9484-4

Evans Cuellar, A., McReynolds, L. S., & Wasserman, G. A. (2006). A cure for crime: Can

    mental health treatment diversion reduce crime among youth?. Journal of Policy Analysis

    and Management: The Journal of the Association for Public Policy Analysis and

    Management, 25(1), 197-214. https://doi.org/10.1002/pam.20162

Fisher, W.H., Silver, E. & Wolff, N. Beyond Criminalization: Toward a Criminologically

    Informed Framework for Mental Health Policy and Services Research. Adm Policy Ment

    Health 33, 544–557 (2006). https://doi.org/10.1007/s10488-006-0072-0

Girasek, H., Nagy, V. A., Fekete, S., Ungvari, G. S., & Gazdag, G. (2022). Prevalence and

    correlates of aggressive behavior in psychiatric inpatient populations. World journal of

    psychiatry, 12(1), 1–23. https://doi.org/10.5498/wjp.v12.i1.1

Grisso, T. (2008). Adolescent Offenders with Mental Disorders. The Future of Children, 18(2),

    143–164. http://www.jstor.org/stable/20179982

Hirschfield, P., Maschi, T., White, H. R., Traub, L. G., & Loeber, R. (2006). Mental health and

    juvenile arrests: Criminality, criminalization, or compassion?. Criminology, 44(3), 593-

    630. https://doi.org/10.1111/j.1745-9125.2006.00058.x

Junginger, J., Claypoole, K., Laygo, R., & Crisanti, A. (1970, June 1). Effects of serious mental

    illness and substance abuse on criminal offenses. Psychiatric Services.

    https://psychiatryonline.org/doi/full/10.1176/ps.2006.57.6.879

Mallett, C.A. Youthful Offending and Delinquency: The Comorbid Impact of Maltreatment,

    Mental Health Problems, and Learning Disabilities. Child Adolesc Soc Work J 31, 369–

    392 (2014). https://doi.org/10.1007/s10560-013-0323-3

McCarter, S., Menon, S. E., & Taylor, K. (2024). Forensic Social Work Practice With Justice-

    Involved Youth. Handbook of Forensic Social Work: Theory, Policy, and Fields of

    Practice, 419.

McKean, L., & Ransford, C. (2004). Current strategies for reducing recidivism. Chicago, IL:

    Center for Impact Research.

Moeller, F. G., Barratt, E. S., Dougherty, D. M., Schmitz, J. M., & Swann, A. C. (2001).

    Psychiatric Aspects of Impulsivity. American Journal of Psychiatry, 158(11), 1783–1793.

    https://doi.org/10.1176/appi.ajp.158.11.1783 .

Mulvey, Edward P. Research on Pathways to Desistance [Maricopa County, AZ and

    Philadelphia County, PA]: Subject Measures, 2000-2010. Inter-university Consortium for

    Political and Social Research [distributor], 2016-03-14.

    https://doi.org/10.3886/ICPSR29961.v2

Mulvey, E. P., Schubert, C. A., & Chaissin, L. (2010). Substance use and delinquent behavior

    among serious adolescent offenders. Washington, DC: US Department of Justice, Office

    of Justice Programs, Office of Juvenile Justice and Delinquency Prevention

Peterson, J., Skeem, J. L., Hart, E., Vidal, S., & Keith, F. (1970, December 1). Analyzing offense

    patterns as a function of mental illness to test the criminalization hypothesis. Psychiatric

    Services. https://psychiatryonline.org/doi/full/10.1176/ps.2010.61.12.1217

Pullmann, M.D. Predictors of Criminal Charges for Youth in Public Mental Health During the

    Transition to Adulthood. J Child Fam Stud 19, 483–491 (2010).

    https://doi.org/10.1007/s10826-009-9320-8

Rohde, P., Jorgensen, J. S., Seeley, J. R., & Mace, D. E. (2004). Pilot evaluation of the coping

    course: A cognitive-behavioral intervention to enhance coping skills in incarcerated

    youth. Journal of the American Academy of Child & Adolescent Psychiatry, 43(6), 669-

    676. https://doi.org/10.1097/01.chi.0000121068.29744.a5

Rosenblatt, J.A., Rosenblatt, A. & Biggs, E.E. Criminal behavior and emotional disorder:

    Comparing youth served by the mental health and juvenile justice systems. The Journal

    of Behavioral Health Services & Research 27, 227–237 (2000).

    https://doi.org/10.1007/BF02287315

Rüsch N, Angermeyer MC, Corrigan PW. Mental illness stigma: Concepts, consequences, and

    initiatives to reduce stigma. European Psychiatry. 2005;20(8):529-539.

    doi:10.1016/j.eurpsy.2005.04.004

Schwarz, S. W. (2009). Adolescent mental health in the United States.

    https://doi.org/10.7916/D8D50WP6

Sealock, M. D., & Manasse, M. (2012). An uneven playing field: The impact of strain and

    coping skills on treatment outcomes for juvenile offenders. Journal of Criminal Justice,

    40(3), 238-248. https://doi.org/10.1016/j.jcrimjus.2012.02.002

Testa A, Turney K, Jackson DB, Jaynes CM. Police contact and future orientation from

    adolescence to young adulthood: findings from the pathways to desistance study.

    Criminology. 2022; 60: 263–290. https://doi.org/10.1111/1745-9125.12297

Underwood, L. A., & Washington, A. (2016). Mental Illness and Juvenile Offenders.

    International Journal of Environmental Research and Public Health, 13(2), 228.

    https://doi.org/10.3390/ijerph13020228

Weatherburn, D., Albalawi, O., Chowdhury, N., Wand, H., Adily, A., Allnutt, S., & Butler, T.

    (2021). Does mental health treatment reduce recidivism among offenders with a

    psychotic illness? Journal of Criminology, 54(2), 239-258.

    https://doi.org/10.1177/0004865821996426

Wieland J, Wardenaar KJ, Fontein E, Zitman FG. Utility of the Brief Symptom Inventory (BSI)

    in psychiatric outpatients with intellectual disabilities. J Intellect Disabil Res. 2012

    Sep;56(9):843-53. doi: 10.1111/j.1365-2788.2011.01440.x.

Wittchen, H. U. (1994). Reliability and validity studies of the WHO-Composite International

    Diagnostic Interview (CIDI): a critical review. Journal of psychiatric research, 28(1), 57-

    84. https://doi.org/10.1016/0022-3956(94)90036-1

Zajac, K., Sheidow, A. J., & Davis, M. (2015). Juvenile justice, mental health, and the transition

    to adulthood: A review of service system involvement and unmet needs in the US.

    Children and youth services review, 56, 139-148.

    https://doi.org/10.1016/j.childyouth.2015.07.014