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Stopping the Revolving Door: Understanding the Connection Between Mental Illness and  
Recidivism for Persons on Parole

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of  
Philosophy in Social Welfare

by

Daniel Michael Applegarth

2023

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## ABSTRACT OF THE DISSERTATION

Stopping the Revolving Door: Understanding the Connection Between Mental Illness and  
Recidivism for Persons on Parole

by

Daniel Michael Applegarth

Doctor of Philosophy in Social Welfare

University of California, Los Angeles, 2023

Professor Laura S. Abrams, Chair

Despite numerous indicators that mental illness (MI) is prevalent among people who are incarcerated, the nature of the relationship between MI and incarceration is yet to be fully understood. Scholars continue to debate whether MI has a unique relationship to repeat offending or if it is related to other key risk factors. Using an administrative dataset from Georgia ( $n = 24,046$ ), this dissertation examined the extent to which individuals mandated to receive mental health treatment on parole have a greater likelihood of rearrest – over a three-year period – than individuals without this parole condition. Additionally, the dissertation tested the extent to which MI moderates the relationship between criminogenic risk factors – employment and substance use – and rearrest. A series of logistic regression analyses were used to examine these relationships. Individuals identified as having a MI were more likely to be rearrested ( $OR = 1.17$ , 95% CI [1.07-1.27]). Criminogenic risk was also found to predict rearrest for the sample;

increased risk assessment score indicated a higher likelihood of rearrest ( $OR = 1.14$ , 95% CI [1.11-1.16]), increased positive drug tests predicted a greater likelihood of rearrest ( $OR = 1.64$ , 95% CI [1.42-1.91]), and increased time employed reduced the likelihood of rearrest ( $OR = .39$ , 95% CI [.35-.44]). MI was found to moderate the relationships between both substance use and employment with being rearrested. The relationship between substance use and recidivism initially differed between the two groups, but as substance use increased the difference became nonsignificant. Employment served as a greater protective factor for individuals without MI. These findings suggest that MI and criminogenic risk factors should be addressed to reduce recidivism. The results also suggest that it is important to understand how MI may relate to criminogenic risk factors. Policymakers and practitioners should focus on developing and implementing strategies and treatment programs to address MI and criminogenic needs. Future research is needed to examine the extent to which mandated mental health treatment reduces recidivism, investigate whether the severity of symptoms or type of mental health disorder relates differently to the likelihood of rearrest, and explore how MI may interact with other criminogenic risk factors.

The dissertation of Daniel Michael Applegarth is approved.

Laura Wray-Lake

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2023

## DEDICATION PAGE

I dedicate this dissertation to Caitlin, Trevor, Logan, James, and Mabel Applegarth. I could not have done this without your love and support. You are my inspiration, pick me up when things are difficult, and always give me a reason to laugh. It has been a long journey, and each of you has inspired me in more ways than I can describe. Thank you.

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### Acronyms

MI	Mental Illness
MH	Mental Health
RNR	Risk Need Responsivity
SIM	Sequential Intercept Model

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## **Chapter One: Introduction**

The criminal legal system has become the default mental health system in the United States. The U.S. Department of Justice estimates that 1 in 7 persons in federal and state prisons meet the criteria for serious psychological distress, and 41% of incarcerated persons self-report a history of mental illness (MI) (Maruschak et al., 2021). The prevalence rates for MI in U.S. prisons are approximately 3-12 times greater than in the general population (Prins, 2014). Considering these statistics, it is no surprise that the nation's three largest mental health facilities are county jails located in the cities of Los Angeles, New York, and Chicago (Lurigio et al., 2008; Mulvey & Larson, 2017; Torrey et al., 2010). Research also suggests that individuals with MI return to prison sooner than those without MI (Cloyes et al., 2010). Despite the numerous indicators that MI is prevalent among people who are incarcerated, the nature of the relationship between MI and incarceration (including reincarceration) is yet to be fully understood. Deepening our understanding of this relationship is vital to developing responsive interventions and policies that effectively improve well-being, address public safety and health concerns, and support successful reentry to society following incarceration. This dissertation seeks to increase knowledge concerning the relationships between MI and recidivism (defined in this study as rearrest within three years of release from prison) among adults on parole from a state prison system.

Definitions and conceptualizations of MI vary from study to study. The National Institute of Mental Health (2019) provides two broad categorical definitions of MI: any and severe. Any MI includes all officially recognized MI, whereas severe MI is a more selective categorization of mental disorders associated with more significant impairment to daily functioning, such as schizophrenia or bipolar disorder. Studies examining MI and criminal legal involvement

frequently focus on samples of individuals experiencing severe MI, but this is not always clear or specified. For this study, the sample is presumed to have severe MI – see Chapter 3 for a description of how MI was measured. Implications and limitations of how MI is conceptualized in this study, and others are discussed later.

This chapter will introduce connections between MI and recidivism, provide an overview of the Risk Need Responsivity model (RNR) – the dominant paradigm on what factors predict criminal behavior - and discuss the need to examine further the nature of the relationship between MI and incarceration. The rationale for using recidivism as the primary outcome will also be provided, along with a brief description of the study’s aims and the sample.

### **Mental Illness and Recidivism**

The criminal legal system has numerous entry and exit points, from informal interactions with law enforcement to post-incarceration supervision. In response to the high prevalence rates of persons with MI in the criminal legal system, federal and state policies have sought to provide mental health-focused solutions, such as 1) diversion programs, 2) mental health courts, 3) specialty probation or parole caseloads, and 4) specialized reentry programs (Skeem et al., 2011). Often these approaches require people on probation and parole to engage in involuntary mental health services. Despite these widespread practices, research suggests that mental-health-oriented “solutions” (i.e., focused on symptom reduction) are only marginally effective in reducing recidivism (Bonta et al., 2014; Epperson et al., 2014; Skeem et al., 2011; Skeem et al., 2015).

When examining reentry, social and environmental contexts must be considered as they shape individuals’ experiences returning from prison. When released from prison, persons with MI often experience less family support, greater difficulty obtaining housing, and more challenges securing employment than those without MI (Bales et al., 2017; Barrenger et al.,

2017; Mallik-Kane & Visher, 2008). Simultaneously, these individuals must attempt to balance their basic needs (e.g., food, housing, income) with their mental health needs, placing them in a proverbial tug of war, often forcing them to prioritize immediate needs over their mental health (e.g., focusing on food and housing over mental health treatment) (Barrenger et al., 2017).

Further, high rates of homelessness and highly visible acts, such as loitering or public disturbances, increase interactions with law enforcement. These challenges result in increased difficulty in avoiding reincarceration for persons with MI. Focusing on the reentry process for this high-risk population is critical to reducing the larger imprisoned population and encompasses essential ethical questions about how society should respond to individuals experiencing MI. Further research is needed to understand the relationship between MI and recidivism and how to address best the conditions that lead to recidivism.

### **Risk Need Responsivity Model**

The RNR model has had a considerable influence on 21st-century corrections, reentry programming, and community supervision, and as such, it is necessary to understand the primary principles of this model. The RNR model identifies who should be treated (based on individuals' *risk* level), what should be treated (identifying persons' criminogenic *needs/risk*), and how the intervention should be delivered (*responsivity*), both generally (i.e., what approaches should be used) and specifically (i.e., adjusting approaches to the individual) (Andrews & Bonta, 2010). Proponents of the RNR model argue that to reduce the risk of recidivism effectively, interventions must focus on targeting critical criminogenic risk factors/criminogenic needs, often referred to as the "Big 8" (i.e., antisocial associates, antisocial cognitions, antisocial personality pattern, history of antisocial behavior, family dysfunction, lack of employment, substance abuse,



and lack of prosocial leisure activities) (Andrews & Bonta, 2010; Andrews et al., 2006; Skeem et al., 2014).

The reentry literature is dominated by studies evaluating programs' adherence to the RNR model, the degree recidivism is reduced when the RNR model is used, and the need to incorporate the targeting of criminogenic risk factors throughout individuals' encounters with the criminal legal system. When evaluating challenges to reentry for any population, it is important to understand the RNR model and how it explains and targets factors related to recidivism for the population of interest. This is particularly the case when examining the experience of persons with MI, as policymakers, practitioners, and researchers tend to place greater emphasis on either meeting mental health needs or targeting criminogenic risk factors.

The principal founders of the RNR model do not consider MI as a critical factor in predicting recidivism and instead suggest that any predictive value associated with MI results from its relationship with one of the previously mentioned criminogenic risk factors. Moreover, they argue that when criminal legal programs target MI, they should only do so to enhance their ability to address criminogenic risk factors (Andrews & Bonta, 2010; Andrews et al., 2006). Others have highlighted the benefits of incorporating mental health-focused treatment into the response of the criminal legal system yet remain adamant that the most promising approach to reducing recidivism is focusing on and effectively integrating the RNR model into correctional policies and practices (Epperson et al., 2014; Manchak et al., 2019; Skeem et al., 2015; Skeem et al., 2011). While evidence suggests a need to target criminogenic risk for individuals with MI, examining the extent to which MI relates to criminogenic risk factors remains important.

## **Is it Criminogenic Risk Factors, Mental Illness, or Both?**

To date, scholars have not reached a consensus on the relationship between MI and recidivism. Recidivism is generally defined as being rearrested, reconvicted, or returning to jail or prison during the three years after being released from incarceration (National Institute of Justice, n.d.). Scholars have made a wide range of conclusions about the relationship between MI and recidivism, from the assertion of no relation to the claim that MI increases the likelihood of further interactions with the criminal legal system. For example, some research suggests that persons with MI are rearrested at the same rate as persons without MI but are more likely to return to prison through parole revocation (Skeem & Louden, 2006; Skeem et al., 2014). Other studies have identified a more robust connection between MI and recidivism. Bales and colleagues (2017) followed more than 40,000 individuals with MI over five years. They found that those with MI had significantly higher odds of being rearrested, reconvicted, and reincarcerated than those without MI. This study is particularly significant due to the methodological strengths of a five-year follow-up period, a large sample size, the use of several recidivism measures, and the inclusion of relevant control variables (i.e., gender, race, age, primary offense, prior system involvement, substance abuse, education level, gang involvement, and post-prison supervision). This study also provides valuable insight into the status of research in this area, categorizing the existing literature examining the relationship between MI and recidivism as “contradictory and inconclusive” (Bales et al., 2017, p. 42).

If MI does not directly predict recidivism, we must ask ourselves the cause of previously observed relationships. Bales and colleagues (2017) controlled for many factors related to recidivism – including some criminogenic risk factors – and still observed an association between MI and recidivism. Other researchers have suggested that people with MI are more

likely to have more criminogenic risk factors than individuals without MI, suggesting the relationship is mediated by risk level. In other words, suggesting an indirect relationship exists between MI and recidivism through an individual's risk level/having more or more severe criminogenic risks (Matejkowski et al., 2015; Skeem et al., 2011; Skeem & Louden, 2006). Common limitations of studies' within this research area include small sample sizes and limited follow-up periods. Additionally, a gap remains in our understanding of how MI may interact with specific criminogenic risk factors. Understanding how MI interacts with specific criminogenic risk factors could have significant implications in developing and implementing effective policies and practices.

### **Recidivism as an Outcome**

Reentry literature focuses heavily on recidivism as a primary outcome of the criminal legal system. From a criminal legal paradigm, this fixation can appear warranted. The primary goals of the criminal legal system are to: 1) deter persons from committing crimes, 2) hold individuals responsible for breaking the law, 3) ensure public safety by incapacitating persons who have been convicted of offenses that cause harm to individuals or society, and 4) provide rehabilitation services to prevent future offending (Coyle, 2018; Kifer et al., 2003). While rehabilitation is cited as a goal of the system, it often takes a back seat to punitive policies, practices, and laws (Lattimore, 2022). The criminal legal system's role in improving the well-being of incarcerated people is often subordinate to these other goals, particularly if it does not directly relate to preventing future criminal behavior. Often the principal measure of success for policies and programs in this realm is if they prevent crime from occurring or reoccurring. The primary measure used to determine this is recidivism, which is often a dichotomous -yes/no-

indication as to whether the person had future interaction with law enforcement that resulted in their arrest, conviction, and/or confinement.

Scholars have rightfully criticized the field's hyper-focus on recidivism, pointing to a need to move beyond recidivism rates and examine more closely the reentry process (Morenoff & Harding, 2014) or at the least other outcomes beyond recidivism (National Academies of Sciences, Engineering, and Medicine, 2022). Others have spoken against an over-reliance on risk factors, claiming that the focus on risk turns the criminal legal system into a risk management institution while simultaneously dehumanizing those involved (Cummins, 2017). At the same time, recidivism can serve as a helpful indicator of whether programs or policies benefit individuals and the community (Duwe, 2017; Visher & Travis, 2012). Increasing our understanding of what types of programs help reduce recidivism allows policymakers, practitioners, and researchers to develop and implement evidence-based policies and interventions that improve public safety and assist individuals exiting the criminal legal system. Nevertheless, recidivism should not be the sole focus of reentry research whenever possible.

The field of social work recognizes the inherent worth of all individuals, the importance of taking a holistic view of an individual's physical, psychological, social, and spiritual well-being, and how each of these domains can fundamentally alter how individuals interact with their peers, community, and society's norms and values. Solely focusing on a yes/no indicator of whether an individual recidivated has several limitations. As in this study, a researcher's capacity to look beyond recidivism is constrained by available information. In cases where recidivism is the sole outcome measure, it is important to contextualize why avoiding recidivism is still a worthwhile goal, recognizing that it is only one component of evaluating outcomes for this population. As a researcher, it is important to understand how reducing recidivism can help

facilitate the pursuit of other important outcomes – such as social justice and individual and community wellness – and how these efforts can support the advancement of social work values.

Reduction of recidivism benefits the legal system, the accused individual, and the public. From a law enforcement perspective, preventing recidivism should prevent the public from future adverse events, with the caveat that some level of crime is likely still occurring but is not detected or those responsible are not identified. Additionally, when recidivism does not happen, the criminal legal system benefits by avoiding using finite resources to prosecute and warehouse the person accused of a new offense. From the perspective of an individual, avoiding recidivism keeps them in the community and maintains their freedom. Furthermore, incarceration disrupts treatment in the community, deteriorates family and social ties, and can disturb employment and housing, which are difficult to obtain (DeMartini et al., 2022; Mear & Cochran, 2015). The public also benefits by ideally being spared negative consequences from the alleged criminal behavior. As social workers advocate for a more holistic approach to supporting persons exiting incarceration, continued recognition of the importance of reducing recidivism is needed. If the overarching goal is to help increase individuals' well-being, avoiding recidivism and remaining in the community are important steps to achieving this goal. Furthermore, recognizing the benefits for different stakeholders can help to facilitate working partnerships that result in positive outcomes for all involved.

### **Study Description**

This study aims to understand better the relationship between MI and recidivism and the degree to which criminogenic risk factors' relationship with recidivism may vary depending on mental health status. This study has two primary aims:

1. Examine whether individuals mandated to receive mental health treatment are more likely to be rearrested compared to those without this parole condition.

H1: Individuals mandated to follow up with mental health treatment as a condition of their parole will have an increased likelihood of being rearrested.

2. Examine the extent to which factors associated with recidivism differ between those mandated to receive mental health treatment and persons on parole without this mandate.

Research Aim Two is exploratory in nature, so no hypotheses are proposed. Prior evidence suggests that individuals with MI share the same criminogenic risk factors as individuals without MI (Matejkowski & Ostermann, 2015; Skeem & Louden, 2006; Skeem et al., 2014). What is less understood is how having a MI may interact with these risk factors and if the relationships between criminogenic risk factors and recidivism look different between the two groups.

The study sample includes a cohort of adults released on parole between January 2012 and December 2015 in the state of Georgia ( $n=24,046$ ). Within the sample, 15.2% were mandated to receive mental health treatment as a condition of their parole. Research Aim One seeks to contribute to knowledge on whether MI is related to recidivism, controlling for other known factors. Research Aim Two seeks to address additional gaps in the literature by examining the degree to which criminogenic risk factors differentially relate to recidivism between the two groups.

## **Conclusion**

In summation, some scholars suggest there is little to no connection between MI and recidivism (Andrews & Bonta, 2010; Bonta et al., 2014); others propose indirect links (Manchak et al., 2019; Skeem & Louden, 2006), and still, other researchers have found a direct relationship

(Bales et al. 2017; Katiyannis et al., 2018; Yukhnenko et al., 2020). There is a need to examine further and clarify the potential relationship between MI and recidivism. Understanding this relationship directly relates to social workers, other stakeholders, and practitioners in the criminal legal system. From a criminal legal perspective – which is primarily focused on delivering punishment and preventing future criminal behavior – if MI has a direct relationship with recidivism, interventions for this population should focus on securing mental health treatment. If persons with MI tend to share a common path to recidivism but have more criminogenic risk factors than individuals reentering society without a MI, clinicians, and policymakers should be responsive in their strategies for this population. This could entail screening for and targeting generalized risk factors in conjunction with MI (Epperson et al., 2014). Furthermore, if MI interacts with specific criminogenic risk factors, these relationships should be considered when developing and implementing interventions.

It is also vital to take a social justice perspective when considering the criminal legal system's responsibility to meet the mental health needs of those under their supervision. Researchers and policymakers alike must acknowledge the system's ethical obligations to ensure the well-being of those for whom the system has incarcerated, advocate for more humane treatment, and seek to divert individuals with MI from the criminal legal system whenever possible. Furthermore, continued efforts must be made to identify ways to support this population during reentry. This can be accomplished partly by deepening our understanding of the relationship between MI and recidivism.

Prior studies examining the relationships between MI and recidivism have tended to have smaller sample sizes and shorter follow-up periods. This study used a large dataset, providing the necessary power to examine relationships that may provide a deeper understanding of how MI

relates to recidivism. Additionally, the dataset records recidivism over three years, allowing for a sufficient period to examine post-release relationships with recidivism. The study also provides nuanced information on the extent to which factors related to recidivism for this population differ from those without MI.



## **Chapter Two: Relevant Literature**

Jails and prisons are the largest mental health treatment facilities in the United States (Lurigio et al., 2008; Maruschak et al., 2021; Mulvey & Larson, 2017; Prins, 2014). Despite the high rates of MI among incarcerated adults, the relationship between MI and recidivism – interaction with law enforcement following incarceration that leads to arrest, reincarceration, or reconviction – remains unclear. Some scholars suggest that MI has little to no relationship with recidivism, defined in this study as being rearrested within three years of release (Bonta & Andrews, 2010; Katsiyannis, 2018; Skeem et al., 2014), while others propose a strong relationship between the two (Bales et al., 2017, Cloyes et al., 2010). A clear understanding of this relationship is imperative to properly inform the criminal legal and human services fields on how to best support those with MI upon exiting a correctional setting. If the presence of MI increases the risk of recidivism, community supervision officers, the courts, service providers, and other relevant stakeholders can respond accordingly. Furthermore, increasing our knowledge of how factors commonly associated with recidivism may vary for persons with MI compared to persons without MI may allow for more responsive and personalized services. The primary aims of this dissertation are to 1) investigate if individuals on parole who have been identified as having a MI are at increased likelihood of being rearrested and 2) examine the extent to which factors associated with recidivism differ between those with MI compared to individuals on parole without MI.

This chapter is divided into three main sections. First, I review existing literature on the high prevalence of MI among those incarcerated and the common challenges individuals with MI face in the criminal legal system. This provides context to the extent MI is a common issue and identifies factors that may help explain the potential relationship between MI and recidivism.

Second, I review how the primary rehabilitation model in the correctional field – the Risk Need Responsivity model (RNR) – and the prediction of risk in general influence stakeholders’ responses to persons with MI and, subsequently, their reentry planning and treatment. Third, I examine the debated relationship between MI and recidivism and how the RNR model and common mental health approaches are often set against one another. The chapter concludes with a summation of key questions needing further examination.

### **Examining The High Prevalence of MI Among the Incarcerated**

As previously noted, jails and prisons serve as the largest mental health facilities in the United States (Lurigio et al., 2008; Maruschak et al., 2021; Mulvey & Larson, 2017; Prins, 2014). The prevalence of MI in prisons is between 3-12 times higher than the general population (Prins, 2014). Over the past few decades, the number of individuals with MI found in correctional institutions has steadily increased (Raphael & Stoll, 2013). This increase is estimated to account for 4-7% of the total incarceration population growth between 1980-2000 (Raphael & Stoll, 2013). Historically, societies’ responses to persons with MI have been punitive, commonly resulting in confinement to institutional settings, such as asylums or correctional institutions (Daugherty et al., 2020; Dvoskin et al., 2020; Slate et al., 2021). The occurrence of high prevalence rates alone is not enough to indicate that MI increases an individual’s risk of being incarcerated; however, it does suggest a need to critically examine why MI is seen at such a high rate among those incarcerated.

### ***Deinstitutionalization’s Contribution***

The sharp increase in the prevalence of persons with MI in correctional settings can be attributed in part to deinstitutionalization. Deinstitutionalization can be defined as the systematic closure of state mental health hospitals fueled by the goal of providing mental health treatment in

the community rather than in hospital settings (Raphael & Stoll, 2013). Deinstitutionalization began in the 1960s through a series of court cases and legislation that ultimately resulted in the closing of large state-ran mental health facilities across the nation (Yohanna, 2013).

Policymakers and practitioners sought to achieve deinstitutionalization through three main components: 1) drastically reducing the number of persons held in long-term state psychiatric facilities, 2) the development of alternative community facilities and diversion efforts from long-term hospitalization, and 3) the creation of community-based treatment services (Lamb & Bachrach, 2001). In communities where all three components were carried out, many individuals with mental health challenges appear to have benefited from greater autonomy and improved quality of life; however, many communities have also failed to establish sufficient community-based treatments to meet the needs of individuals with severe MI (Lamb, Bachrach, 2001).

As a result of deinstitutionalization, communities were exposed to individuals with severe MI at a much higher rate, and police were increasingly relied upon as the first responder to persons displaying signs of MI in the community (Slate et al., 2021; Yohanna, 2013). Starting in the 1970s and 1980s, the lack of community treatment options and increased pressure to reduce the number of persons in the community with MI committing low-level offenses (e.g., non-violent crimes) contributed to a societal response of criminalizing persons experiencing MI through strict enforcement of legal violations (Slate et al., 2021). The coalescence of deinstitutionalization and the emergence of a get tough on crime approach can begin to explain the increasingly high prevalence rates of individuals with MI within correctional institutions (Dvoskin et al., 2020).

While it is important to recognize the contributions of deinstitutionalization in the mass imprisonment of persons with MI, to credit this phenomenon as the sole cause is overly

simplistic. The examination of deinstitutionalization is not the first time the use – or lack thereof – of mental health facilities and their connection to incarceration has been explored. Dating back to the 1930s, hypotheses have been made about the impact of available psychiatric beds on the number of incarcerated individuals with MI (Penrose, 1939). Decades later, scholars are still debating the relationship – often acknowledging the impact social and economic factors have on the use of incarceration for this population (Lamb, 2015). Specifically, regarding the period of deinstitutionalization, factors such as housing and employment challenges, increase in drug use, the ensuing war on drugs, and large-scale budget cuts on community mental health care have likely contributed to incarceration rates of persons with MI (Winkler et al., 2016).

### ***Common Challenges***

MI can negatively impact individuals across many domains in their life, ultimately leading to them getting entangled in the criminal legal system. MI frequently manifests in the late teenage years and early adulthood, potentially hindering school and job performance and resulting in greater poverty rates (Lurigio & Harris, 2016). Low levels of education and high poverty rates negatively impact individuals' abilities to gain employment and housing, which can lead to interactions with law enforcement (Lurigio & Harris, 2016). Furthermore, persons with MI often have a high prevalence of substance use disorders (i.e., co-occurring disorders), which can subsequently increase contact with law enforcement (Lurigio & Harris, 2016). These factors (substance use and lack of employment) have been identified as criminogenic risk factors in the RNR model and found to be associated with criminal behavior. Therefore, we can start to get a sense of how MI may increase an individual's risk of committing a crime and, at the same time, make them more visible to law enforcement.

As noted above, substance use disorders and MI may ultimately lead individuals into the criminal legal system. Evidence of this is reflected in the degree of co-occurring disorders among persons with criminal legal involvement. For individuals under community supervision, comorbidity of substance use and MI is a common occurrence, with many not receiving necessary treatment for either disorder (Feucht & Gfroerer, 2011; Hawks, Horton, & Wang, 2022; Hunt, Peters, & Kremling, 2015). Research has found – among persons with criminal legal involvement – as high as 60-87% of persons with severe MI have a co-occurring substance use disorder (Substance Abuse and Mental Health Services Administration, 2015). As of 2014, nearly 40% of persons on parole had an alcohol or drug use disorder (Lipari & Gfroerer, 2014). In 2019, the U.S. Department of Justice reported that 24% of persons on parole most serious offense was drug-related (Oudekerk & Kaeble, 2021).

Common risk factors are shared between developing a mental health disorder and a substance use disorder (National Institute of Drug Abuse, 2021), and the use of substances can increase mental health symptoms (National Institute of Drug Abuse, 2018). This suggests that when examining the relationship between MI and incarceration, it is paramount to account for the use of substances. Houser and colleagues (2019) found that among a sample of over 4,000 persons on parole, experiencing both MI and a substance use disorder was associated with an increased likelihood of being arrested for a new crime.

In addition to substance use disorders, individuals on parole with MI often face challenges in obtaining employment, having sufficient money to meet their needs, and securing long-term housing (Barrenger et al., 2017). Each of these challenges can interact, creating a compounding effect on one's ability to meet their mental and physical needs. Experiencing insecure housing can make it extremely difficult to regularly attend treatment and prevent

meaningful progress in mental health and substance use recovery (Pope et al., 2013). High rates of homelessness and decreased family support can also compound the challenges these groups face during their reentry journey (Mallik-Kane & Visser, 2008). Ultimately, many are forced to prioritize finding housing and a source of income at the cost of not addressing physical and mental health needs, which may jeopardize their long-term well-being (Zekker & Prokop, 2020).

## **Risk Need Responsivity Model and Identifying Risk**

### ***The Risk Need Responsivity Model***

To put into context the scholarly debate concerning whether and how MI is related to recidivism, it is imperative to understand the theory and reach of the Risk Need Responsivity model (RNR). A central point of debate on the relationship between MI and Recidivism centers on whether MI increases the risk of recidivism or whether the central factors identified in the RNR model explain the connection. As such, an understanding of the primary tenants of the RNR model is needed.

When discussing the RNR model, it is necessary to remember that a primary goal of the criminal legal system is to increase public safety. In the context of reentry, this often results in focusing on identifying who is at the greatest risk of committing a future crime and strategizing ways to reduce this risk. The authors of the RNR model sought to identify critical factors that predict the risk of recidivism and to use this information to develop evidence-based practices to reduce such risk (Andrews & Bonta, 2010). In other words, the RNR model seeks to address modifiable, dynamic levers that can be targeted to reduce the risk of reoffending. The criminal legal system often does not prioritize the overall well-being of persons involved in the system. Instead, it focuses on reducing recidivism rates to prevent crime and benefit the larger

community. As the RNR model is primarily used by entities within the criminal legal system, these systems share similar goals and viewpoints with the founders of this model.

The RNR model has been the primary rehabilitation model in the correctional field over the past couple of decades and is widely applied across all aspects of the criminal legal system – from intake to probation and parole services (Goggin, 2018; Serin & Lloyd, 2017; Wormith & Zindenberg, 2018). As briefly described in chapter one, the RNR model is used to identify persons with criminal legal contact who should be treated (based on the individual’s *risk* level), what should be treated (identifying a person’s criminogenic *needs/risk*), and how interventions should be delivered (*responsivity*), both generally (i.e., what approaches should be used) and specifically (i.e., adjusting approaches to the individual) (Andrews & Bonta, 2010; Bonta & Andrews, 2017). All aspects of the model are heavily intertwined with Andrews and Bonta’s eight identified risk factors associated with criminal behavior. These factors include one static (i.e., unchangeable) risk factor, history of antisocial behavior, and seven dynamic (i.e., amenable to change) risk factors, including antisocial personality patterns, antisocial cognitions, antisocial associates, family dysfunction, lack of employment and education, substance use, and lack of prosocial leisure activities (Andrews & Bonta, 2010; Andrews et al., 2006). Bonta and Andrews refer to the seven dynamic risk factors as criminogenic needs and assert that these needs should be the primary aim of rehabilitative treatment for persons with criminal legal involvement (Bonta & Andrews, 2017).

When implementing the RNR model, practitioners must first identify a person’s level of risk in engaging in future criminal behavior. This is accomplished using structured risk assessments. Determining the level of risk is essential as it assists practitioners in identifying the appropriate level of intensity and number of services an individual should receive. The model

suggests that persons identified as high risk should receive the greatest intensity of services, and persons with low levels of risk should receive minimal to no formal interventions. Researchers have repeatedly found that when providers adhere to the risk principle (targeting those with the highest risk), an increased reduction in recidivism can be achieved (Goggin, 2018).

Spanning four generations of development, risk assessments have evolved in both their content and degree of accuracy (Andrews et al., 2006). The use of different generations of risk assessments overlaps historically (Latessa & Lovins, 2014). The first generation of risk assessments depended on the subjective judgment of individual practitioners and had limited accuracy in predicting recidivism (Andrews et al., 2006; Latessa, 2010). Starting as early as the late 1920s (Dean & Duggan, 1968; Gruschow, 2022) – and greatly accelerating in the 70s and 80s – the second generation of risk assessments incorporated statistical methods to assess risk; however, they were not driven by theory and primarily used static factors (Bureau of Justice Assistance, n.d.). While static factors – such as criminal history – can assist in the general categorization of risk, they do not provide actionable information when attempting to develop treatment plans to reduce risk (Latessa, 2010) and cannot indicate behavioral changes (Goodley et al., 2021). The RNR model guided the third generation of risk assessments, incorporating static and dynamic risk factors into the risk predictions (Bureau of Justice Assistance, n.d.). Starting in the early 1990s, this generation of risk assessments produced increased accuracy and improved stakeholders’ abilities to develop responsive treatment plans and allocate increased resources for those at the highest risk of recidivism (Andrews et al., 2006). The fourth generation of risk assessment – starting in the early 2000s –



focuses on administering assessments over time, evaluating the change in risk, and providing practitioners with additional information to inform case management plans (Andrews et al., 2006; Bureau of Justice Assistance, n.d.; Latessa & Lovins, 2014).

Once the level of risk has been established, practitioners are tasked with choosing from an array of evidence-based practices that seek to modify these risks. This commonly includes cognitive behavioral interventions that target antisocial cognitions and beliefs, education and employment programs, substance use treatment, and family relationship interventions. As mentioned above, the model also emphasizes that at the time of intervention, practitioners should be responsive not only to evidence-based interventions for the overall population they are treating but also on an individual level (i.e., accounting for learning styles and capacities). Research has found that when evidence-based interventions target criminogenic needs, the risk of recidivism generally decreases (Goggin, 2016).

The RNR model has not gone without critiques, chief among them, surrounding the heavy reliance on numeric risk assessments (Cummins, 2017; Klingele, 2016; Werth, 2019). Risk assessments cannot perfectly predict if an individual will recidivate (Applegarth et al., 2023) and can introduce bias based on the factors used to calculate the risk score (Berk, 2009) with limited ability to correct for this bias (Berk et al., 2021; Martin & Garcia, 2022). Furthermore, the factors used to produce the risk score are not always clear – as developers and agencies are allowed to keep their algorithms proprietary (Selbst & Barocas, 2018; Werth, 2019) – and have the potential to perpetuate bias based on how they are implemented (Justice Center, 2016). Nevertheless, risk assessment tools have an established degree of reliability that is greater than practitioner judgment alone (Bonta & Andrews, 2017; Garb & Wood, 2019; Martin & Garcia, 2022), extensive research supports the targeting of the identified risk factors within the RNR

model (Goggin, 2018; Goodley et al., 2021), and researchers have observed positive outcomes when the intensity of interventions targeting identified criminogenic needs is matched with individuals' risk level (Serin & Lloyd, 2017). Overall, despite the shortcomings of the RNR model, research has demonstrated that applying its principles, on average, reduces recidivism.

### ***Identifying Risk Factors Associated with Recidivism***

Over the past 30 years, extensive research has sought to identify the key factors associated with recidivism among adults who are imprisoned. In 1996, Gendreau and colleagues conducted a meta-analysis examining 131 studies from 1970-1994. Gendreau's study was one of the first to incorporate dynamic risk factors into their meta-analysis – building off the recent classification of risk factors by the founders of the RNR model – and thus remains salient today (Andrews & Bonta, 1994; Andrews et al., 1990). The strongest predictors of recidivism in this study included static factors – history of antisocial behavior, age, gender, and race – and dynamic factors – lack of social achievements and family factors. They also found that intellectual functions, personal distress, and socioeconomic status of family origins were weakly related to recidivism. Their study has since been cited over 3,000 times and supported efforts to incorporate dynamic risk factors in risk prediction and treatment planning.

Recently, Katsiyannis and colleagues (2018) argued that Gendreau et al.'s (1996) study was dated and had sufficient methodological flaws that warranted a new analysis. To update the findings, they examined 19 articles published from 1996-2015, following the same inclusion and coding criteria as Gendreau and colleagues, with the addition of other predictor variables. Within these studies, personal distress was coded as measures of “anxiety, depression, neuroticism, low self-esteem, psychiatric symptomatology (i.e., psychotic episodes, schizophrenia, not guilty by reason of insanity, affective disorder), attempted suicide, personal inadequacy” (Gendreau et al.,

1996, p. 597). Similar to Gendreau's study, Katsiyannis et al. (2018) found that age, history of antisocial behavior, history of family criminality, family upbringing, gender, antisocial personality indicators, criminogenic needs, personal distress, social achievement, and substance abuse all independently predicted recidivism. The strongest predictors included gender, history of antisocial behavior, and family factors, and the weakest were personal distress measures.

A unique aspect of Katsiyannis' analysis was how these authors analyzed recidivism by three types of reoffending, general offenses (i.e., nonviolent and nonsexual), sexual offenses, and violent offenses. For the general offense category, the leading factor associated with recidivism was substance use, followed by mental health issues. While both extensive meta-analyses found greater support for the primary risk factors in the RNR model, they also found relationships with personal distress. These analyses reviewed nearly 50 years of research and collectively found mental health factors had associations with recidivism, albeit "weak" or the "least robust." This is a critical point, as the RNR model asserts that MI alone contains little to no predictive value for determining recidivism risk (Andrews & Bonta, 2010).

These studies illustrate that the connection between mental health factors - referred to in their papers as personal distress - and recidivism is largely inconclusive. Both Gendreau et al. (1996) and Katsiyannis et al. (2018) found that personal distress is the weakest predictor of recidivism; however, Katsiyannis et al. also reported that for certain types of recidivism (nonviolent, nonsexual), personal distress does lead to recidivism. Furthermore, these studies provide very different ideas about personal distress. Gendreau et al. (1996) claimed that interventions focusing on personal distress would have limited success in reducing recidivism, while Katsiyannis et al. (2018) stated that their study demonstrates the importance of personal distress and psychopathic variables (i.e., antisocial orientation) in increasing risk for recidivism.

A limitation to both sets of findings and their subsequent discussion around MI's connection to recidivism is the operationalization of personal distress, which spans a wide range of mental health conditions and levels of severity.

### **Debated Connection Between Mental Illness and Recidivism**

In the early 2000s, Skeem and Louden (2006) systematically reviewed recidivism rates for persons with MI while under community supervision. Some of the questions they proposed to the field included: could observed relationships between increased recidivism be explained by the criminal legal system's responses to this population (e.g., enhanced supervision); could specific factors commonly associated with this population predict increased recidivism (e.g., high rates of substance use and difficulty obtaining employment), or was it some type of spurious relationship? They concluded that the relationship could be partially explained by indirect factors commonly accompanying having a MI, such as difficulty obtaining and maintaining employment, high rates of substance use, and a potential for increased violence. To further knowledge surrounding why persons with MI may experience an increased risk of recidivism, Skeem and Louden called for longitudinal studies and following matched pairs of persons with and without MI during the periods when recidivism would most likely occur. They also identified a need to examine the field's response to mandating treatment for this population, stating this practice was often utilized, but little research had tested its effectiveness - a statement that remains true.

Skeem and colleagues (2014) continued to study why persons with MI may recidivate at higher rates. Among a sample of 221 persons, they found that those with MI ( $n=112$ ) had more criminogenic risk factors compared to their counterparts, that these criminogenic risk factors predicted recidivism, that unique mental health variables such as medication adherence and

mental health symptoms did not predict recidivism, and that persons with MI were not rearrested at higher rates but returned to custody more frequently because of parole violations. Ultimately, they claimed the relationship between MI and recidivism was indirect through criminogenic risk factors and that untreated MI only weakly predicted recidivism. In addition, they proposed that rather than having different risk factors, persons with MI have a greater number and greater severity of criminogenic risk factors.

Other scholars have observed similar relationships. Matejkowski and Ostermann (2015) examined arrest rates over a two-year follow-up period in a sample of persons released from prison with severe MI ( $n=184$ ) compared to a group without severe MI ( $n=184$ ). They found that severe MI was associated with higher levels of assessed risk and that those with higher assessed risk were more likely to recidivate at two years post-release. However, they observed no direct relationship between having a severe MI and recidivism (i.e., those with severe MI had similar recidivism rates compared to those without severe MI). Therefore, their findings suggest that persons with MI have a greater amount of risk and that this helps explain higher observed recidivism rates.

Matejkowski and Ostermann (2015) also tested the extent to which being assigned to parole supervision would moderate the relationship between risk level and recidivism. Results indicated that being under parole supervision did not weaken the strength of the relationship (i.e., did not reduce recidivism). Furthermore, having a MI and not being placed on community supervision was associated with a lower likelihood of recidivism. This raises important questions as to the role of supervision and the degree it may hinder or support those assigned to supervision. If individuals with MI are recidivating to a greater extent when under community supervision, this could suggest that current strategies are doing more harm than good.

The prior studies reviewed (Matejkowski & Ostermann, 2015; Skeem & Loudon, 2006; Skeem et al., 2014) all suggest MI is related to criminogenic risk factors and may result in persons having higher levels of risk. Evidence also suggests that persons with MI return to prison sooner when compared to persons without MI (Cloyes et al., 2010). Cloyes and colleagues (2010) examined time to recidivism over five years using a sample of 2,112 persons released on parole. Those with severe MI returned to prison on average 200 days sooner than those under parole supervision without any MI. In the study, the authors controlled for race, ethnicity, gender, crime severity, and type of offense. While these are important factors to consider, they are all static factors that occurred before reentry (i.e., factors that cannot be changed or influenced by interventions, such as criminal history). Accounting for factors that occurred before release should occur, but stopping there leaves many important questions unanswered. To get a more holistic understanding of what is happening during the reentry process, it is crucial to examine dynamic factors such as employment and substance use during the period of reentry. Cloyes and colleagues (2010) acknowledged that underlying factors could help explain the observed differences between the two groups; however, the available data did not permit the researchers to examine dynamic risk factors during reentry.

Bales et al. (2017) conducted an influential study that helps to provide additional insight into the potential relationship between MI and recidivism. The study drew upon a sample of 200,889 individuals released from incarceration between 2004-2011 in Florida. Each individual received a mental health screening by a mental health professional while in one of the six Florida Department of Correction reception centers. Within this sample, 40,145 were diagnosed with a MI, and 10,826 were diagnosed with a severe MI. Bales and colleagues identified several limitations in the literature examining the relationship between MI and recidivism, calling the

current knowledge base “contradictory and inconclusive” (p. 42). The authors attributed some contradictions to studies using one measure of recidivism (i.e., only arrest, incarceration, or conviction), having limited follow-up periods of one to two years, using small samples, and excluding necessary control variables.

To address these shortcomings, Bales et al. (2017) used multiple measures of recidivism (re-arrest, reconviction, and reincarceration), examined the outcomes over five years, used a large dataset, and incorporated relevant control variables (i.e., gender, race, age, primary offense, prior system involvement, substance abuse, education level, gang involvement, and post-prison supervision). They conducted multiple analyses to provide a robust examination of the proposed relationship. Survival analysis, controlling for other factors, found that at any given time, those with MI were 14.2% more likely to be rearrested, 14.2% more likely to be re-convicted, and 13.5% more likely to be reincarcerated than persons released without MI. The same models were rerun, comparing those with severe MI ( $n=10,826$ ) to those with general MI ( $n=40,145$ ), finding those with more serious MI had increased likelihood of recidivism across all three measures (4% rearrest, 3% reconvicted, and 6% reincarcerated). Additionally, they used logistic regression analysis to test whether having a MI increased the odds of recidivating at specific time points (i.e., at years 1-5). They found significant relationships for all three measures of recidivism (arrest, reconviction, and reincarceration). Having a MI significantly increased the likelihood of being arrested for all five years. In general, the odds of being arrested increased over the five years, starting at a 9.5% greater likelihood at year one and rising to 14.8% by year five. MI was a significant predictor for years one through four of a higher likelihood of reconviction (6.7% at year one – 3.9% at year four). MI also predicted a higher likelihood of reincarceration for years one through five (6.8% at year one – 3.9% at year five). Despite varying strengths of the

relationship, Bales et al. provide the most robust evidence that the presence of MI directly increases the odds of recidivism.

### ***Two Common Treatment Responses***

There is robust evidence that persons exiting incarceration under community supervision often need mental health and substance abuse treatment and face difficulty obtaining services (Bales et al., 2017; Barrenger et al., 2017; DeMartini et al., 2022; Mallik-Kane & Visher, 2008). This information has contributed to policies emphasizing treatment provision to decrease recidivism (Feucht & Gfroerer, 2011). Naturally, the debate concerning the relationship between MI and recidivism has extended to the types of treatments for mental health that ought to be provided in parole services. Two primary treatment approaches have emerged in the criminal legal field; the mental health model and the correctional rehabilitation model (i.e., the RNR Model) (Manchak et al., 2019). The mental health model assumes that mandated mental health therapy, and psychiatric medication will decrease individuals' symptoms and assist individuals in avoiding recidivism (Manchak et al., 2019). Once someone is identified as having a mental health issue in the criminal legal system, a growing response is to attempt to provide mental health services, often through mental health courts and specialty supervision caseloads (Epperson et al., 2014; Manchak et al., 2019).

Skeem and colleagues (2006), using a national survey, identified five components of specialty mental health caseloads; 1) community supervision officers only have persons with MI on their caseload, 2) caseloads are typically reduced in size compared to stander caseloads, 3) officer receive training on working with people who have MI, 4) resources are utilized to meet specific needs of persons with MI, and 5) problem-solving strategies rather than punitive reactions are used to address noncompliance issues. When comparing responses from 21



matched agencies that did not utilize specialty caseloads to the 66 agencies that did, the authors found that specialty supervisors reported that their agencies had greater success in reducing the risk of recidivism for persons with MI. A common challenge among the 66 agencies was maintaining the reduced caseload size, with 21% of agencies exceeding the set caseloads by 30 individuals. This is an important issue as some believe one of the primary reasons for this supervision approach's success is the reduced caseloads (Skeem et al., 2006; Manchak et al., 2019). Evidence suggests that reduced caseloads increase officers' ability to connect individuals to resources and facilitates the development of higher-quality relationships with those they supervise, helping reduce technical violations (Lurigio et al., 2012). Limited studies have examined if symptom reduction occurs for those supervised on specialty caseloads; existing evidence does not indicate a relationship (Skeem et al., 2011; Manchak et al., 2019).

Mental health courts are often composed of a team that includes a judge, defense and prosecuting attorneys, community supervision representatives, case managers, and community mental health provider representatives (Almquist & Dodd, 2009). The overarching goals of mental health courts are to improve public safety by reducing recidivism, provide support to individuals with MI by increasing their utilization of treatment, and reduce costs by using alternative sanctions instead of incarceration (Almquist & Dodd, 2009). Studies of mental health courts often focus on recidivism, and little is known about the process of mental health courts, what aspects work, and for whom these services are most beneficial (Almquist & Dodd, 2009; Lowder et al., 2018; Manchak et al., 2019). A recent meta-analysis found that mental health courts have limited efficacy in reducing recidivism (Lowder et al., 2018). While encouraged by some level of success, findings are not as effective as stakeholders had initially hoped during the development of mental health courts (Epperson et al., 2014).

Epperson and colleagues (2014) noted that the two most common explanations for the limited success of the mental health model are the failure of the system to provide adequate care and not providing these approaches on a broader scale. They warn that evidence does not support that delivering high-quality care on a wide scale will result in improved criminal legal outcomes, stating that even the most effective community mental health strategies have had limited success in reducing recidivism. These authors concluded that the most effective evidence-based strategies shown to address mental health needs in the community have not reduced recidivism, and without further adjustments, it does not matter how widespread these practices become if the system's goal is to reduce recidivism.

The RNR model also referred to as the correctional rehabilitation model (Manchak et al., 2019), was previously described in detail. What is important to reemphasize here is that this approach routinely places limited focus on mental health and often minimizes its role in helping individuals to avoid returning to incarceration. The two models are usually not integrated, with practitioners and policymakers selecting to follow the guiding tenets of one model while failing to include beneficial aspects of the other model. One area where these models could naturally incorporate the strengths of one another is through greater focus and application of specific responsivity approaches (i.e., adjusting treatment approaches to individuals' circumstances and personal characteristics) (Manchak et al., 2019). Along with others, I argue that there is a need to incorporate criminogenic needs more comprehensively into mental health treatment approaches for individuals with criminal legal involvement. In doing so, the criminal legal system may be able to support the needs of this population better, improve well-being, and reduce recidivism (Bonfine et al., 2020; Epperson et al., 2014; Lurigio & Harris, 2016; Skeem et al., 2015).

## *Ethical Considerations*

The use of mandated mental health treatment in any setting can be controversial. Scholars have raised ethical concerns about requiring individuals to receive mental health care against their will (Leung, 2002; Monahan et al., 2003) and debated when and if this practice is acceptable (Caplan, 2006; Hachtel et al., 2019). A critical factor that must also be considered when determining whether and when treatment should be mandated is that only a tiny portion of individuals with MI pose a serious risk to public safety (Dvoskin et al., 2020). A definitive claim of mandated treatment's role is beyond this dissertation's scope; however, as social workers, using social work values as an evaluative criterion can be helpful.

One of the governing values of social work that is particularly pertinent to this issue is recognizing the dignity and worth of all individuals, as well as seeking social justice, understanding the importance of human relationships, having integrity, and providing competent care (National Association of Social Workers, 2021). Guiding questions on if mandated treatment should be used can include is the practice done in a way that recognizes the inherent dignity and work of the individual, are the services being delivered informed by evidence-based knowledge and provided competently, can mandated treatment be enforced in a way that builds human relationships, demonstrates integrity, and advances social justice? If systems, organizations, and providers can answer yes to these questions, then there may be a role mandated treatment can play. If social work practitioners find themselves in situations where these values are being violated, as social workers, they must advocate for their clients and seek systematic change.

## **Conclusion**

As described in this chapter, many questions about the relationship between MI and recidivism remain unanswered. Despite the continued debate, sufficient evidence suggests that

MI has some relationship with recidivism. What is less clear is the extent of the relationship, the factors that may moderate this relationship, and if the RNR model can account for these observed connections. Furthermore, the lack of understanding and continued debate has greatly impacted the strategies utilized to respond to the burgeoning population of people imprisoned with MI. Common approaches to help reduce the prevalence of individuals with MI in the criminal legal system have centered on mandating mental health treatment. While these strategies have shown some level of success, the reported level of effectiveness leaves ample room for improvement. An improved understanding of how criminogenic risk factors impact those with MI can help to increase the effectiveness of these approaches while recognizing the unique impacts MI can have on individuals. Additional research is needed that utilizes large sample sizes, has sufficient follow-up periods, and examines the differential impact of criminogenic risk factors for individuals identified as needing mental health treatment compared to those without MI.

### **Chapter 3: Method**

This study utilized administrative data from Georgia's Department of Community Supervision (DCS). The study included individuals released from prison on parole in the state of Georgia between January 1, 2013, and December 31, 2015. Reviewing some of the characteristics of Georgia's criminal legal system is needed to contextualize this study. Currently, there are 34 state prisons, housing approximately 47,000 persons at any given time, and two private prisons (Georgia Department of Corrections, n.d.). Georgia has no legal right for persons to be released on parole. A person must be statutorily eligible for parole consideration (e.g., not serving a life sentence). The State Board of Pardons and Paroles then reviews eligible cases - consulting state guidelines - and recommends the percentage of the sentence that should be served (State Board of Pardons and Paroles, n.d.). For an individual to be released on parole, a majority vote of a five-member parole board must approve the release. Persons on parole must then comply with standard and special conditions given by the parole board while under supervision in the community (Department of Community Supervision, n.d.).

In 2012, Georgia spent over one billion dollars on adult corrections and reported a felony reconviction rate of 26% over a three-year follow-up period (Boggs & Miller, 2018). Racial disparities are prevalent among the prison population. Black individuals accounted for 33% of the general population in Georgia in 2010 (United States Census Bureau, n.d.) but comprise a larger proportion of the prison population. In 2009, two out of every three men in prison were Black (66%), and by 2017, this disparity had decreased to 40% (Boggs & Miller, 2018). In 2011, Governor Nathan Deal began to seek reforms in the criminal legal system to reduce the number of people incarcerated, provide increased support for those exiting the system, and reinvest savings into prevention efforts. Initial research has shown positive effects from these efforts to

reduce incarceration across the state, with nearly 2,000 fewer people in prison compared to 2012 (7,000 below the projected prison population growth estimates), 4,000 fewer annual commitments, and reductions in recidivism risk between 10-30% across participating counties in specialty programs (Applied Research Services, 2018; Boggs & Miller, 2018).

### **Sample and Dataset**

The sample for this study included individuals released from Georgia state prisons between January 2013 and December 2015. Georgia's DCS Department provided all records for the analysis. Administrative records were compiled containing everyone released on parole between 2013 and 2015 and their prior criminal history, conditions of parole, events during supervision (e.g., drug test results, supervision violation), and arrests occurring within three years after release. Approximately 33,798 individuals were released on parole supervision in Georgia during the study period. Before releasing the data, DCS removed individuals missing key identifiers linking them to arrest records, persons who were transferred out of state to be supervised, or those who were deported or died, placing the sample size at 26,761.

Of the 26,761 persons, 286 were dropped due to having a negative age at the time of release, likely resulting from a data entry error. Additionally, 596 individuals were dropped due to insufficient sample size of ethnic or racial identities (i.e., Hispanic  $n=493$  (1.8%), Asian  $n=74$  (.28%), Native American  $n=12$  (.04%), other  $n=15$  (.06%), and unknown  $n=4$  (.01%)), placing the sample size at 25,879. Of the 25,879, seven percent were missing values on variables included in the final analysis; years of education (4.85%), years in prison (1.04%), and recidivism risk assessment score (1.85%), placing the analytic sample at 24,046. A detailed discussion of how missing data was addressed is provided below. This study received an IRB-exempt status from the UCLA Institutional Review Board (UCLA IRB#22-000110).

## **Measures**

### ***Recidivism***

The dependent variable in this study was recidivism. Recidivism is defined as an arrest for a felony or misdemeanor offense following release. Recidivism data were tracked for three years post-release and reported by the Georgia Crime Information Center. Recidivism was coded as zero if the individual was not arrested over the three-year follow-up period and a one if they were arrested.

### ***Mandated Mental Health Condition of Parole***

The primary independent variable of interest is if an individual received mandated mental health treatment as a condition of their parole. The parole board can mandate specific conditions individuals must meet to qualify for and maintain their release. One of these conditions is that an individual must follow up with some mental health treatment. This can include mandated mental health therapy, mandated medication adherence, or a combination of interventions. The parole board makes these decisions based on the prison health records of the individual. Mandated mental health conditions are almost exclusively required for persons with severe MI (e.g., schizophrenia, bipolar, severe depression) (Nicholas Powell, personal communication, November 18, 2022). Mental health diagnosis was unavailable in the shared data, requiring this measure to serve as a proxy indicator for the presence or absence of MI.

### ***Risk Assessment Score***

Georgia's DCS utilizes an in-house risk assessment tool developed by Applied Research Services (Meredith, 2017). Males and females have different algorithms that predict an individual's recidivism risk based on a multitude of factors (e.g., age, type of offense, prior criminal history, mental health); however, the specific factors that go into the risk assessment

score are not released to the public. ARS reports submitted to Georgia's DCS indicated that the risk assessments for males and females on parole have been validated and accurately classified males and females (Meredith, 2017). I was not provided additional information regarding the risk assessment. Risk assessment scores are reported on a scale of 1-10, with one being the lowest level of risk and ten being the highest. Once released from prison, all persons should receive an initial risk assessment score.

### ***Percent of Supervision Period Employed***

The percentage of time employed following release was calculated by taking the number of days employed during the three years divided by the number of days under supervision during the three-year follow-up period. Individuals with no record of employment were coded as being employed zero percent of the time. This measure indicated one of the main RNR risk factors (i.e., employment).

### ***Percent of Positive Drug Tests***

The percentage of positive drug tests was calculated by taking the total number of positive drug tests and dividing it by the total number of tests. The State of Georgia does not require all individuals under parole to be regularly drug tested, and the supervising officer can have discretion on the frequency of drug tests (Department of Community Supervision, n.d.; Nicholas Powell, personal communication, November 17, 2022). The percentage of positive drug tests was used to control for these factors rather than a raw count of positive drug tests. Individuals with no recorded drug test were coded as zero percent. This measure served as an indicator of one of the RNR risk factors (i.e., substance use).



### ***Supervision Violations***

An index was created to measure the number of supervision violations. The number of electronic monitoring violations, violations for not following instructions, the number of times someone failed to report, and the number of times a person received a violation for moving without permission were summed. This measure indicated whether individuals followed parole requirements.

### **Covariates**

#### ***Primary Offense***

National figures have identified variations in recidivism rates for individuals released from state prisons when comparing the primary offense type for their initial conviction (Antenangeli & Durose, 2021; Durose & Antenangeli, 2021). Additionally, research suggests differential recidivism rates are prevalent when comparing individuals with violent crimes to those with non-violent crimes (Prescott et al., 2020) and potentially that risk factors may vary for individuals when examining offense type (Van Der Put, 2020). Therefore, it was important to account for the committing offense. In the sample, there were 203 unique primary offenses recorded. Using Georgia's classification categories, primary offenses were recoded into five parent classifications, 1 = violent (non-sexual offense), 2 = violent (sexual offense), 3 = property offenses, 4 = drug offenses, and 5 = other. Individuals without a primary offense indicated were coded as unknown. The analysis used dummy coding with violent (non-sexual offense) as the reference group.

### ***Additional Parole Condition(s)***

Georgia's parole board can assign additional parole conditions beyond mental health treatment as a requirement for community supervision. Conditions of parole were important to account for as they indicate a suspected area of concern for the individual and place additional requirements on the person that may alter their reentry experience. The following parole conditions were included in the data and coded as follows: substance abuse treatment (yes = 1, no = 0), cognitive skills course (yes = 1, no = 0), educational obtainment (yes = 1, no = 0), no contact order (yes = 1, no = 0), electronic monitor order (yes = 1, no = 0), mandated work release (yes = 1, no = 0), restitution (yes = 1, no = 0), and sex offender treatment (yes = 1, no = 0).

### ***Gender***

Gender differences have been observed in the frequency of recidivism and factors associated with recidivism (Benda, 2005; Collins, 2010; Miller, 2021). Variation is also present in the types of mental health diagnoses that men and women are diagnosed with within the general population (Eaton et al., 2012; Riecher-Rossler, 2017). Additionally, incarcerated women tend to report a history of MI at a higher rate than incarcerated men (Bronson & Berzofsky, 2017; Maruschak et al., 2021). As such, gender was an important variable to include in the analysis. Gender was coded as female = 0 and male = 1. No other gender categories were recorded.

### ***Race***

Black individuals are often overrepresented in the criminal legal system (Nellis, 2021, The Sentencing Project, 2018) and the MI population inside correctional institutions (Apple et al., 2020). On average, Black individuals have higher risk assessment scores, primarily linked to greater criminal history (Skeem & Lowenkamp, 2016) and systemic racism (Freeman &

McGilton, 2020; The Sentencing Project, 2018). Furthermore, Black individuals continue to face systemic racism that negatively impacts their reentry process (Mitchell, 2021; Williams et al., 2020). As such, race was an important control variable to include. Participants' race was coded as Black = 0 and white = 1. Other racial and ethnic identities were not included in the analysis due to sample size limitations.

### *Age*

The evidence connecting age and criminal behavior is robust, with criminal offending peaking in late adolescence/early adulthood and declining after that (Farrington, 1986; Rakes et al., 2018). Despite varying theories on how age is connected to crime (Hirschi & Gottfredson, 1983), age remains a necessary factor to consider (Shulman et al., 2013; Kazemian, 2021). Age at the time of release was calculated by subtracting the individual's birthdate from the released date and then dividing it by 365.25, putting the measurement unit in years.

### *Years of Education*

Obtained education is a protective factor against criminal behavior (Lochner & Moretti, 2004). Individuals with higher levels of education have a greater opportunity to increase their wages. Additionally, education reinforces prosocial norms that can reduce the likelihood of engaging in crime (Lochner & Moretti, 2004). While incarceration may limit the positive effects of education before imprisonment, it is reasonable to expect that increased levels of education could still improve an individual's reentry experience and employment opportunities. For this study, individuals' level of education at the time of incarceration was measured in years. One point-eight percent of the sample reported having more than 21 years of education. These values were recorded as 21-plus. Twenty-one was selected as the maximum value as most graduate education would be concluded in that time.

### ***Years Incarcerated***

Length of incarceration can have a criminogenic effect (i.e., increase the likelihood of reoffending) (Cullen et al., 2011; Nagin et al., 2009; Vieraitis & Kovadzic, 2007). More extended periods of incarceration expose individuals to this criminogenic environment for longer periods. Lengthy periods of incarceration may also weaken individuals' social ties to a greater extent, potentially resulting in less social support upon reentry. Length of imprisonment was initially recorded in days incarcerated. For interpretability, this measure was recoded into years by dividing the days by 365.25.

### ***Criminal History***

Prior criminal history strongly predicts recidivism (Bonta & Andrews, 2017; Gendreau et al., 1996; Katsiyannis et al., 2018). To account for criminal history, the number of misdemeanor arrests and felony arrests were summed individually. Both the number of misdemeanor arrests and the number of felony arrests were included in the analysis. The history of the seriousness of offenses and frequency may differ for individuals, hence the need to include both misdemeanor and felony arrests.

### **Descriptive Statistics**

Table 1 provides descriptive statistics for all measures included in the analysis. Table 1 displays the distribution of the variables for those with a mental health condition of parole, those without a mental health condition of parole, and the total sample.

Table 1.

#### *Descriptive Statistics*

Variable	With MH Condition of Parole	Without MH Condition of Parole	Total Sample <i>n</i> =24,046
----------	-----------------------------	--------------------------------	----------------------------------

	<i>n</i> =3,642	<i>n</i> =20,404	
			%
Mental Health Condition of Parole			
Yes	-	-	15.2
No	-	-	84.9
Gender			
Male	58.5	92.5	87.4
Female	41.5	7.5	12.6
Race			
White	39.7	60.1	57.0
Black	60.4	39.9	43.0
Primary Offense			
Violent/Non-Sex	20.6	22.1	21.9
Property	39.4	31.8	32.9
Drug	19.3	20.9	20.7
Violent/Sex	4.0	3.9	3.9
Other	7.4	9.0	8.7
Unknown	9.4	12.3	11.9
		<i>M</i>	
		( <i>SD</i> )	
Age	37.1	35.0	35.5
	(10.3)	(10.0)	(10.2)
Years of Education	11.6	11.5	11.5
	(2.7)	(2.1)	(2.1)
Years in Prison	1.9	2.2	2.2
	(2.2)	(2.7)	(2.6)
Number of Prior Misdemeanor Arrests	5.0	4.6	4.7
	(4.7)	(4.6)	(4.6)
Number of Prior Felony Arrests	7.7	4.0	7.1
	(6.2)	(5.7)	(5.8)
Risk Assessment Score	6.4	6.1	6.2
	(2.4)	(2.3)	(2.3)
Percent of Time Employed	39.8	47.3	46.1
	(41.6)	(41.6)	(41.7)
Percent of Positive Drug Tests	18.6	20.4	20.1
	(32.1)	(33.0)	(32.6)
Number of Supervision Violations	1.0	1.0	0.72
	(2.8)	(3.1)	(2.1)

MH = Mental Health, *M* = mean, *SD* = Standard Deviation

## Research Aims and Hypothesis

This study aims to understand better the relationship between MI and recidivism and the degree to which criminogenic risk factors' associations with recidivism may vary depending on

whether an individual has been identified as having mental health needs. Research Aims One and Two are listed below.

1. Examine the extent to which individuals mandated to receive mental health treatment are more likely to be rearrested compared to those without this parole condition.

H1: Individuals mandated to follow up with mental health treatment as a condition of their parole will have an increased likelihood of being rearrested.

2. Examine the extent to which factors associated with recidivism differ between those mandated to receive mental health treatment and persons on parole without this mandate.

As Research Aim Two is exploratory, hypotheses are not proposed. Prior evidence suggests that individuals with MI share the same criminogenic risk factors as individuals without MI (Matejkowski & Ostermann, 2015; Skeem & Louden, 2006; Skeem et al., 2014). What is less understood is how the presence of MI may interact with these risk factors and if the relationships between criminogenic risk factors and recidivism look different between the two groups. Specifically, the analysis assessed if the relationships between risk assessment score, employment, substance use, and the number of parole violations as related to odds of rearrest differ across the two groups.

### **Analysis**

Stata 16 was used for data preparation and analysis. Logistic regression was used to test Research Aims One and Two. For Research Aims One and Two, recidivism served as the dependent variable. The independent variables in the models included mandated mental health condition of parole, risk assessment score, percent of positive drug tests, percent of supervision period employed, and the number of supervision violations. All covariates were used to create entropy balancing weights (EB) – described below – with the weights applied in all regressions.

For Research Aim One, a series of bivariate logistic regressions were conducted first. Recidivism was the dependent variable for each regression accompanied by one of the independent variables - mandated mental health condition of parole, risk assessment score, percent of positive drug tests, percent of supervision period employed, and supervision violations. Next, a multivariate regression was run that included all independent variables in one model. Research Aim Two was tested with a series of logistic regressions, with each regression having an interaction term between having a mandated mental health condition of parole and one of the independent variables while still controlling for the other independent variables.

### ***Entropy Balancing***

Entropy balancing is an effective method for creating rigorous comparison groups by creating balanced covariates between the groups (Hainmueller, 2012; Hainmuller & Xu, 2013; Zhao & Percival, 2017). EB makes weights for the covariates of the comparison group to match those of the reference group being examined, in this case, individuals with MI. EB assumes observations are independent, the samples are equally distributed from a population, and all the information that may cause the groups to differ has been included (Zhao & Percival, 2017). The ability to meet the assumptions that all variables that lead the groups to differ depends in this case on the available data and the theoretical application of the measures. Based on my knowledge of the area of study and the available measures, these assumptions have been met to an acceptable degree. Measures such as homelessness and the level of family support may help to provide additional information; however, they were not available for this analysis. It is important to note that using EB helped to create a stronger causal claim, but it cannot be expected to reach the rigorous level of randomization.

### ***Missing Data***

Limited missing data were present in this study. Primary prison offense had the largest portion of missing data at 12.7%, followed by education at the time of arrest (4.85%), initial risk assessment score upon release (1.85%), and years in prison (1.04%). Chi-square and t-tests were conducted to examine if participants with missing data on primary prison offense were statistically different from those with a primary offense recorded. Individuals missing a primary offense were significantly different in the proportion of gender (having fewer females) and race (having fewer Black individuals), were 1.3 years older, had slightly fewer years of education (0.2), had on average .5 more misdemeanor arrests and one more felony arrest. While some differences were observed, the substantive difference was minor. An unknown category was created for those missing a primary offense to maintain these observations in the sample.

The remaining observations with missing data were excluded from the final analysis. Minimal differences were observed between those included in the final model and those with missing data; for example, individuals not included in the analytic sample had a smaller proportion of females (4% difference), were slightly older (3 years), and had marginally less education (.25 years). Due to the minimal difference observed, the fact that no variable had greater than 5% missing data (Schafer, 1999) and that there was no missing data on the dependent variable (Bennett, 2001), these observations were excluded from the analytical sample.

### **Limitations**

This study had several strengths, including a large sample and a three-year follow-up period. However, some limitations must be noted. All analyses used receiving mental health treatment as a condition of parole as a proxy variable for having a MI. Georgia's parole board



used prior mental health history and current mental health needs to inform if an individual should receive a condition of mental health treatment. The parole board's decision may not directly coincide with a MI diagnosis. Furthermore, an individual could experience a MI while in prison and not receive this condition or develop a MI once released – both of which would not be accounted for in this study. Official diagnosis and prior mental health history were unavailable to determine the severity or types of mental health issues. Without this information, it is impossible to validate the parole board's determination that the person has a MI.

Another limitation is the absence of data on the type of MI treatment and the attendance frequency. This gap prevented the examination of what proportion of individuals mandated to receive treatment attended treatment and whether treatment attendance served as a protective factor. Additionally, the dataset did not allow for examination of what types of services and interactions individuals on parole had with their community supervision officers, which could impact reentry success.

Researchers and federal agencies often use arrests to indicate recidivism (National Institute of Justice, 2008). However, arrests can only serve as an indication of crime, as crimes may go undetected and may not be confirmed or convicted (National Institute of Justice, 2008). Additionally, having multiple indicators of recidivism beyond arrests can add valuable information regarding if someone is convicted and then ultimately reincarcerated (King & Elderbroom, 2014). For this study, an arrest was the only indicator of recidivism, limiting the extent to which recidivism could be examined.

It is also important to acknowledge that generalizability is limited to Black and white persons released on parole in the state of Georgia. Due to the small sample size of other racial and ethnic identities, they were not included in the analysis. When considering geographic

location, the state of Georgia may have system-level and cultural differences that may alter factors associated with reentry compared to other geographical areas. Additional studies are needed to examine whether similar relationships are observed in other locations.

## Chapter 4: Results

This chapter presents the results for Research Aims One and Two. Table 2 shows the results for Research Aim One, both the bivariate and multivariate regressions. For Research Aim Two, figures are provided to visualize significant interaction terms.

### Research Aim One

For Research Aim One, the hypothesis that individuals with mandated mental health treatment were more likely to be rearrested compared to those without this parole condition was examined. First, a series of bivariate logistic regressions were conducted with recidivism as the dependent variable and one of the following independent variables: mental health condition of parole, risk assessment score, percent of positive drug tests, percent of supervision period employed, and the number of parole violations (see Table 2). Individuals who received a mental health condition of parole were 34% more likely to be arrested within the three-year follow-up period ( $p < .001$ , 95% CI [1.23, 1.46]). Moreover, on average, each one-point increase in the risk assessment score was associated with 15% greater odds of being re-arrested ( $p < .001$ , 95% CI [1.13, 1.17]). As the percentage of positive drug tests increased, individuals' likelihood of being arrested also increased ( $OR = 2.29$ ,  $p < .001$ , 95% CI [2.0, 2.62]). The greater the proportion of time someone was employed during their community supervision was associated with a decreased likelihood of being arrested ( $OR = .38$ ,  $p < .001$ , 95% CI [.34, .42]). Finally, the number of parole violations was associated with a minimal increase in the odds of being arrested ( $OR = 1.02$ ,  $p < .01$ , 95% CI [1.01, 1.05]).

The multivariate regression tested the relationships between recidivism and each independent variable simultaneously within one model. Having a mandated mental health condition of parole was associated with having a 17% increased likelihood of being re-arrested

( $p < .001$ , 95% CI [1.07, 1.27]). This result supports the hypothesis that individuals mandated to receive mental health treatment are more likely to be arrested compared to persons without this parole condition.

It is important to note that risk assessment score, percent of positive drug tests, and percent of time employed while under supervision remained significant in the multivariate regression, see Table 2. Each one-point increase in the risk assessment score was associated with a 14% increased likelihood of being arrested ( $p < .001$ , 95% CI [1.12, 1.16]). As the percentage of positive drug tests increased, the likelihood of being arrested also increased ( $OR = 1.64$ ,  $p < .001$ , 95% CI [1.42, 1.91]). Increased time of employment was associated with a decrease in the likelihood of being arrested ( $OR = .39$ ,  $p < .001$ , 95% CI [.35, .44]). The number of parole violations was no longer significant when accounting for the other factors in the model ( $OR = 1.0$ ,  $p = .39$ , 95% CI [.99, 1.01]).

Table 2.

*Bivariate & Multivariate Logistic Regressions on Recidivism*

	Bivariate Regressions		
	<i>OR</i>	<i>SE</i>	95% CI
Mental Health Condition of Parole	1.34***	.06	1.24-1.46
Risk Assessment Score	1.15***	.01	1.13-1.17
Percent Positive Drug Test	2.29***	.16	2.00-2.62
Percent of Supervision Period Employed	0.38***	.02	0.34-0.42
Number of Parole Violations	1.02**	.01	1.01-1.04
	Multivariate Regression		
Mental Health Condition of Parole	1.17***	.05	1.07-1.27
Risk Assessment Score	1.14***	.01	1.12-1.16
Percent Positive Drug Test	1.64***	.12	1.42-1.91
Percent of Supervision Period Employed	0.39***	.02	0.35-0.44
Number of Parole Violations	1.00	.01	0.98-1.02

$n = 24,046$

*OR* = Odd Ratio, *SE* = Standard Error, CI = Confidence Interval

\* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$

## Research Aim Two

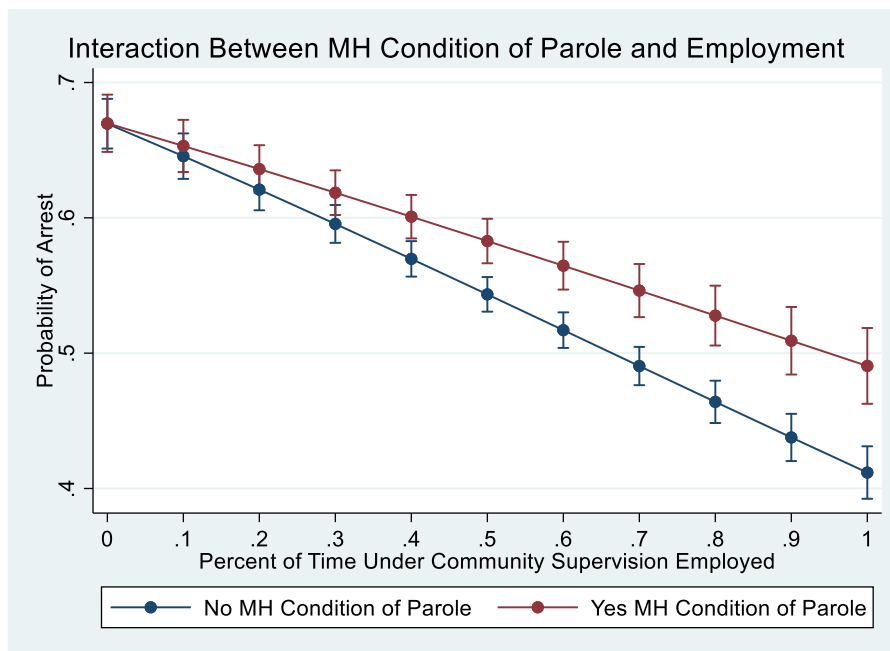
In Research Aim Two, the extent to which known factors associated with recidivism differ between those mandated to receive mental health treatment and persons on parole without this mandate was examined. Four logistic regressions were run, each with an interaction term between having a mental health condition of parole and one of the independent variables (i.e., risk assessment score, percent positive drug tests, percent of supervision period employed, and the number of parole violations), while also controlling for the other independent variables in the model. A significant interaction term infers that the relationship between two variables depends on another variable (i.e., there is evidence of moderation). No hypotheses were stated due to the exploratory nature of this research aim.

Two of the four interactions were significant. The interaction between having a mental health condition of parole and percent of positive drug tests was significant ( $OR = .72$ ,  $SE = .10$ ,  $p < .05$ ), with increased positive drug tests being significantly related to a higher likelihood of arrest for both individuals with a mental health condition of parole ( $OR = 1.41$ ,  $SE = .16$ ,  $p > .01$ ) and individuals without mandated mental health treatment ( $OR = 1.96$ ,  $SE = .17$ ,  $p > .001$ ). The percentage of supervision period employed ( $OR = .33$ ,  $SE = .15$ ,  $p < .01$ ) was also significant, with increased time of employment associated with a decreased likelihood of arrest for both individuals with a mental health condition of parole ( $OR = .46$ ,  $SE = .02$ ,  $p > .001$ ) and individuals without mandated mental health treatment ( $OR = .33$ ,  $SE = .04$ ,  $p > .001$ ). These significant interactions suggest that the relationship between being arrested and positive drug tests and the relationship between being arrested and the percentage of time employed changes based on whether an individual has a mental health condition of parole. Interactions between having a mental health condition of parole and risk assessment score ( $OR = .99$ ,  $SE = .02$ ,  $p =$

.11) and having a mental health condition of parole and number of parole violations ( $OR = .97$ ,  $SE = .02$ ,  $p = .37$ ) were not significant.

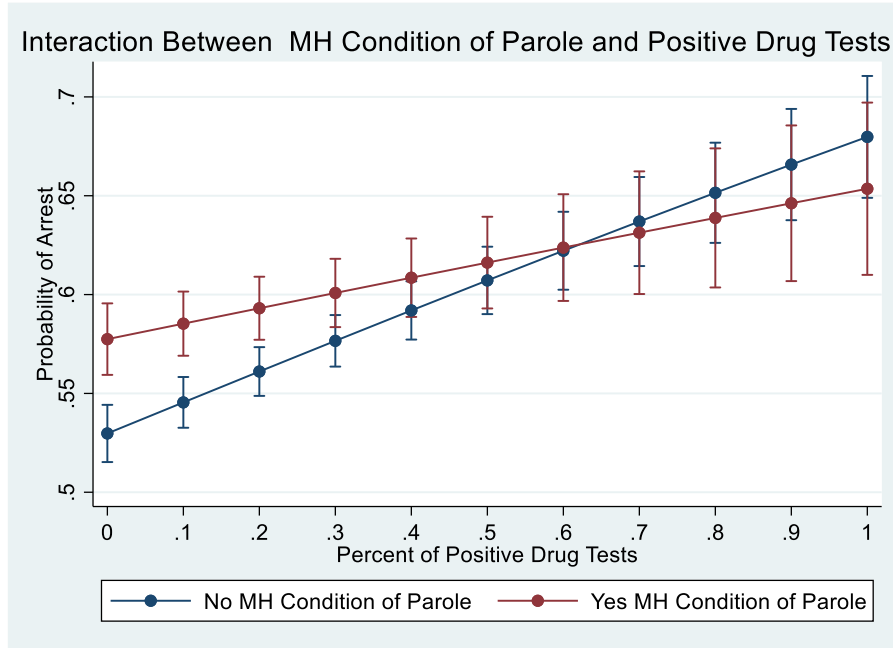
The values were plotted to examine the significant interactions further; see Figure 1. As the percentage of employment increased for individuals without a mental health condition of parole, the probability of being arrested decreased to a greater extent when compared to individuals with a mandated mental health condition of parole.

Figure 1.



As shown in Figure 2, individuals with a mental health condition of parole had a higher probability of being arrested when positive drug tests were not present or low. As the percentage of positive drug tests increased for both groups, the probability of arrest is no longer significantly different from individuals without a mental health condition of parole. This interaction suggests that as the percentage of positive drug tests increases for individuals without a mental health condition of parole, their probability of arrest becomes similar to those with a mental health condition of parole.

Figure 2.



## Conclusion

Results from this study suggest that individuals identified as needing mental health follow-up while under community supervision are more likely to be arrested when controlling for risk assessment score, employment, substance use, and parole violations. Results also indicate that the relationship between being arrested with employment and positive drug tests depends on having a mental health condition of parole. Employment served as a protective factor for both groups; however, individuals without MI likelihood of recidivism decreased to a greater extent as the percentage of employment increased. When examining positive drug tests, individuals with MI initially had an increased likelihood of rearrest, but as the rate of positive drug tests increased, the two groups were no longer statistically significantly different. It is also important to note that an increase in risk assessment score significantly predicted recidivism on average for the entire sample and was not dependent on if someone had a mental health condition of parole. The implications of these findings will be discussed in more detail in the next chapter.

## Chapter 5: Discussion

The relationship between MI and recidivism has been highly debated over the last 20 years (Andrews & Bonta, 2010; Bales et al., 2017; Bonta et al., 2014; Cloyes et al., 2010; Katiyannis et al., 2018, Manchak et al., 2019; Skeem & Loudon, 2006; Skeem et al., 2014; Yukhnenko et al., 2020). This study contributes to the literature by providing evidence that both MI and criminogenic factors predict recidivism and should be areas of focus for policymakers, practitioners, and researchers. In this analysis of an extensive state database, individuals identified as requiring mental health follow-up were more likely to be arrested within three years of release. Additionally, increased risk assessment scores were related to a higher likelihood of arrest for both groups. These findings suggest that MI and criminogenic needs should be targeted when attempting to reduce recidivism and support those under supervision. The analysis also revealed important insights surrounding individual criminogenic risk factors. Across the sample, employment was a protective factor for avoiding arrests, and increased substance use was associated with a greater risk of arrest. These findings suggest that securing and maintaining employment and avoiding substance use for all participants is important. Being identified as having a MI was also related to varying relationships between employment and recidivism and substance use and recidivism. This has important implications for policy, practice, and research as the relationships between these criminogenic risk factors varied by MI, pointing to a need to implement responsive policy and interventions that effectively address the needs of this population. This chapter will focus on contrasting these results to existing research, identifying implications for policy, practices, and research, identifying the contribution of this study to the field, and providing suggestions on the next steps to improve outcomes for individuals with MI involved in the criminal legal system.



## **Unpacking the Results**

### ***Mental Illness Does Predict Recidivism***

This study found that individuals identified as needing mental health treatment by the parole board – who were thought to have a severe MI - were at higher risk of being arrested for a new crime over a three-year follow-up period. This finding adds additional evidence to existing literature suggesting that having a MI directly increases the odds of being arrested (Bales et al., 2017; Colyes et al., 2010). Additionally, this finding provides counterevidence to others that suggest people with MI are arrested at the same rate as persons without MI (Skeem & Louden, 2006; Skeem et al., 2014) or that the explanatory power of MI is attributable to criminogenic risk factors (Andrew & Bonta, 2010; Andrews et al., 2006; Matejkowski et al., 2015; Skeem et al., 2011). The fact that the presence of MI in this study increased the odds of arrest for a new crime may add to this debate with a greater degree of conclusiveness. MI does matter, and it matters in both direct and indirect ways.

When interpreting the finding that MI was associated with increased recidivism, diagnosis, symptom severity, and symptom reduction were not examined. This is an important distinction, as this study could not determine if the relationship varied based on the type of mental health disorder or the severity of symptoms. Furthermore, it is possible that being identified as having a MI by itself may negatively impact how criminal legal actors respond to those under community supervision. However, this explanation is somewhat limited in that recidivism was measured by an arrest for a new crime and not parole violations. This strengthens the claim that MI negatively impacts individuals' ability to avoid being arrested, as an individual would have to have been accused/arrested of a new offense rather than simply not following parole procedures. Additionally, the finding that MI did increase the risk of recidivism is further

strengthened by the study accounting for individuals' risk assessment scores, frequency of employment, positive drug tests, number of parole violations, and a host of relevant covariates.

This study also observed differential relationships – dependent on being identified as needing mental health treatment – between known criminogenic factors (i.e., employment and substance use) and re-arrest. This suggests MI should be considered when attempting to reduce recidivism by addressing criminogenic risks in the RNR model. A one-size-fits-all approach will, at best fall short in achieving the desired outcome of reducing recidivism and, at worst, prove ineffective. As discussed in the literature review, evidence-based practices from the mental health and the RNR models should be incorporated. When attempting to implement the RNR model, MI is an important factor to consider, particularly in connection with the responsivity principle, and should be actively considered when developing and implementing policies and interventions for this population.

### ***Risk is also Important***

In this study, higher risk assessment scores were associated with a greater likelihood of being arrested across the sample. No significant interactions were observed between being identified as needing mental health follow-up and risk assessment scores for predicting re-arrest. This means that as assessed risk increased, the likelihood of recidivism increased at the same rate for those with MI and those without MI. Many researchers tout criminogenic risk factors as significant predictors of recidivism, regardless of MI status (Andrews & Bonta, 2010; Bonta & Andrews, 2017). Scholars have proposed targeting these criminogenic risks for everyone, irrespective of mental health challenges (Andrews & Bonta, 2010; Goodley et al., 2021; Skeem & Loudon, 2006; Skeem et al., 2014). The findings from this study support evidence that criminogenic factors are important to address for all individuals, including those with MI. This

finding is consistent with prior research, which has documented that persons experiencing mental health challenges share at least some of the same risk factors as individuals without MI (Bonta et al., 2014; Epperson, 2014; Manchak et al., 2019, Matejkowski & Ostermann, 2015; Skeem et al., 2014, Skeem et al., 2011). Furthermore, increased employment and decreased substance use were associated with reduced recidivism for the whole sample. This implies that both groups will benefit from interventions that aim to address these criminogenic needs, but as noted above, they may benefit more from treatment approaches that consider their mental health.

### ***Need to Target Both Mental Illness & Criminogenic Needs***

A unique contribution of this study was the examination of if MI was related to variations in the relationship between criminogenic needs (i.e., substance use and employment) and recidivism. This study measured individuals' employment and substance use over the three years. This design was a significant strength, as the study was not bound to solely look at risk assessment scores (i.e., predictions of future behavior based on current assessments of criminogenic risks) but also examined how specific criminogenic risks were experienced over the follow-up period. The finding that the presence of a mental health condition of parole was significantly related to differential relationships with recidivism when examining employment and substance use suggests that it is not enough to know that both groups share the same risk factors but that it is also important to understand how MI may interact with these risk factors. For example, employment served as a greater protective factor for persons who did not have a mental health condition of parole. This finding suggests that although employment benefits both groups, persons identified as needing mental health support benefited to a lesser degree.

The increase in positive drug tests was associated with an increased risk of recidivism for people with and without MI in the sample. It is well established that persons with MI have high

rates of comorbidity with substance use disorders (Baranyini et al., 2022; Hawks et al., 2022; Hunt et al., 2015; National Institute of Drug Abuse, 2021). Treatment needs are high for this population and often go unmet in carceral settings (Feucht & Gfroerer, 2011; Hawks et al., 2022). It is also widely acknowledged that using illicit substances increases the risk of criminal legal involvement for persons without MI (Bennett et al., 2008; Dowden & Brown, 2002). In this study, when individuals did not test positive for substances, persons with MI had a higher likelihood of arrests. As the percentage of positive drug tests increased, the difference in increased probability of arrest began to decrease and eventually was no longer significantly different between the two groups. This suggests on average, the use of substances increased the risk of recidivism to a similar extent across groups. This is an important finding as substance use treatment is highly emphasized for individuals with MI, possibly to a greater extent than for persons without MI. To be clear, I am not saying substance use treatment is more or less important for persons with co-occurring MI, but that in this study, the relationship between substance use and recidivism was similar across the groups.

Evidence is continuing to grow that both MI and criminogenic risk factors should be targeted, and hyper-focusing on one or the other will likely be related to lower levels of effectiveness (Bonfine et al., 2020; Epperson et al., 2014; Skeem et al., 2015). A shared interest is needed between criminal legal actors and behavioral health professionals to make meaningful progress in reducing recidivism and increasing the personal wellness of this population. These disciplines can have opposing points of view and philosophies, with the criminal legal perspectives often being dominated by punitive approaches that primarily focus on retribution and attempting to increase public safety. At the same time, behavioral health professionals prioritize the health and well-being of their clients and seek to provide support to improve

functioning in multiple domains beyond criminal legal outcomes. Despite this, both entities can agree that recidivism is a negative outcome for all and should be minimized when possible. From a criminal legal standpoint, MI appears to interact with criminogenic risk factors in a way that increases the risk of recidivism; as such, MI does need specific attention and treatment (Skeem et al., 2015). From a social welfare approach, avoiding recidivism will likely be in the individual's best interests -from a legal and personal wellness perspective. Unfortunately, it is not as simple as agreeing that recidivism is important to avoid and that both criminogenic risk factors and MI should be treated. Complex questions arise, such as what are effective strategies in targeting both criminogenic risk factors and MI, who and when should specific stakeholders take the lead in addressing these issues, and what are the best practices in obtaining buy-in from multiple stakeholders? These questions must be informed by research and addressed on policy and practice levels.

### **Policy, Practice, and Research Implications**

In this section – informed by the findings from this study and needs identified in the literature – implications for policy, practice, and research are discussed. First, the Sequential Intercept Model (SIM) is introduced. The SIM is referenced throughout this section as it serves as a helpful framework to guide communities' efforts to meet better the needs of individuals experiencing MI and criminal legal involvement. It effectively frames the policy, practices, and research suggestions below. Next, policymakers need to strengthen community mental health resources, increase the use of specialty courts, fund treatment inside correctional settings, intentionally shape community supervision, and develop a shared framework with stakeholders is discussed. Following this, the practice implications of needing to focus on both MI and criminogenic needs – and the role of social workers in achieving this – are reviewed. This section

concludes with a discussion of how future research is needed to identify and develop approaches that effectively meet both MI and criminogenic needs, increase the field's understanding of how MI and criminogenic risk factors interact, incorporate the voice of persons with lived experience, examine the effects of mandated mental health treatment, clarify how MI is measured and reported, include multiple outcomes in research studies both for and beyond recidivism, and evaluate the responsivity principle among individuals with MI.

### ***The Role of the Sequential Intercept Model***

In this section, the Sequential Intercept Model (SIM) is introduced as it will be used to help frame policy, practice, and research implications from this study. The SIM is a valuable framework that can help better meet the needs of individuals with MI and prevent/reduce engagement with the criminal legal system. The SIM's intended purpose is to stop the criminalization of MI by developing and implementing policies and practices at natural intervention points (Griffin et al., 2015; Munetz & Griffin, 2006). The SIM includes six intercepts – five when first conceptualized by Munetz and Griffin (2006) – spanning pre-law enforcement exposure (intercept zero) to exiting incarceration facilities under community supervision (intercept five). Munetz and Griffin (2006) initially conceptualized efforts to prevent interaction with law enforcement as best practice. They did not consider it to be an intercept but more as a foundational strategy communities should establish. Intercept zero was officially added to the framework in 2017 as a means to help stakeholders from the criminal legal system, mental health system, and substance use treatment systems collaborate when law enforcement is called to be a first responder to someone in crisis (Abreu et al., 2017; Substance Abuse and Mental Health Services Administration, 2022; Willison et al., 2018).

The goal of the model is to have intercept zero (community services) replace the need for most law enforcement engagement with individuals experiencing MI in the community by using crisis hotlines, mobile crisis teams, short-term stabilization beds, and established protocols for law enforcement to coordinate with mental health care and substance use systems (Abreu et al., 2017; Willison et al., 2018). If formal engagement with law enforcement has occurred, intercepts one through five outline opportune times where policies and interventions can prevent further engagement with the criminal legal system. Intercept one occurs during the initial engagement with law enforcement (e.g., an officer is responding to a call but has not formally arrested the individual). Intercept two comprises interactions at post-arrest, booking (i.e., being processed into jail), and initial court hearings. Intercept three occurs once the individual is engaged with the courts and or is incarcerated. Intercept four focuses on what happens during reentry and intercept five encompasses individuals released from correctional facilities under community supervision (Griffin et al., 2015; Munetz & Griffin, 2006).

The SIM can be a powerful tool to assist policymakers in reducing the cost of the criminal legal system, improving public safety, and increasing the wellness of persons currently entangled in the system (Bonfine et al., 2020). The model can also help communities evaluate which intercepts need strengthening and develop a comprehensive plan across all interactions (Willison et al., 2018). Furthermore, the SIM serves as a tool to guide researchers in evaluating policies and interventions at any one intercept, as well as using the model to examine the effectiveness of greater efforts that span multiple intercepts (Willison et al., 2018).

### ***Policy Implications***

To improve reentry outcomes for persons exiting prison with the presence of MI, it is critical to consider both macro and micro approaches. As Mears and Cochran (2015) aptly

identify, macro-level policies and laws – informed by theory and empirical research – can help remove the need for specific programs and interventions that occur during incarceration and reentry by preventing incarceration in the first place. As outlined in the SIM, investing in community services before criminal legal involvement has the greatest potential to reduce the number of individuals with MI who are incarcerated (Abreu et al., 2017; Munetz & Griffin, 2006; Willison, 2018). Individual treatment programs are an essential part of the puzzle in providing support and bolstering individual’s abilities to advance in their desistance trajectory (Mears & Cochran, 2015; National Institute of Justice, 2021); nevertheless, programs and interventions will not lead to long-term changes unless policymakers are invested in transforming systems to reduce reliance on incarceration. Increased efforts are needed first to attempt to meet the needs of persons experiencing MI through prevention and diversion efforts. By doing so, the system’s ability to provide personalized care responsive to individuals’ MI and criminogenic needs upon exiting incarceration should increase.

**Strengthening Community Mental Health Resources.** Strengthening mental health resources in communities can help increase diversion efforts and support those returning from incarceration. Researchers and advocates routinely point out that actors within the criminal legal system do not possess the required training, expertise, or capacity to provide treatment and care for those incarcerated experiencing MI (Bonfine et al., 2020). Yet, criminal legal actors often remain in control of providing these services. Increased efforts are needed to strengthen fragmented mental health systems that often result in individuals not receiving the care they need and ultimately ending up in the criminal legal system and struggling not to return (Iglehart, 2016). Community mental health providers have limited authority and resources to deliver services and shape social policies, which naturally reduces their ability to provide effective



treatment in the community (Bonfine et al., 2020). Empowerment of community health systems should occur as these entities have the necessary skills and legal mandates to address public health needs (Bonfine et al., 2020). Policymakers should prioritize efforts to increase medical professionals and mental health care providers (e.g., social workers) role in diversion efforts while also building up partnerships that provide these professionals the skills to assess criminogenic risks and incorporate strategies that reduce these risks into existing behavioral health treatments. This can be done through the development of partnerships across multiple stakeholders.

The Criminal Mental Health Project (CMHP) in Miami Florida provides a promising model to follow. CMHP has implemented interventions during pre-booking (i.e., initial contact with law enforcement/intercept one in the SIM) and post-booking (i.e., after initially being booked into jail/intercept two in the SIM), provides 40 hours of mental health training for police officers and utilizes working partnerships with behavioral health providers who incorporate targeting criminogenic risk factors into their behavioral health treatments. Initial results have seen a decrease in the jail population and reduced instances of physical harm to both individuals encountering law enforcement and the officers themselves (Iglehart, 2016). Policymakers should consider the potential these types of programs have to reduce incarceration and recidivism and improve the well-being of a vulnerable population. Similar models can be followed for individuals exiting incarceration through specialty training provided to supervision officers and developing working partnerships with behavioral health providers that target both mental health and criminogenic needs.

**Increase the Use of Specialty Courts.** Mental health and other specialty courts – intercept three interventions - serve as a viable option to better meet the needs of individuals with

MI involved in the criminal legal system (Almquist & Dodd, 2009). Mental health courts are founded on cross-agency collaboration with different entities establishing partnerships to address multiple needs of the individual while also seeking to maintain public safety. Additional research is still needed to identify specific mechanisms that contribute to improved outcomes from using mental health courts (Almquist & Dodd, 2009; Lowder et al., 2018). Mental health courts, in general, also need better integration of their efforts to reduce criminogenic risk factors and address mental health needs (Epperson et al., 2014). Despite the need for further understanding of how and why they work, existing research justifies their continued use through observed decreases in recidivism when used (Lowder et al., 2018). Policymakers should examine the extent they have authorized funds for the establishment and continued operation of specialty courts.

**Ensure Treatment is Provided in Correctional Facilities.** Policymakers should continue supporting services provided during incarceration (i.e., intercept four in the SIM). Individuals with MI are at higher risk of self-harm and suicide, experience higher rates of sexual victimization, are subjected to solitary confinement more frequently, and remain in need of symptom management (Barrenger et al., 2017; Mallik-Kane & Visser, 2008). Acknowledging the pressing need for mental health treatment to be provided in correctional facilities, policymakers should not view this as the primary tool to reduce incarceration but as an ethical obligation for care that can also assist in reducing recidivism. Evidence suggests that recidivism rates decrease when mental and physical health improves during and after incarceration (Wallace & Wang, 2020). It is also important to address individuals' mental health challenges and criminogenic risk factors that may limit their ability to reintegrate into the community upon release. Examples of these efforts can be seen by the Federal Prison Bureau through policies requiring the

identification of criminogenic needs at the start of incarceration, incorporating educational programming, providing job training, seeking to deliver evidence-based mental health and substance use treatment, and striving to maintain family relationships (Department of Justice, n.d.).

**Intentionally Shape Community Supervision Practices.** Policymakers also play a critical role in shaping community supervision and the interventions invested in at this stage (i.e., intercept five in the SIM). States must allocate funds for agencies to implement evidence-based practices if they hope for community supervision to reduce incarceration (PEW, 2020). It is crucial to acknowledge that parole boards and community supervision agencies often have broad discretion on what occurs during community supervision and how services are delivered. However, through state legislation, policymakers can regulate who is eligible for community supervision, develop guidelines on the requirements that can be placed upon individuals, and the available degree of support provided to individuals exiting correctional institutions – through allocating funds to support these efforts. One practical step is limiting the maximum size of caseloads facilitating increased capacity to connect individuals to needed resources (Jalbert et al., 2011; PEW, 2020).

Policies can also be crafted that enhance the effectiveness of community supervision while reducing the burden of persons under supervision. Examples include limiting random drug tests to persons with diagnosed substance use disorders, classifying positive drug tests as a treatment need indicator rather than a rule violation, and ensuring reporting facilities are in the community individuals reside within (PEW, 2020). State legislation in many of these areas will be required if large-scale implementation is to occur.

While this study did not have the necessary information to examine the processes and procedures individuals on parole experienced in Georgia, the analysis did find that individuals mandated to receive mental health treatment were at higher risk of recidivism. Although this will be discussed in greater depth in the research implication section, there remains a need to examine if mandated mental health treatment improves individuals' ability to avoid arrest. Additionally, policymakers should be cognizant that geographical and socioeconomic factors may influence this relationship and should be accounted for in their jurisdictions when evaluating mandated mental health treatment.

**Developing a Shared Framework.** A shared framework for pursuing public safety and public health is crucial to improving outcomes for all stakeholders (Skeem et al., 2015). A critical step in this is through policymakers emphasizing the need to address both mental health needs and criminogenic risk factors at each intercept outlined in the SIM through the designation of funding and development of policies supporting community treatment. Policymakers and practitioners must examine criminogenic needs and mental health factors in developing and implementing reentry programs (Epperson et al., 2014). Local collaboration between community mental health systems and law enforcement agencies is also critical to reducing the number of persons with MI being arrested/rearrested and incarcerated (Lamb et al., 2002). State, county, and city-level policymakers are crucial in establishing and maintaining these partnerships. They should utilize the SIM as a guide in developing initiatives to reduce incarceration for individuals with MI and improve outcomes for individuals under community supervision. Policy will continue to play an important role in shaping available resources and reentry programming for persons exiting jails and prisons. While efforts are needed to improve the system's capacity to

provide adequate care, policymakers should also prioritize reducing the interaction between law enforcement and persons experiencing MI before incarceration.

### *Informing Practice*

**Which Needs Take Priority.** Entities from the criminal legal and mental health systems can be seen competing over what should be considered a priority –mental health or criminogenic needs (Manchak et al., 2019). This study suggests that these efforts should not be mutually exclusive. Community supervision agencies often mandate or strongly encourage individuals with MI to receive mental health services (Manchak et al., 2019). Unfortunately, this may lead to decreased efforts to address criminogenic risk factors. Cross-collaboration between practitioners within the criminal legal and behavioral health systems must increase, focusing on developing interventions that target both criminogenic risk factors and mental health needs. Agencies should implement practices such as utilizing validated risk assessments, adjusting supervision requirements based on risk/need, developing specialty caseloads, and identifying appropriate caseload sizes (PEW, 2020).

Individuals exiting prisons also face many challenges to successful reentry. To help address these needs, reentry planning should account for transportation, clothing, food, money, state identification, housing, employment and education, health care, and connection to social support systems (La Vigne et al., 2008). Correctional and mental health practitioners must also identify treatment programs that effectively target the needs of individuals. Prioritizing one characteristic/risk of an individual can result in treatment and interventions taking on a narrow and myopic approach (Mears & Cochran, 2015). This is not to say specific factors such as MI or substance use should be ignored, nor that specialty programs are ineffective in addressing particular problems. As Mears and Cochran (2015) emphasize, it does suggest a need to employ

multifaceted and individualized approaches that address a wide range of risks the person is experiencing. This approach requires fundamental changes in how systems view their primary goals and how resources are distributed.

**Pathways Moving Forward.** Additional evidence is needed to understand how MI can interact with criminogenic risk factors. Social work clinicians are uniquely qualified to provide guidance on how MI may create challenges in obtaining employment, avoiding substance use, maintaining or developing strong family support, and challenging problematic thinking patterns – all criminogenic risk factors. All parties benefit from avoiding increased recidivism; notably, this provides individuals with the best opportunity to improve their overall wellness. Social workers have the training and skill set to help communities evaluate local systems and practices – using the SIM as a guide – to increase the system’s level of responsiveness to this population. Guided by the knowledge of how macro, mezzo, and micro forces can interact and influence human behavior and accompanied by a social justice lens, social workers can serve as leaders in targeting criminogenic risk factors while also meeting mental health needs and increasing individual and community wellness. A specific implication from this study is that community supervision officers and social workers should recognize that securing employment is important but might not have the same effect across different portions of their caseloads.

While hope remains that progress can be made in providing treatments that improve outcomes for persons with MI, it is naive to propose that the criminal legal system has the capacity or inclination to respond individually to multifaceted and interactive needs. This will require a philosophical paradigm shift from punishment and incapacitation to one of public health and social welfare orientation (Mears & Cochran, 2015). Additionally, due to the current practices and policies that have fueled mass imprisonment (Drucker, 2011; Pfaff, 2017), the

system often struggles to provide humane conditions for individuals to reside in, let alone develop individualistic treatment approaches. To effectively implement the above practice suggestions, we must begin to think about reforms that move the criminal legal system towards a state where transformations can occur. Social workers can play an essential role in strengthening community mental health services and building partnerships with law enforcement practitioners, ultimately diverting individuals experiencing MI from the criminal legal system. Structural change is needed in the criminal legal system if these efforts are to have lasting impacts.

### ***Implications for Future Research***

Results from this study suggest that providers should target both MI and criminogenic risk factors for people returning from prison and understand that the impact of criminogenic risk factors may vary based on MI. In addition to having direct implications for policy and practice, these findings also have implications for future research. What does it look like to target both MI and criminogenic needs? Do all criminogenic needs relationships with recidivism vary depending on if MI is present? Results from this study also prompt larger questions surrounding the role of supervision, the use of mandated treatment, the limited voice and role individuals with lived experience have in research and policy development, how MI is measured and reported, what outcome measures should be included, and what the responsiveness principle in action looks like for this population.

**Targeting MI and Criminogenic Needs.** There are several evidence-based practices for treating MI and targeting criminogenic risk factors (Latessa et al., 2020; Lurigio, 2001; Osher & Steadman, 2007). Additional research is needed to evaluate programs/approaches that combine these practices. Identifying important components of programs, the balance of focus, and who should participate in these programs are important questions to consider if widescale

implementation is to be effective. Furthermore, examining if the strength of the relationship between MI and criminogenic risk factors varies by the specific risk factors or type of MI should be conducted. Future studies must examine how MI may relate to other criminogenic needs beyond substance use and employment. Future research should also expand our understanding of the experience of different stakeholders in this area. Conducting focus groups with service providers and community supervising agencies could provide valuable insights into how they are currently attempting to address specific needs and how it might look for these stakeholders to be more responsive to MI.

**Incorporating the Voice of System Involved Persons.** This study utilized large-scale administrative data, allowing for a robust examination of the relationship between MI and recidivism. While insights gained from this type of data can be valuable, it is only one source of information. The voice of system-involved individuals must also be incorporated. Prior research has explored providers' viewpoints on barriers to treatment (Hancock et al., 2018), as well as trying to understand how individuals prioritize their needs (Davis et al., 2011). While insights from these studies are helpful, more is needed in this area, particularly from individuals experiencing the reentry process firsthand. A common theme thus far is that individuals struggle to meet basic needs such as housing and financial stability, which results in mental health services being neglected (Barrenger et al., 2017; Hancock et al., 2018; Pope et al., 2013; Zekker & Prokop, 2020). Increased insights are needed from people with MI under community supervision on the types of services they need, what they see as the most beneficial practices agencies engage in, and how mandated mental health treatment has helped or hindered their reentry process. The prevalence of reentry challenges is well established, and increased focus on



addressing these barriers is needed. An essential part of this will be expanding the role individuals with lived experience have in research and policy development.

**Mandated Treatment and the Role of Supervision.** Mandated mental health treatment is widely used, with few studies showing the benefits of such an approach (Skeem & Louden, 2006). This study found that individuals with mandated mental health treatment were at higher risk of recidivism. However, it does not provide insight into if mandated mental health treatment helped to prevent recidivism in the long run. Future research should consider employing experimental designs to compare the use of mandated treatment to the lack of use. Opportunities to conduct randomized control trials may be limited due to possible reservations of jurisdictions willing to participate and ethical limitations. Another possibility would be to identify two jurisdictions with similar characteristics that differ in their policies surrounding mandated treatment. Data measuring attendance of mandated treatment, the types of treatment provided, and the length of services are also needed to examine the impact of mandated treatment. Researchers must also consider that these interactions occur while participants are under community supervision, which may impact individuals' reentry trajectories.

An important finding from Matekowski and Ostermann's (2015) study is that persons with MI who were on parole did worse than their counterparts who were not under parole supervision. Matekowski and Ostermann (2015) could not test the supervision conditions individuals were assigned and if persons were attending treatment. This study accounted for individuals receiving several parole conditions; however, a deeper examination of what went into meeting these conditions was unavailable. While community supervision is often seen as the natural alternative to incarceration, it remains to be established that this practice ultimately leads to fewer individuals being incarcerated. Additionally, limited research has examined the use of

specialty mental health caseloads (Justice Center, 2021) and, when conducted, has focused on probation rather than parole samples (Skeem et al., 2017; Van Deirse et al., 2021; Wolff et al., 2014).

**Measuring Mental Illness.** The wide use of mental health measures in the literature is also an area in need of improvement. Variations in the terminology used, differences in the operationalization of MI, and lack of distinctions between severe MI and any MI are prevalent in the literature (Bales et al., 2017). This study relied upon the determination of a third party (i.e., the parole board) to identify individuals needing mental health treatment. While this information was informative, it has inherent limitations – namely, the validity and reliability of this identification process. Future research should seek to include individuals’ diagnoses, when and where these diagnoses were received, and any other available mental health history. Understanding if the type and severity of the MI being experienced impacts if recidivism occurs, how these factors may interact with criminogenic risk factors differently, and the level of support being provided for different types of mental illness are needed to increase responsivity in developing and implementing interventions for this population.

**Including Multiple Outcome Measures.** Future research should examine additional measures of recidivism and criminality, such as reconviction, reincarceration, number of arrests, the time between arrests, the seriousness of the new offense, and self-report criminal engagement. Arrests indicate if interaction with law enforcement has occurred; however, an individual could be falsely accused, arrested because of minor infractions of the law, or to enforce jurisdictional mandates such as removing homeless populations from specific geographical locations. Including reconviction and reincarceration provides additional measures to help evaluate the level of system involvement the individual is experiencing and indicates the

severity of the new alleged criminal behavior. Recording the number of arrests, the time between arrests, and the seriousness of the new crime can help evaluate where in the desistance process an individual may be (Bucklen, 2021; Bucklen et al., 2022). Self-report measures also provide valuable information, with criminal behaviors often undetected by law enforcement or over-surveilled in Black and low-income communities.

When considering outcome measures, recidivism should not be the sole measure of success for policy and programs (Morenoff & Harding, 2014; National Academies of Sciences, Engineering, and Medicine, 2022). Preventing recidivism should remain a goal of all stakeholders involved in working with this population. Outcomes in education, employment, physical and mental health, developing prosocial connections, and other factors must also be prioritized. Regardless of the stakeholders' primary goals, understanding how individuals are faring in these different domains can help to inform if interventions have beneficial impacts.

**The Responsivity Principle.** Currently, a dearth of research examined the responsivity principle among individuals with MI (Skeem, Steadman, Manchak, 2015). Research is needed that establishes what increased responsivity looks like, how mental health symptoms relate to criminogenic risk factors, and practical models that engage this population in effectively reducing criminogenic and mental health needs (Manchak et al., 2019). Furthermore, increased examination of if MI is connected to specific types of crimes could help inform interventions for this population (Katsiyannis et al., 2018).

### **Addressing Shortcomings in the Literature**

Prior studies finding little or no direct relations between MI and recidivism were limited by small sample sizes and limited follow-up periods (Matejkowski et al., 2015; Skeem et al., 2011; Skeem & Loudon, 2006). This study addressed these limitations using a sample size of

over 24,000 individuals and a follow-up period of three years. Large sample sizes and extended follow-up periods allow researchers to examine the relationship between MI and recidivism better. This study and Bales et al. (2017) used state community supervision populations (Georgia & Florida) with official archival data. Increased partnerships between state agencies and researchers are needed to facilitate data access and broader samples. This practice will facilitate a deeper understanding of important factors and open the door to developing interventions more responsive to specific populations' needs. In addition to small sample sizes and short follow-up periods, Bales and colleagues (2017) argued that existing research on MI and recidivism fails to include relevant covariates. This study included a wide range of covariates allowing for a more rigorous examination of the proposed relationship.

It is important to note that due to the lack of public access to the risk assessment tool used in this study, a deeper examination of what influenced the risk assessment score was limited. The need for greater transparency surrounding risk assessment tools is common across the criminal legal system (Selbst & Barocas, 2018; Werth, 2019). Researchers have called for increased transparency to inform practitioners' understanding of what influences the results and dynamic factors that should be targeted, improve researchers' abilities to examine factors that may impact the score, and increase public trust (Applegarth et al., 2023; Garrett & Monahan, 2019; Hermstuwert, 2019; Matejkowski et al., 2015; Selbst & Barcoas, 2018).

## **Conclusion**

This study aimed to understand better the relationship between MI and recidivism among imprisoned adults and the degree to which criminogenic risk factors' relationship with recidivism may vary depending on mandated mental health treatment status. The dataset was well suited to address these aims, having a large sample, capturing dynamic risk factors, and containing

sufficient follow-up data. The analysis found that MI was associated with increased odds of recidivism, measured by re-arrest, that criminogenic risk factors predicted recidivism for both groups and that MI moderated the relationships between recidivism and substance use. These findings highlight a need to address mental health needs and criminogenic risk factors.

Policymakers, researchers, and practitioners each have important roles in better serving this high-risk population and continuing to increase our understanding of how to improve criminal legal outcomes (e.g., recidivism) and other important outcomes such as individual well-being. Social workers must continue to advocate for policy and practice changes that effectively address the social justice challenges individuals with MI face during and after incarceration. This encompasses critically examining who is incarcerated in the first place, the treatment and reentry planning that occurs during incarcerations, and agencies' abilities and willingness to respond holistically to criminogenic risks and mental health needs of those they serve.

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