


2015

# Predictors of Recidivism for Offenders With Mental Illness and Substance Use Disorders

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*Walden University*

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# Walden University

College of Social and Behavioral Sciences

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Linda Buckmon

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2015

Abstract

Predictors of Recidivism for Offenders With Mental Illness and Substance Use Disorders

by

Linda Buckmon

Bowie State University, 1999

Bowie State University, 1995

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

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## Abstract

Mental illness and substance use disorders have been determined to be leading predictors for recidivism among criminal offenders in the United States who are released to community supervision. Women make up an increasing in percentage of this criminal justice population; however, few studies have explored the role that gender plays in determining men and women's recidivism. Offender's education, employment, and peer association have also been reported to be predictors increasing the likelihood of recidivism among criminal offenders. This study was designed to determine if gender, mental illness, substance use disorder, employment, education, and peer association predicted recidivism. Differential association theory and gender pathways theory provided the theoretical framework for this study for examining archival data obtained from the Court Services and Offender Supervision Agency AUTO Screener and Supervision Management Automated Record Tracking System. Multiple logistic regression analysis showed that substance use disorder significantly predicted recidivism, while employment decreased the likelihood of recidivism. This study did not find a significant interaction between mental illness and substance use disorder or mental illness only. Additionally, neither gender, education, nor peer association were found to be associated with recidivism. This study promotes social change by highlighting the increasing need for services for offenders and identifying the complex factors that impact recidivism. The findings from this study will be helpful to criminal justice agencies for developing programs that address the need of SUD and employment for offenders to reduce the likelihood of recidivism and increase public safety.

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## Dedication

I would first like to dedication the success of this dissertation to my Lord and savior Jesus Christ. During this process, my vision often became bleary; yet, God reassure me that He would continue to see me through as long as I kept the faith and believed. I would also like to dedicate the success of this dissertation to my parents Mr. Albert F. Burns and Mrs. Hellene S. Burns for believing in me and reminding me that the obstacles that I faced during this process were all in God's divine plan for me. My parents have been my rock during the storm. They gave me a solid elevated surface to stand on when the water rose above my shoulders and I felt as though I was drowning. Lastly, I would like to dedicate this study to my brothers Kenneth Burns and Dennis Burns, my sister Diana Battle and her husband James Battle, and friends that never gave up on me and always told me how proud they were of me and that this, too would be added to my many accomplishments.

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## Chapter 1: Introduction to the Study

### **Introduction**

Numerous offenders have been determined by the Bureau of Justice Statistics (2006) to meet criteria for mental disorders given in the *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM) of the American Psychiatric Association (APA, 1994). Offenders convicted of a crime may serve their sentence on community supervision in lieu of incarceration, while others may be sentenced to incarceration and complete community supervision upon release. Offenders under community supervision release often continue to engage in repetitive criminal behavior.

Several factors are associated with continued criminal behavior. According to the most recent data by the Bureau of Justice Statistics (BJS) mental illness and substance use increases the likelihood of repetitive criminal behavior (BJS, 2006a, 2006b). Current research conducted by Matejkowski, Drain, Solomon, and Mark (2011) also reported that mental illness and substance use disorder offenders on community release had more criminal offenses than those offenders on community release without a mental illness or substance use disorder. Fazel and Yu (2011) conducted a systematic review and meta-analysis and found similar trends of increased risk of reoffending among MI offenders. Other researchers have suggested additional factors such as socioeconomic, gender, age, race/ethnicity, and social support as impacting continued criminal behavior (Silver, Felson, & Vaneseltine, 2008; Spjeldness, & Goodkind, 2009). Additionally, Matejkowski et al. (2011) reported that a lack of family bond, lower levels of education, lack of employment, limited recreational activities, antisocial peers, and antisocial personality

are also risk factors for repetitive criminal behavior. Additionally, Cobbina, Huebner, and Berg (2012) found that offenders are more likely to engage in criminal activities as a result of their association or social bonds with others who hold similar beliefs or behaviors. These factors combine to increase offenders' risks of recidivism and likelihood to reoffend.

In addition, offenders that continually engage in criminal activity have also been determined to have lower levels of education and lack employment. According to the most recent data reported by the BJS (2003), in 1997, 41% of inmates in state, and federal prisons, and local jails did not complete high school or obtain a general education development (GED). Recent research conducted by Lockwood, Nally, Ho, and Knuton (2012) found that offenders that did not complete high school reoffended more often than those offenders that completed high school. Females accounted for 42% of state inmates who did not complete high school or obtain a GED; males accounted for 40% of state inmates who did not complete high school or obtain a GED (DOJ, 2003). One in six inmates indicated that they dropped out of school as a result of their criminal convictions or involvement in illegal activities (BJS, 2003). Offenders with lower levels of education are further challenged with securing legitimate employment with sustainable wages (Blitz, 2006).

Various risk factors have been determined to increase recidivism among offenders released to community supervision in the U.S. criminal justice system. Numerous researchers have found some combination of risk factors and the correlation with predicting recidivism. Numerous researchers have found that mental illness (MI) has a

significant influence on criminal behavior, and that criminal behavior is escalated when those offenders who are mentally ill engage in substance use (Baillargeon et al., 2009b, 2009c; Becker, Andel, Boaz, & Contantine, 2011; Derry & Batson, 2008; Lamb, Weinberger, & Gross, 2004; DOJ, 2006b, 2006c; Skeem, Manchak, & Peterson, 2011; Sung, Mellow, & Mahoney, 2010). The elevating number of MI and SUD offenders entering the criminal justice system will at some point return to the community, suggesting that it is helpful and necessary to identify risks factors that decrease their likelihood to reoffend.

Criminal justice professionals who are cognizant of the risk factors associated with MI, SUD, and the implication of gender will be able to take steps to reduce or prevent recidivism. This study offered enhanced knowledge of the critical risk factors of recidivism by examining whether the predictors of recidivism differ as a function of gender. This study highlighted the need for integrative community supervision practices specifically for offenders with MI and SUD. Its implications for positive social change include increased understanding to criminal justice agencies of the critical risk factors of education, employment, and peers association that correlate with recidivism specifically for female offenders with MI, SUD, or both, and the needed services to potentially minimize recidivism, thereby increasing public safety.

### **Background**

Offenders with mental illness (MI) and substance use disorder (SUD) are at an increased risk for reoffending than offenders without MI and SUD (Baillargeon et al., 2009b, 2009c; Lamb, Weinberger & Gross, 2004). According to the most recent MI data

by the Bureau of Justice Statistics (BJS, 2006a), during the year 2005, approximately 74% of prisoners in state jails and 76% of inmates in local jails who had a mental health disorder also satisfied the criteria for substance dependence or abuse. In addition to MI and SUD, other risk factors associated with increased risk for recidivism such as education, employment, finances, family/marital, companions, leisure/recreation, and attitude/orientation (Blitz, 2006; Cobbina, Huebner, & Berg, 2012; Watkins, 2011). There is also an increasing number of females entering the criminal justice system (National Criminal Justice Reference Service, 2013; Tripodi, Bledsoe, Kim, & Bender, 2011).

To explore the provision of community alternatives for MI and SUD offenders and the contributing factors for recidivism, Hartwell (2004) compared offenders diagnosed who only had MI with offenders who had both MI and substance abuse problems. Hartwell studied those offenders three months after their release to determine if members of one group had more immediate service needs than the other and were more likely to be rearrested. A comparable study by Baillargeon et al. (2009b) examined inmates with MI, SUD, or both to determine if there were differences in incarceration rates. Both Baillargeon et al. and Hartwell concluded that inmates with MI and SUD were much more likely to have multiple incarcerations than those with only MI or SUD. Baillargeon et al. (2009b) further concluded that substance use reduces compliance with psychotropic medication and use of other services, resulting in a decline in mental status and increased criminal behavior. The findings from these studies show that the combination of MI and SUD increase rearrest. These finding also show that offenders

with both MI and SUD are more likely to not comply with medication management, which may lead to further offending.

Researchers have continued to focus on the risk and needs of male offenders despite the increase in female offenders entering the U.S. criminal justice system. Few researchers have addressed whether the predictors of recidivism differ as a function of gender in those under community supervised release who also suffer from MI, SUD, or both. This study was designed to address this research gap and address the events associated with MI, SUD, or both, and if there is an interaction with gender across other variables such as employment, education, and peer associate on recidivism.

### **Problem Statement**

According to the U.S. Department of Justice (DOJ, 2014a), during the year 2013, some 631,200 inmates entered state or federal prisons. This number shows an increase of 4% from the 608,400 who entered these prisons in 2012. An estimated total of 1,574,700 inmates were held in state and federal prisons at yearend 2013 (BJS, 2014a). At the end of 2013, approximately 4,751,400 adult offenders were released to community supervision, which reflect a decline of 29,900 fewer offenders released compared to yearend 2012 (BJS, 2014b). According to BJS (2014b) “the number of offenders released annually to probation declined from 3,942,800 probations at yearend 2012 to 3,910,600 at yearend 2013”(p.1). The Bureau of Justice Statistics (2014) also reported “the adult parolee population increased by about 2,100 offenders between yearend 2012 and 2013, to about 853,200 at yearend 2013” (p.1). The Bureau of Justices and Statistics (2014b) further reported that 66% of probationers completed community supervision during 2013.



Additionally, during 2012 and 2013, probationers remained stable (5.4%) on community supervision for reincarceration for new arrests, revocation, and other violation. The Bureau of Justices and Statistics (2014b) reported that in 2013, 3% of parolees on community supervision were reincarcerated for new offenses, a rate that did not change significantly from 2012, at 3.0%, while 5.4% parole supervision was revoked in 2013. Female adult probationers increased from 22% in 2000 to 25% in 2013(DOJ, 2014b).

According to Baillargeon et al., (2009b) parolees diagnosed with a MI and SUD have a substantially increased risk of having their parole revoked for either technical violations or rearrests. Parolees with either a MI only or a SUD exclusively are less likely to have their parole revoked for either technical violations or rearrests when compared to those who have both, or those who are free of a major psychiatric disorder and a substance use disorder (Baillargeon et al., 2009c). Additionally, Skeem, Manchak, and Peterson, (2011) found mentally ill offenders who are supervised in the community are more likely to have their supervision revoked, unlike offenders who are not mentally ill on parole or probation supervision (Skeem, Manchak, & Peterson, 2011). These common trends found among researcher highlights the growing concerns of MI and SUD offenders increased risk for recidivism.

The impact of education, employment, and peer association in males and female offenders with MI and SUD with relation to recidivism warranted further examination. Offender's with lower levels of education often leads to offenders inability to secure sustainable employment, resulting in reoffending. Likewise, employers are often reluctant to hire offenders due to stigma's associated with offenders, mental illness, drug history,

and high school dropouts. According to Sutherland and Cressey (1955) association with others often influence criminal behavior. Increasing the criminal justice knowledge of factors that increase recidivism among at risk offenders may provide benefit to reduce recidivism.

The primary purpose of this study was to analyze the associations of MI and SUD offenders with an increase of recidivism among female offenders in the United States. Although researchers have addressed reoffending in connection with MI and SUD, limited extant research has examined how these risk factors differ as a function of gender. This study specifically examined MI, SUD, and gender as predictors of recidivism between offenders under community supervision requiring behavioral health services, and the likelihood of successful supervision completion. This study also assessed whether employment, education, and peer association are predictive of greater successful community supervision completion.

It is essential that community supervision practitioners are able to identify key risk factors of offending and implement interventions to reduce recidivism. This study identified complex factors among the MI, and SUD offenders, and how recidivism was impacted by these factors. The findings from this study provided criminal justice professionals with greater awareness of the risk factors that predict recidivism, as well as advance knowledge if these predictors differ as a function of offender's gender. Ultimately, this may aid in decreasing recidivism, and increasing successful completion of supervision for MI and SUD offenders on community supervision. As a result in the reduction of criminal behavior public safety may be increased.

### **Purpose of the Study**

The purpose of this quantitative study was to examine risk factors of offenders released to community supervision and how these risk factors impacted recidivism. This study also investigated differences in peer associate to examine whether association with other criminals lead to criminal behavior. Differential associations and feminist pathway theory served as the theoretical foundations for examining whether gender differentiates pathways to recidivism in MI and SUD offenders. This study explored other circumstances that impacted recidivism to include education, employment, and peer association for offenders released to community supervision under Court Services and Offender Supervision Agency (CSOSA).

This study used participants archival data from the AUTO Screener obtained from CSOSA. The dependent variable was recidivism as evident in rearrests, and revocations. The independent variables were gender, mental illness, substance use, education, employment, and peer association. The sample for this study was comprised of 618 participants from the archival data that satisfied the required construct for MI and SUDS.

### **Research Questions and Hypotheses**

The following research questions and hypotheses guided this study:

- Research Question 1: Is the presence of mental illness associated with greater likelihood of recidivism?
  - $H_{1o}$ : There is no significant difference in presence of mental health issues and the likelihood of recidivism.

- $H1_A$ : There is a significant difference in presence of mental health issues and the likelihood of recidivism.
- Research Question 2: What is the relationship between substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and recidivism?
  - $H2_0$ : There is no significant relationship with substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and greater likelihood of recidivism.
  - $H2_A$ : There is a significant relationship with substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and greater likelihood of recidivism.
- Research Question 3: What is the relationship between gender and likelihood of recidivism?
  - $H3_0$ : There is no significant relationship between gender and likelihood of recidivism.
  - $H3_A$ : There is significant relationship between gender and likelihood of recidivism.
- Research Question 4: Is there an interaction between mental illness and substance use such that the presence of both factors is associated with greater likelihood of recidivism than either variable alone?
  - $H4_0$ : There is no significant interaction between mental health and substance use resulting in greater likelihood of recidivism than either variable alone.

- *H4<sub>A</sub>*: There is a significant interaction between MI and SUD resulting in greater likelihood of recidivism than either variable alone.
- Research Question 5: Is there a relationship between education and recidivism?
  - *H5<sub>0</sub>*: There is no significant relationship between education and recidivism.
  - *H5<sub>A</sub>*: There is a significant interrelationship between education and recidivism.
- Research Question 6: Is there a relationship between employment and recidivism?
  - *H6<sub>0</sub>*: There is no significant relationship between employment and recidivism.
  - *H6<sub>A</sub>*: There is a significant relationship between employment and recidivism.
- Research Question 7: Is there a relationship between peer association and recidivism?
  - *H7<sub>0</sub>*: There is no significant relationship between peer association and recidivism.
  - *H7<sub>A</sub>*: There is a significant relationship between peer association and recidivism.

### **Theoretical Framework for the Study**

Gender pathway theory and differential association theory (DAT) were used as the theoretical lens for a comprehensive integrated criminological approach to recidivism. They were specifically used to explore the potential negative outcomes and factors

leading to recidivism while on community correction supervision among men, women, MI, and SUD offenders and non-identified mentally ill offenders. Differential association theory was developed by Sutherland, who posited that criminal behavior is acquired through a process of learning through interaction with others (Sutherland & Cressey, 1960). Sutherland asserted that deviance is the result of socialization and learning values transmitted through subculture, which does not reject attitudes and behaviors that mainstream culture rejects (Sutherland & Cressey, 1955). As applied in this study, DAT contends that criminal behavior is learned through interaction with others, suggesting that repetitive offending may be learned and may also be influenced by acceptances from others as implied in pathways theory.

In the early 1900s, Daly (1994) began the exploration of traditional theory assumption as to why women commit crimes and their pathway to return to prison. Crime committed by women is shaped by different social experiences that differ from men. The paths into crime and reoffending follow different routes and trajectories (Simpson, Yahner, & Dugan, 2008). According to Belknap (2001), the most common pathways for women entering the criminal justice system are survival (abuse, poverty) and drug abuse. According to Gilligan (2004), pathways to women offending include the need for relationship fulfillment. The need to fulfill their need for relationships often results in illicit substance use, depression, and aggression, to name a few (Daly, 1994). Similarly, Daly's pathways to female offending included being a *street woman*, harmed and harming woman, battered woman, drug-connected woman, and other woman. This study explored the most common pathway to female offending, which is being a street woman

focusing on three dominate pathways: education, which includes school dropout, employment, which usually results in lower wages due to education level or unskilled employment, and relationships, which are often unhealthy due to both partners drug use and criminal behavior (Daly, 1994).

### **Nature of the Study**

This study used a quantitative design exploring archival data from the AUTO Screener and Supervision Management Automated Record Tracking System (SMART). This aligned with the focus of the study, allowing for inquiry about the relationships between variables in this study. The dependent variable in this study was recidivism as evident in revocation, and rearrests. The independent variables were gender, MI, SUD, education, employment, and peer association. Due to limitation of data this study did not control for age and race. Data for the study were obtained from Court Services and Offender Supervision Agency, which processed 9,417 intakes in FY 2012 for offenders entering community supervision (CSOSA, 2013).

The study employed a predictive model that offered an explanation of the correlation of gender, MI, SUD, employment, education, and peer association on recidivism, which included rearrests and revocation. To investigate the correlation of gender, MI, SUD, education, and employment on recidivism multiple logistic regression was utilized. This allowed the use of dichotomous research questions to measure for success or failure, or yes or no. The primary independent variables were gender, MI, and SUD, and the primary dependent variable was a base model compliant with supervision conditions which included violating release conditions, revocation, and rearrests and was

introduced in a stepwise fashion. This study explored compliance with release conditions of male and females, those with identified MI, or no documented MI, and SUD.

### **Definitions**

*Community corrections:* “The supervision of criminal offenders in the resident population, as opposed to confining offenders in secure correctional facilities. The two main types of community corrections supervision are probation and parole. Community corrections are also referred to as community supervision” (BJS, 2014, p. 4).

*Conviction:* “Classification of a person as a recidivist if the court determines the individual committed a new crime” (BJS, 2014, p. 14).

*Noncompliance:* Any offender released in the community that does not adhere to the release conditions as instructed by the releasing authority (CSOSA, 2013).

*Parole:* The act of releasing offenders during “A period of conditional supervised release in the community following a prison term” (BJS, 2015, p. 2).

*Probation:* “A court-ordered period of correctional supervision in the community, generally as an alternative to incarceration. In some cases, probation can be a combined sentence of incarceration followed by a period of community supervision” (BJS 2014b, p. 2).

*Recidivism:* “The loss of liberty resulting from revocation for a new conviction and/or for violating release conditions” (CSOSA, 2013, p. 16).

### **Limitations of the Study**

This study presented several limitations that impacted the outcome of the study. The first limitation was the use of offender’s self-reported documented mental illness as



use of self-reported data may not be fully representative of accurate mental health history. A second limitation was that supervising parole and probation officers may have not accurately documented and reported violations, and practice truthfulness and honesty when reporting non-compliance. Lack of efficient record keeping may greatly impact supervision outcome.

Another limitation for this study was that it did not use the current measures of mental illness based on the *DSM-5*'s (APA, 2013) diagnostic categorical criteria, and instead used a proxy to that identified offenders with identified MI, and no documented MI. A specific diagnostic categorical criteria was not use due to CSOSA not be determining such diagnoses. Therefore, we acknowledge that this may be a limitation. A final limitation was this study was limited to offenders residing in the community within the geographic boundaries of the District of Columbia while under the supervision authority of CSOSA; this may limit the applicability of the study findings to offenders in other jurisdictions.

### **Assumptions of the Study**

There are some key assumptions that could have influenced the outcome of this study. The first was that mental health history information collected in the AUTO Screener relies on all available criminal justice documentation, identifies mental health issues, and drug use history which were ascertained during the investigation process were accurately recorded. Current researchers supported the notion that offenders generally experience increase rates of recidivism as a result of mental health and substance use issues (Baillargeon et al., 2009a, 2009b; BJS, 2006a, 2006b; Hartwell, 2004). Although

this study was limited to offenders under community supervised release in the District of Columbia, an assumption was that the results of this study was generalized to offenders in other geographical areas. A second assumption was that offender's positive drug tests have been accurately reported, as the data collection was provided by trained toxicologists.

### **Scope of Delimitations**

Due to limitation on MI diagnoses, a proxy was developed to define MI, which included identified MI, and no documented MI. The scope of this study investigated offenders released to community supervision under CSOSA, which supervises the offender population under the jurisdiction of the District of Columbia. This limited the study to covering a broader scope of offenders in other jurisdictions. This study did not cover offenders with confirmed *DSM-5* (APA, 2013) categorical criteria diagnosis, and used self-reported mental illness history. A proxy was used to categorize MI for the purpose of this study, which included: identified MI, and no documented mental illness.

### **Significance**

The rate of criminal activity continues to rise among offenders with a co-occurring psychiatric and substance use disorder, resulting in increased rates of incarceration (Baillargeon et al., 2009a, 2009b; DOJ 2006a, 2006b). As a result of those events associated with the MI and SUD vulnerability, successful community integration becomes particularly difficult. Mentally ill offenders incarcerated during 2005 were reported being incarcerated three or more times, compared to those without MI, 63% MI offenders used drugs one month prior to their arrest, compared to the 49% without a MI,

(BJS, 2006b). If indeed recidivism is associated with these reported risk factors, the criminal justice officials then become the ideal source to monitor and possibly promote the reduction in criminal activities, thereby improving public safety and the well-being of with mentally ill and illicit substance use offenders.

In comparison to the extensive research findings concerning mental health issues pertaining to the inmate population, less data seems to exist concerning mental health problems in community supervision. It becomes increasingly important and urgent that community supervision practitioners are able to identify key risk factors of offending and implement interventions. This study identified the risk factors with recidivism among the MI and SUD and how supervision outcomes were impacted by these factors. The effect of gender and its interaction with other risk factors may be especially important given the increasing number of female convicts. The findings from this study offered important implications of risk factors that increase the likelihood for recidivism for both male and female, MI, and SUD offenders, highlighting if they differ as a function of gender. This increased knowledge could lead to positive social change through reduction of crime, and increased community safety.

### **Summary**

The continually growing numbers of offenders particularly female offenders, entering the criminal justice system present many challenges. Research has shown that both MI and SUD offenders are faced with contributory risk factors for reoffending. The prominent challenges that inmates face as they reintegrate back into the community include: housing, employment, education, substance abuse, and social support just to

name a few. For inmates with MI challenges, issues are compounded as a result of diagnosis associated with their psychiatric condition, which include distorted cognition, disturbance of mood, functional impairment, and perception of the world (Adams et al., 2011; APA, 2013; Baillargeon, 2009a; Castillo & Alarid, 2010; Council of State Government Justice Center, 2012; Derry, & Batson, 2008; Elbogen & Johnson, 2009; Wood, 2011).

As offenders encounter the numerous challenges as they integrate back into the community, researchers have also revealed that females are increasing in numbers within the criminal justice systems, while men tend to appear stagnated when compared to females (BJS, 2006d). Differences in offender's gender in terms of risk factors and pathways that bring offenders into the criminal justice system have been overlooked. Further research examining predictors of recidivism and how these risks differ as a function of gender may offer statistically significant findings in the reduction in risk factors associated with MI, and SUD offenders, thereby improving public safety through the reduction of criminal behavior.

To this end, Chapter 2 is a review of literature relevant to the issue of MI, SUD, and the implication of the risk factors for recidivism. Details of the theoretical framework for this study are discussed. Chapter 3 is an explanation of the research design, methodology, and threats to validity. Chapter 4 is a description of the data collection and research results. Lastly, Chapter 5 is an interpretation of the findings, limitations of the study, and recommendations for further research that are grounded in the strengths and limitations of the current study.

## Chapter 2: Literature Review

### **Introduction**

This review is a synthesis of emerging literature on the nexus between gender differences among offenders with MI and SUD under community supervision, and the likelihood of reoffending as a result of these factors. There is a growing body of literature documenting the increasing number of individuals with MI in the criminal justice system, many of whom are known to have a history of substance use problems and community supervision failure (Becker, Andel, Boaz, & Contantine, 2011; Derry, & Batson, 2008; Lamb, Weinberger, & Gross, 2004; Skeem, Manchak, & Peterson, 2011). These factors result in a higher likelihood of recidivism (BJS, 2002; BJS, 2006c; Council of State Government Justice Center, 2012). According to the Bureau of Justice Statistics (2009), the number of female inmates in the United States correctional system is increasing. Few researchers have addressed the essential factor that gender may play with respect to recidivism as evident in revocations, rearrests, or technical violations in those under community supervised release who also suffer from MI, SUD, lack employment, level of education, and peer association.

This literature review's exploration of recidivism-related research begins with a discussion of the theoretical framing work guiding this study. The second section is an outline of predictors of recidivism, which include gender, education, employment, peer association, MI, and SUD. The final section of this literature review addressed the descriptive data for recidivism among mentally ill, and substance use parolee and probationers supervised on community correction. The discussion of these factors

underscores the urgency of identification of the identified key risk factors of offending and implementations of recidivism among those with MI and/or SUD.

### **Literature Search Strategy**

For this study, an Internet search was conducted on the topics of mental health, mental illness, substance abuse, gender, jail, prison, arrest, and recidivism using the following research databases: EBSCOhost, ERIC (Educational Resource Information Center, Psychology), SAGE Full Text, Criminal Justice Periodicals, PsycINFO, SocINDEX, Google Scholar, and PsychARTICLES peer-reviewed journals publication. This study also utilized the *DSM-5* (APA, 2013). A thorough search of U.S Department Bureau of Justice Statistics reports was also conducted for this literature review. The following keywords were used to obtain peer review articles related to this study: *mental illness, mental health, substance use disorder, gender, men, women, prison, jail, criminal justice, education, employment, recidivism, revocation, and rearrests*.

### **Theoretical Foundation**

Base on the literature search there does not appear to be a single theory that is best able to explain recidivism and how men and women are lead in engage in crime behavior. Therefore, this study attempted to identify the predictors of recidivism and how these predicators differ as it relates to gender. Differential association theory (DAT), and pathways to offending appeared most appropriate to answer the research question and hypothesis for this study because it will allow for exploration for both risk predictors of recidivism and how recidivism differ as a function of gender.

## **Differential Association Theory**

Differential association theory (DAT) was developed by Sutherland in 1939 and has been revised several times (Matsueda, 1988). Two elements have remained consistent in DAT: that behavior is learned, and that criminal behavior is acquired through social interaction with others (Sutherland & Cressey, 1960). Through this learning, individuals establish motives, values, techniques, and attitudes that coincide with criminal behavior (Sutherland & Cressey, 1960).

Differential association theory evolution was aimed at predicting crime. According to Matsueda (1988), the theoretical ground for Sutherland's theory was the result of Sutherland's engagement with contemporary issues and agreement with the Chicago School of Symbolic Interactionism school of thought's approach to the study of crime. The Chicago School approach provides the framework for conceptualizing human behavior as determined by social and physical environmental factors. According to Sutherland (1947), DAT predicts that individuals will choose criminal behavior when the decision of committing a crime exceeds that of not committing a crime. This tendency becomes learned through social association and communication (Sutherland & Cressey, 1960). The implication of DAT suggests that individuals' engagement in criminal behavior is often the result of involvement with others.

Prior to Sutherland's theory, criminologists' prevailing explanation of crime was based on a number of conditions, such as mental health state, divided homes, minority status, age, social class, substance dependent parents, lack of recreational facilities, and inadequate socialization (Sutherland, 1947). According to Sutherland (as cited in

Matsueda, 1988), “such multiple-factors approach failed to provide a scientific understanding of criminal behavior” (p. 279). Sutherland and Cassey (1955) argued this point, stating that the conditions causing criminal behavior must be explained with consideration given to factors that are always present as well as always absent when crime is absent. In other words, once criminal behavior is learned through association with others criminal, the behavior may continue to occur in the absences of the other individuals from which the behavior was learned. According to Sutherland (as cited by Matsueda, 1988) “the influence of crime involves the interrelated assertions propositions that together explain all of the observed correlates of crime” (p. 279). The three methods proposed included: logical abstraction, differentiation of levels of explanation, and analytic induction

Sutherland (1947) stated that DAT has a set of nine propositions, which can be grouped into 2 sets of elements. According to Sutherland (as cited by Matsueda, 1988)The first set of elements for learned criminal behavior include those techniques and skills for committing crimes, which vary from simplistic techniques to complex techniques that are only known by selected individual belonging to the group. The second set of elements for learned criminal behavior are considered the more proximate set of elements learned assumed “specific direction of motives, drives, rationalization, and attitudes (p. 281)” toward the rules governing body overseeing laws or disobedience of law and rules.

Sutherland (1947) outlined nine propositions for DAT which are out lined according to Sutherland (as cited by Matsueda, 1988) as sets of elements.



- “Criminal behavior is learned.
- Criminal behavior is learned in interaction with others through communication.
- Criminal behavior is learned with person only belonging to the accepted group.
- Criminal behavior is learning which includes techniques, direction of motive, drives, rational, and attitudes.
- The specific direction of the learned behavior is acquired as either favorable or unfavorable legal codes.
- Individuals engage in criminal behavior as a result of excessive definition favorable to violations of law.
- Differential associations may be displayed in variation on frequency, duration, priority, and intensity.
- Learning criminal behavior from other based on association is learned just as any other behavior is learned.
- Criminal behavior is detailed by an individual’s general needs and values, which are not explained by those same values as non-criminals” (pp. 6-9).

Sutherland’s theory of criminal behavior suggests that behavior is learned, as in this study criminal behavior would then be learned through association with other offenders in prison, jail, or community. Criminal behavior may also be the result from peer or intimate relationship and suggested by gender pathways to crime theories.

### **Gender Pathways to Crime**

Women engage in criminal behavior leading to arrest and incarceration in the U.S. criminal justice system for different reason than men. Daly (1992, 1994) asserted that

women have different pathways to crime when compared to men. Various researchers have suggested that women's pathways to crime are grounded in self-esteem and self-efficacy, parental stress, victimization and abuse, relationship dysfunction, mental health, poverty, and homelessness (Bellnap, 2007; Bloom, Owen, & Covington, 2003; Daly 1992, 1994). Overall, feminist theorists have agreed that women's pathway into the criminal justice system is rooted in childhood victimization and trauma (Bellnap, 2007; Bloom et al., 2003; Daly, 1992, 1994).

Gender pathway theory, which states that men and women have different motives for engaging in criminal behavior, was first proposed by Daly (1994) and is grounded in the feminist criminology model. While Daly (1992) acknowledged that trauma and abuse are prominent among female offender, Daly also noted that not all women involved in the criminal justice system have been victims of trauma or sexual abuse. Other studies have also associated childhood experience with future offending (Bellnap, 2007; Bloom et al., 2003; Salisbury & Voorhis, 2009). On the other hand, Daly (1992) posited that not all girls advance to criminal behaviors as adults as reported by (Bellnap, 2007; Bloom et al., 2003; Salisbury & Voorhis, 2009). Overall, this may suggest that victimization and trauma may defer among individual for offending.

Daly (1992) proposed that the expected roles of women in society places them at greater risk of becoming abused and victimization than men, and that women suffer higher levels of mental health and substance use. According to Daly's (1992) gender pathways theory, there are five typologies that increase the likelihood of female's involvement in the criminal justice system: street women, harmed and harming women,

battered women, drug-connected women, and other women. The most common pathway of female offending is the street woman pathway, which involves a life on the street that leads most women to live a life of criminal misconduct often for the purpose of survival. Daly suggested that living the street life often results in women electing to drop out of school, which is often due to pregnancy, drug use, and/or low-paid or unskilled employment. Daly also suggested that relationships with men often lead women to continued criminal behavior, a phenomenon known as the revolving door between incarceration and time on the streets.

Next, harmed and harming women endure neglect, physical and/or sexual abuse as children, often labelled as violent or troublesome youth, and experience chaos in the home, and abused drug and alcohol as a teen (Daly, 1992). Drug-connected women identifies those women who sold drugs through their involvement with partners (male) or family members. Battered women were involved in violent relationships that lead them to be battered by their partner. Lastly, other women did not fit any of the other typologies, as they did not experience drug or alcohol problems, no previous criminal involvement, home life was not chaotic, less likely to use drugs, and desired a conventional lifestyle (Daly, 1992).

This study investigated the most common pathway of *street women* focusing on 3 dominate pathways to women's recidivism which included the following: education, employment, and relationships (Blanchette, & Taylor, 2009; Daly, 1994). Blanchette and Taylor reported that critical factors in reintegration of women include MI, employment, poor quality of life, legal problems, family, and relational. Salisbury and Voorhis (2009)

concluded in their quantitative, path analytic approach that studied 313 women that engaged in unsatisfying inmate relationship who continued to engage in criminal behavior. Salisbury and Voorhis indicated that as a result of these unsatisfying relationships women developed other means of coping that often result in substance abuse and mental health issues. The researchers also found that trauma and employment were directly correlated with incarceration (Salisbury & Voorhis, 2009). Holtfreter, Reisig, and Morash (2004) found that by providing services to support women offender's economic needs such as opportunities for increasing education, job training, and housing reduced recidivism by 83%.

Both Sutherland (1947) and Daly (1994) posited that peers association has an impact of criminal behavior. Sutherland indicated that criminal behavior is learned through peer association. Daly stated that women often engage in repeated criminal behavior through the association observed in inmate male relationships. Therefore, both gender pathways theory and DAT would be appropriate for providing the theoretical framework to explain risk factors associated with recidivism.

### **Literature Review Related to Key Variables**

Both mental illness and substance use disorder are becoming increasing concerns among the criminal justice system as evident in the increasing criminal justice population (BJS, 2006). Along with these elevating concerns, female offenders are increasing in numbers for their involvement in the criminal justice system. Yet, few researchers have explored if there are differences in risk factors that increase the likelihood to recidivate for females. Multiple researchers have explored gender difference as a risk factor for

recidivism. With little data existing on female risks factors and successfully completion of community supervision, this study intended to contribute to the growing concerns of gender differences with relations to predictors of recidivism especially for women. The findings from this study may offer benefit with implications for social change through better understanding the increasing needs for services for male and female offenders with MI, SUD, and how these issues are exacerbated as a result of education, employment, and peer association. These findings would offer positive social change resulting in higher rates of success while on community supervision, reduction in crime, as well as increase public safety.

Researchers have consistently agreed that offenders returning from incarceration that were uneducated and unemployed present significant barriers leading to recidivism (Lockwood, Nally, Ho, & Knutson, 2012; Makarios, Steiner, & Travis, 2010). Makarios and Latessa (2010) found no difference in these risk factors with respect to gender. The failure of the researcher to include variables identifying gendered context of female reentry may have impacted the outcome. As most feminist scholars agree female offending is greatly impacted by such factors as MI, SUD, relational problems (Dale, 1992, Van Voorhis, Salisbury, Wright, & Bauman, 2008).

Johnson (2006) conducted a study using multivariate analysis to identify risk factors leading to regular drug use prior to arrest for women offenders. According to the author 470 confined women completed an interviewed across a total of six different jurisdictions located in Australia for the female component of the Drug Use Careers of Offenders (DUCO). Johnson (2006) indicated predictors for recidivism are impacted by

the following: offenders age, being married or not, not having children, introduction to drugs by others, traumatic exposure as an adult, obtaining finance via sexual solicitation, lower level education, and having mental health problems. Results from the study indicate that 62% of the women were regular drug users 6 months prior to their arrest, and that this was highest among women with a 10<sup>th</sup> grade education, those dropping out of school age 15 or younger, women who were single and in de facto relationships, and that drug use was higher among women 30 years of age. Additionally, 43% had previously served a prison sentence, 34% had a mental health problem, and 78% were abused as adults (Johnson, 2006).

### **Predictors of Recidivism: Independent Variables**

Several risk factors are associated with increased risk of criminal behavior. These include gender, age, race/ethnicity, sexual abuse, stressful life events, impaired social support, substance abuse, neighborhoods, and socioeconomic status (Silver, Felson, & Vaneseltine, 2008; Spjeldness & Goodkind, 2009). Matejkowski, Drine, Solomon, and Salzer (2011) identified similar predictors for criminal involvement which include lack of family bond, level of education, employment, failure to maintain leisure activities, antisocial peers, withdrawal from others, and use of illicit substances. Watkins (2011) proposed similar risk factors association with recidivism that concluded that education/employment, finances, family/marital, accommodation, leisure/recreation, companions, alcohol/drugs, emotional/personal, and attitude/orientation are generally used to predict risk of recidivism.

In an effort to offer an explanation for the factors that predicted recidivism among mentally impaired offenders, Castillo and Alarid (2011) examined offenders released under various correctional interventions. Castillo and Alarid found that alcohol use was a significant contributing factor for rearrests for violent offenses among individual with mental illness. Castillo and Alarid found that 48.9% of the rearrests at the conclusion of their supervised period were for drug related offenses, and most committed new crimes within the first year of release. Hispanics represented 48% of the sample, 32.6% were White, and 19.5% were African American, 57% were male, and 43% were female, the age ranged from 18 through 61 years, 86.% of the offenders were single, 51.7% read at a 11<sup>th</sup> grade level, and 6 of 10 were unemployed or receiving disability. Approximately 72% were on probation predominately for a drug-related crime, 87.7% had been arrest before, 36% reported a problem with alcohol, 36% use crack or cocaine, 36% used marijuana, 11% used opiates, and 8.5% reported use of amphetamines.

### **Gender**

Historically, there have been ongoing debates over differences in the mental health needs of men and women. Equally debated is the increasing rate of incarceration of women over that of men. Some researchers posited that women suffer more from psychopathology issues than men, while others argue the opposite. Other researchers suggested that both male and females suffer equally, yet they have different maladies (Rosenfield, & Smith, 2004). According to the most current reference found the Bureau of Statistics “during 2005 more than half of all prison and jail inmates had a mental health problem, including 705,600 in state prison and 78,800 in federal prisons, and 479,

900 in jail” (BJS, 2006b, p.1). Additionally, female inmates are reported to represent higher percentage (73.1% state, 61.2% federal, and 75.4% jail) of mental health problems than male inmates (55% state, 43.6% federal, and 62.8% jail; DOJ, 2006b).

According to the Bureau of Justice Statistics (2006b), offenders with MI were reported to have more prior sentences than inmates without MI. Additionally, DOJ reported approximately 47% of state prisoners with MI, compared to 39% without MI, had served 3 or more prior sentences to either probation or incarceration. Additionally, female state prisoners that were reported to have a MI had three or more prior sentences to probation or incarceration compared to females without a MI (DOJ, 2006b).

Although past researchers have studied gender in relation to offenders with MI and SUD, there is not a clear distinction of the risk factors particular to men and women with MI, SUD, or both in the criminal justice system. This has resulted in little research exploring the role that gender may play in the criminal justice system among persons with MI, SUD, or both. Becker et al. (2011) explored this disparity in their study that investigated the relationship of arrest of severely mentally ill SMI, with a focus of gender. Becker et al. used data from the County Criminal Justice Information System (CJIS) records, and county and Florida State and social service archival databases to identify 3,769 inmates under the age of 65 with SMI who spent a minimum of 1 day in the Pinellas County jail during July 1, 2003 to June 30, 2004. Data for this study included tracking individuals forward 2 years and backward for 1 year. Becker et al. (2011) reported that during the 12 month period of the study, women averaged 4.2 arrests, and men averaged 4.9 arrests. Becker et al. used poisson regression to assess the relationship



between gender and the likelihood of further arrest, which suggested that men had a 15% increased odds of additional arrests compared to women. Controlling for the number of years in the study, duration of time in the community, age group, and race, the association between gender and additional arrest decreased slightly more than 50% when SMI was included. Becker et al. concluded that men were more likely than women to experience additional arrest.

Becker et al. (2011) found that men are more likely to experience arrest and incarceration than women. Spjeldness and Goodkind (2009) offered parallel results in their study. Although many researchers have validated this trend, that men are arrested more than women, other researchers have concluded otherwise (FBI, 2011; Merolla, 2008). In contrast to the findings that men experience more arrest and incarceration, Merolla argued that the war on drugs has resulted in an influx of women being more likely to be arrested. Merolla reported that structural changes have affected the chances of females being arrested.

Merolla (2008) reported that increasing changes in the proportion of female's arrests is due to drug laws and social construction of the drug user. The FBI (2012) reported in 2011 the number of males arrested declined 11% when compared to 2002, yet the number of females arrested increased 5.8% during that same comparison period. When referencing the war on drugs, the FBI (2012) reported the difference in arrest during the period of 2002 (789,543) through 2007 (761,050) men arrest rate decline - 3.6% for drug abuse violations, while women increased in 2002 (178,975) through 2011

(193,114), which reflect a 7.9% change. Conclusively, the highest number of arrests was for drug abuse violation, which estimated a total of 1,531,251 (FBI, 2012).

Cloyes, Wong, Latimer, and Abarca (2010) explored the disparities in the roles of sex by comparing recidivism rates, severity of MI, and clinical history among women and men, with and without serious mental illness (SMI) that were released during the period of 1998 and 2002 from the Utah State Prison. Cloyes et al. included 9,245 unique cases retrieved from an electronic medical and prison records. Cloyes et al. measured survival time based on the time frame of their return to prison, using the cox proportional hazard model. Cloyes et al. presented a threefold aim to their study, which identified the sample of women with SMI during the 5 year period; a comparison was made against those women without SMI and men with and without SMI. Cloyes et al. explored how recidivism rates compare to severity of MI and clinical history, as well as those factors that differ from men and women with SMI.

Cloyes et al. (2010) controlled for demographics, degree and types of crimes, as well as conditions of released. Seventy-six percent were male and 92% White, 11% were Hispanic. With an average median age of SMI of 40 years. Women made up 23.5% of the SMI sample. Previously incarceration women with SMI was 1.5, ranging from 0 to 9, 64% had at least one incarceration, and 12% had three or more prior incarcerations. The most notable Axis I for women was major depressive disorder, and the second being bipolar I and II mood disorder, which was reported in 30% of the sample, while men were represented less in these disorders (Cloyes et al., 2010).

According to Cloyes et al. (2010), indicators of substance abuse revealed that 1% of women had substance abuse records, while 26% were arrested for alcohol or drugs-related offenses, and charts reflected 67% received substance abuse treatment while incarcerated. Cloyes et al. concluded that women had a longer survival period in the community than men; however, SMI had an increased influence on recidivism for women. Additionally, results revealed that women 1 year after incarceration 65% of the women with SMI remained in the community, while 57% of the men remained in the community over the same one year period. At the 2-year mark 55% of women and 45% of the men remained in the community, resulting in men returning to prison 41 days earlier than the women, and men without SMI returned 101 days prior to women with SMI. Furthermore, men with mental illness returned 67 days before women with SMI. Overall, Cloyes et al. demonstrated that inmates with SMI released from prison do not reflect a homogenous group.

### **Mental Illness**

The terms mental illness and mental disorder are often used interchangeably despite their being clearly marked by distinguishable factors. According to the Department of Health and Human Services and the National Institute of Mental Health (1999), “mental illness is a term used when referring collectively to all diagnosable mental disorders” (p. 5). According to the United States Department of Health and Human Services (2012), an estimated 45.6 million adults (18 and older) in the general population in the United States had any mental illness (AMI) in 2011. Any mental illness is defined as “an adult 18 or older that currently or at any time in the past month having

had a diagnosable mental, behavioral, or emotional disorder (The United States Department of Health and Human Services, 2012, p. 6).” The *Diagnostic and Statistical Manual of Mental Disorders* further defines a mental disorder as

A syndrome characterized by clinically significant disturbance in an individual’s cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. (APA, 2013, pp. 20-21)

According to the most recent report by the Bureau of Justice Statistics (2006b) in 2005, over half of all prison and jail inmates had a mental disorder based on the criteria specified by the DSM-IV. Subsequently, approximately 1 in 10 individuals in the general population met DSM-IV criteria for symptoms of a mental health disorder (BJS, 2006b). Women inmates were reported to be amongst the highest with MI both in the criminal justice system and in the general population (BJS, 2006b). This study did not investigate mental disorders as categorized by the DSM-5, only references were made to the overall mental illness issues as self-reported by the participants. Baillargeon et al. (2009a) concluded that inmates with MI and SUD had substantially statistically significant increased risks of multiple incarcerations.

Similar to the finding of the BJS study that studied MI among jail inmates Baillargeon et al. (2009) also concluded for their study of 61,00 Texas prison

inmates revealed that MI inmates had higher rates of recidivism than those inmates without MI. Equally, those inmates with either mental illness or substance use disorders only demonstrated lower rates of recidivism. Wood (2011) also confirmed that parolees released to community supervision with MI and SUD were rearrested faster than those with non-dually diagnosed parolees.

### **Substance Use Disorders**

Substance abuse is a major contributing factor that leads to higher rates of recidivism (Adams et al., 2011; Baillargeon, 2009a, Castillo & Alarid, 2011; Penn, Williams, & Murray, 2009; Derry & Batson, 2008; Wood, 2011). Oftentimes, offenders commit criminal acts to support their substance use (Hiday & Wales, 2009). According to the most recent findings by the BJS (2006c), between 1997 and 2004 the number of inmates in both state (from 34% to 39%) and federal (39% to 45%) prison increased. In 2004, 17% of state and 18% of federal prisoners reported committing their crime to obtain the financial means to obtain drugs, while 56% in state and 50.2% in federal prison reported using drug the month before their offense.

In 2004, 59.3% females and 55.7% males in state prison indicated that they used drugs the month before the offense, and 47.6% female and 50.4% males in federal prison reported using drug the month before their offense (BJS, 2006c). Additionally, in 2004, 32.1% of state inmates and 26.4% of federal inmates reported being under the influence of drugs at the time of the offense (BJS, 2006). Inmates in state prison that had prior criminal history for drug recidivist equaled 4% for state prisoners compared to 2.8% of other inmates, and 10.2% for drug recidivists in federal prisoners, compared to 6.8% of

other inmates (BJS, 2006c). These results demonstrate a moderate parallel of the impact of recidivism and substance use among the criminal justice population.

The Bureau of Justice Statistics (2006c) reported in 2004, 53% of state and 45% federal prisoners met the criteria for drug dependence or abuse as specified in the *DSM-IV*. Those prisoners who met the criteria for recent drug dependence or substance abuse also demonstrated an extensive criminal history (BJS, 2006c). Fifty-three percent of state inmates had at least three prior convictions, compared to other inmates. At the time of arrest, those state prisoners dependent or abusing drugs account for 48% compared to other inmates, of which 37% were receiving probation or parole supervision (BJS, 2006c). The study conducted by Cobbina, Huebner, and Berg (2012) found that women with drug use histories failed in community supervision more quickly than men.

### **Education**

According to the most current education and correctional report by the BJS (2003) in 1997, 41% of inmates in state and federal prisons and local jails, and 31% on probation had not completed high school or its equivalent, and 18% of the general population did not complete the 12<sup>th</sup> grade. Females accounted for 42% of State inmates who did not complete high school or obtain a GED, while males accounted for 40% of state inmates who did not complete high school or obtain a GED (BJS, 2003). Seemingly, on average one in six jail inmates reported dropping out of school due to criminal convictions, or were involved in illegal activities (DOJ, 2003). According to BJS (2006a) offenders with lower educational levels were more likely to violate the conditions of parole, supervised release, or probation (BJS, 2006a). These findings further illuminate the urgent and

emergent need for identifying risk factors for offenders in the criminal justice population if offending and reoffending aims to be reduced.

As reported by the Bureau of Justices Statistics (2003) in 1997 approximately 11% of state inmates, 24% of federal inmates, 14% if jail inmates, and 24% of probationers reported participating in college-level courses or postsecondary vocational classes. Lockwood et al. (2012) conducted a 5-year follow up study from 2005 – 2009 on 6,561 offenders inmates released from the Indiana Department of Correction (IDOC) to examine the effect of level of education on postrelease employment and recidivism. Lockwood et al. revealed that those offenders who had higher education levels had lower recidivism rates, and increase employment rates than offenders with lower education levels. In brief, 3,146 (48%) of the offenders released from custody returned during 2005 - 2009, of which 1,472 (46%) returned to custody within 1 year, 2,548 (81%) returned to custody within 2 years, 2,863 (91%) offenders returned to custody within 3 years (Lockwood et al., 2012). Accordingly, 31% of offenders who had a college education had lower levels of recidivism, yet, 56% of offenders with below 12<sup>th</sup> grade education had a higher recidivism rate (Lockwood et al., 2012). When examining these results of the effect of education on postrelease employment on recidivism results conclude that employment and education are important predictors on recidivism. Increased education and enhanced employment skills among the criminal justice population may better prepare offenders for successful return into the community and reduce or eliminate continued criminal behavior.

## **Employment**

Achieving stable employment presents significant challenges for offenders in the criminal justice system. Failure to secure sustainable employment has shown to be an important predictor of recidivism (Lockwood et al., 2012; McNeil, Binder, & Robinson, 2005; Greenberg & Rosenheck, 2008). Blitz (2006) noted that the inability to secure stable employment is a crucial factor for successful community integration. Blitz concluded that women are of increased rate of not securing stable employment as a result of higher rates of psychiatric and substance abuse disorders. Blitz noted the complexity of securing legitimate employment with sustainable wages is due to such lower levels of education found among the criminal justice population. Although researchers have identified a significant relationship between employment status and recidivism, there continues to be conflicting findings.

Tripodi, Kim, and Bender (2009) analyzed administrative data of 250 Texas Department of Criminal Justice (TCCJ) male parolees released between 2001 and 2005, to determine if employment is associated with reincarceration. Tripodi et al. concluded that obtaining employment on release from prison did not decrease the likelihood of reincarceration over time. Tripodi et al. suggested this outcome may be an indicator of offenders positive behavior change over time which other researchers may not take into account such time frame.

Cobbina, Huebner, and Berg (2012) found that among men, postrelease employment was a strong predictor of recidivism, but was not a significant factor for women. In contrast to the finding of Cobbina et al. and Blitz (2006) found that women



with higher levels of education postrelease had increased chances of securing employment than postreleased women with lower levels of education. Blitz suggested that women, regardless of their educational level, were equally impacted in their ability to secure employment due to their higher rates of MI, and SUD. Lower levels of education seem to be a prominent forecaster for securing sustainable employment, which research has shown is an important predictor of recidivism (Lockwood et al., 2012; McNeil, Binder, & Robinson, 2005; Greenberg & Rosenheck, 2008).

### **Peer Association**

Numerous researchers have determined that offenders who engage in criminal activities often do so as a result of their association or social bonds with others that hold similar beliefs or behaviors (Cobbina et al., 2012; Sutherland, 1994). Recidivism may vary by gender as a result of offenders association or social bonds with others criminals (Cobbina et al., 2012; Herrchaft, Veysy, Tubam-Carcone, & Christian, 2009; Miller, 1976). Consistent with other studies, Cobbina et al. found that association or social bonds (e.g., parents and intimate partner) with others influenced reoffending. Moreover, men and women with positive parental relations had delay time until recidivism, whereas quality relations with intimate partners significantly influenced recidivism. For instance, women with quality intimate association or social bonds remained arrest free longer than those females without quality social bonds; quality intimate association was not significant in men. Yet, men that associated with criminal peers reoffended more quickly than females (Cobbina et al., 2012).

Cobbina et al. (2012, p. 1) indicated that 65% of the male and 55% of the females were rearrested during the 46 months follow-up period. On average, men spent 619 days in the community, and females spent 747 days in the community before committing another crime. Although the results from this study showed that peer and/or intimates association suggest that females remain arrest free longer than men, this may be due to women being more relationally driven, as opposed to men being more status driven (Herrchaft, Veysy, Tubam-Carcone, & Christian, 2009).

Both male and female recidivism is associated with quality relational bonds. Brenda (2005) and Smith (2006) concluded that offenders that associate with criminal peers returned to prison more frequently than those offenders with prosocial relationships. Offenders that lived with a criminal partner were more likely to reoffend (Brenda, 2005). Leverentz (2006) found that marriage was strong predictor of successful reentry; however, this was not found to be the case for women.

### **Descriptive Data for Recidivism: Dependent Measure**

Oftentimes, inmates are released from the criminal justice institution after serving a portion of their sentence in a correctional facility, while other offenders may serve their entire sentence under community supervision. Offenders released to community supervision often fail to comply with the releasing authority's supervision release conditions. Community supervision failure is usually associated with failure to sustain from illicit substance use, not reporting to parole or probation officer, and reoffending. Reoffending for the study will be operationalized as dependent variable recidivism as evident revocation, and rearrests.

According to Bureau of Justice Statistics (2009) at the end of 2008, 5,095,200 parole and probation offenders were under community supervision, on average this equated to one in every 45 adults in the United States. Probationers accounted for 84%, and parolees accounted for slightly less than 16% of this population (BJS, 2008). According to the BJS (2008) during the past 8 years community supervision has increased over a half million from the estimated 4.6 million in 2000. During 2010 community supervision slightly declined yearend by 1.3% as evident from 4,954,600 to 4,887,900 (BJS, 2011). Lower rates of community supervision were again observed from 2012 to yearend 2013, an estimated 4,751,400 total offenders declined of about 29,900 (BJS, 2015b). According to BJS the decline was a result of a slight reduction in probationers. The incarceration rate between probationers (5.4%) and parolees (9%) at risk of violating their release conditions remained stable in 2013 (BJS, 2015b). The number of offenders under community supervision appears to fluctuate over time, while MI and SUD have demonstrated an increase risk for recidivism.

Mental disorders and substance abuse are risk factors observed in the increased rate of recidivism (Sung, Mellow, & Mahoney, 2010). Mental ill offenders unlike others who are not mentally ill and have a substance use disorder that are on parole or probation supervision who are supervised in the community are likely to have their supervision revoked (Baillargeon et al., 2009b). Baillargeon et al. reported that offenders with either a MI only or SUD exclusively were found to be less likely to be rearrested or have a technical violation compared to those who have both MI and SUD. According to Cloyes

et al. (2010) rearrests based on gender and mental disorder found females at a greater risk than males for recidivism base on strengths and resources that promote success.

### **Revocation**

The Bureau of Justice Statistics (2015a) reported that 34 per 100 parolees completed community supervision in 2012 and 33 per 100 completed in 2013. In addition, 9.3% parolees were reincarcerated. Since 2009, probationers completing community supervision have remain stable and 36 per 100 completed supervision in 2013 (BJS, 2015b). According to BJS 5.4% of probationers were reincarcerated for either violating release conditions for new arrest, revocation, and other reasons.

Wood (2011) examined the relationship between MI, SUD, and time to parolee rearrests. Wood obtained data from the BJS's Survey of inmates in state and federal correctional facilities for 2004. The sample was inclusive of 1,121 state prison inmates on parolee. Using cross-sectional self-reported data the premise was supported by the findings that parolees with reported MI and SUD experienced rearrests more rapidly (3 to 5 months) than parolees that did not have MI and SUD. In a similar study, Baillargeon et al. (2009a) examined comorbid substance use disorder and the risk of reoffending and returning to jail in inmates with MI. Baillargeon et al. hypothesized that prisoners with comorbid MI and SUD were an increased risk of committing new criminal offenses when compared to those prisoners with severe mental illness only or substance use disorders only. The researchers conducted a retrospective cohort study of 61,248 inmates in 116 Texas Department of Criminal Justice (TDCJ) prisoners who were screened for substance use disorder and mental health disorders at intake, and serving sentences during the

period of September 1, 2006, and August 31, 2007. Inmates that were incarcerated for technical parole violation were excluded from the study. Inmates with SUD only or MI only, compared to inmates with co-occurring disorders were determined to be reincarcerated over the 6-years follow-up period (Baillargeon et al., 2009a).

Different from the study conducted by Baillargeon et al. (2009a) for which inmates that were incarcerated for technical parole violations were excluded from the study, Solomon, Drained, and Marcus (2002) circumvented their study to identify inmates incarcerated for technical violations, as opposed to incarceration for new offense. A total of 250 psychiatric probationers and parolees who were on supervision in the community in a large city on the East Coast of the United States were monitored for a period of 12-months. Participants from the archival data were selected based on probationers and parolees who were assigned to the psychiatric supervision unit, as well as referrals from the supervising officers. During the data collection period 34% were incarcerated; 16% of the participants from the archival data were reincarcerated for technical violations, and 18% were incarcerated for new offenses (Solomon et al., 2002). The results of this study confirmed the hypothesis that probationers and parolees receiving mental health services experienced increased risk of incarceration for technical violations (Solomon et al., 2002).

Swartz and Arthur (2007) conducted a study that examined the relationship between MI, SUD and arrest, which, concluded arrests are largely attributed to the mediating effect of SUD. The findings of Swartz and Arthur (2007) are consistent with researchers who have reported that the use of substance increases the risk for criminal

behavior among individuals with MI (Adams et al., 2011; Castillo & Alarid, 2011; Council of State Government Justice Center, 2012; Derry & Batson, 2008; Elbogen & Johnson, 2009; Wood, 2011). The Council of State Government Justice Center (2012) reported that MI individuals exclusively were not a strong predictor of criminal behavior, yet individuals with MI in the criminal justice system satisfy more risk factors than individuals without MI in the criminal justice system. Substance use disorder was reported as a major criminogenic risk factor for future criminal behavior (Council of State Government Justice Center, 2012).

### **Rearrests**

As reported by BJS (2013), for the third consecutive year the percentage of adults on community supervision declined. It was also reported at the end 2011, approximately 4,814, 200 adult probationers and parolees under community supervision decreased by 71,300 offenders from the beginning of the year. Probationers, who exited supervision in 2011, account for 66% who successfully completed, 16% were incarcerated for a new offense and probation was revoked, and 2% absconded supervision (BJS, 2012f).

Skeem, Manchak and Peterson, (2011) reported that inmates with MI are more likely to have their supervision revoked, unlike inmates who are not MI on parole or probation supervision. Mentally ill offenders that engage in substance use are at increased risk for reoffending. Castillo and Alarid (2010) found 48.9% of offenders were rearrests at the conclusion of their supervised period for drug related offenses, and most committed new crimes within the first year of release. Women continue to rapidly increase in criminal justice system. According to BJS (2008a) the percentage of incarcerated women

increased 67% between 1995 and 2007. The influx of women involvement in the criminal justice system warrants attention if recidivism aims to be reduced.

### **Summary**

Recidivism is becoming an increasing concern in the criminal justice system. Yet, there is minimal research that addresses recidivism among parole and probation offenders on community supervision with some combination of MI, SUD, or both, and whether risks of recidivism differ as a function of gender. Both mentally offenders and non-identified mental ill offenders are faced with contributory factors for the risk of reoffending. The prominent challenges that inmates face as they reintegrate back into the community include mental illness and substance abuse (Adams et al., 2011; Baillargeon et al., 2011; Council of State Government Justice Center, 2012; Derry, & Batson, 2008; Elbogen & Johnson, 2009; Penn, Williams, & Murray, 2009; Wood, 2011). Stronger predictors of offender likelihood of reoffending is greatly influenced by their level of education (BJS, 2003; Blitz, 2006; Lockwood et al., 2012), ability to secure sustainable employment (Lockwood et al., 2012; McNeil, Binder, & Robinson, 2005; Greenberg & Rosenheck, 2008), and peer association (Blitz, 2006; Cobbina, Huebner, & Berg, 2012).

Females are increasing in numbers compared to men in the criminal justice system. Further research exploring the role that gender may play may offer further insight into the contribution of MI and SUD as risk factors, increase successful supervision outcome, and offer improvement to society as a whole through the reduction of crime. Sutherland's theory argues that behavior is socially transmitted by association with deviant individuals, thereby increasing criminal behavior. This theory may best explain

the influx in recidivism among female offenders who continue to engage in criminal behavior as a means of survival, and their association with intimate peer relations. Feminist pathways to crime also illuminate the risk needs of men and women such as education, employment, and peer association particular to female offending. This study addressed the current gap in the literature that fails to examine whether predictors of recidivism differ as a function of gender and the likelihood of recidivism. Chapter 3 is an outline of the methodology of the study and the utilization of archival data collection.



## Chapter 3: Research Method

### **Introduction**

The purpose of this study aimed at examining risk factors of offenders released to community supervision and the role that gender differences may play among offenders. The results also aimed to advance knowledge with respect to the effects on recidivism of education, employment, and peer association among offenders on community supervision. This chapter offers an explanation of how this was accomplished, the research design, and the rationale for this study. This chapter also includes selection of the instrument, risk assessment, characteristics of the sample population, sample size, and the method for selecting the participants from the archival data. Additionally, this study will address threats to validity. The final sections will discuss ethical procedures, and summarize Chapter 3.

### **Research Design and Rationale**

This study employed a quantitative design to explore differences of recidivism across documented mental illness, and no documented mental illness, substance use disorder, and the role that gender may play among offenders released to Court Services and Offender Supervision Agency (CSOSA). A quantitative approach was chosen because it aligned with the focus of the study, facilitating an inquiry about the relationships between variables in this study. This study used electronic archived data of offenders under supervision release with CSOSA during fiscal year FY 2012 (October 1, 2012 through September 30, 2013). Archival data were used to determine to what extent gender, MI, SUD, education, employment, and per association predict recidivism, which

includes: rearrests, and revocation. The dependent variable in this study was recidivism, which was measured through rearrests and revocations. The independent variables were gender, documented MI, no documented MI, SUD, education, employment, and peer association. Data analyses were accomplished using multiple logistic regression.

A multiple logistic regression model was derived to determine if there was a significant relationship between identified mental illness, against their counterparts with no-documented MI, substance use, and recidivism. Age and race did not display a moderate relationship with the outcome variable, so they were not controlled for in this study; these demographic variables have previously been determined to influence recidivism associated with female and male criminality (Matejkowski, Drine, Solomon, & Salzer, 2011). As reported by Seltzer and Bazelon (2005), adult offenders diagnosed with MI are more frequently arrested for the same behavior in comparison to those without MI.

This study determined two ways participants were considered to recidivate. The first, was revocation which is the removal of an offender from a community by the releasing authority because that offender has violated the conditions of release. Revocation includes new convictions, technical violations (such as positive drug test or missed appointments with supervising officer), or rearrests. The second, was rearrest which is defined by the occurrence of one or more new convictions over a predetermined period of one year while on supervision. Rearrests include those offenders that commit another crime, but who were not removed from community supervision. Successful supervision includes those offenders discharged from supervision with a status of

satisfactory completion. Unsuccessful supervision includes those offenders whose supervision was terminated by the U.S. Parole Commission or the Superior Court for the District of Columbia due to revocation. Cases closed to death or without a specified reason for closure were not captured in this study. Noncompliance included one or more rearrests, conviction for a new offense, or technical violation of release conditions (positive drug test, not reporting to releasing authority as instructed).

### **Research Questions**

Research Question 1: Is the presence of mental illness associated with greater likelihood of recidivism?

- $H1_0$ : There is no significant difference in presence of mental health issues and the likelihood of recidivism.
- $H1_A$ : There is a significant difference in presence of mental health issues and the likelihood of recidivism.

Research Question 2: What is the relationship between substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and recidivism?

- $H2_0$ : There is no significant relationship with substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and greater likelihood of recidivism.
- $H2_A$ : There is a significant relationship with substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and greater likelihood of recidivism.

Research Question 3: What is the relationship between gender and likelihood of recidivism?

- $H3_0$ : There is no significant relationship between gender and likelihood of recidivism.
- $H3_A$ : There is significant relationship between gender and likelihood of recidivism.

Research Question 4: Is there an interaction between mental illness and substance use such that the presence of both factors is associated with greater likelihood of recidivism than either variable alone?

- $H4_0$ : There is no significant interaction between mental health and substance use resulting in greater likelihood of recidivism than either variable alone.
- $H4_A$ : There is a significant interaction between MI and SUD resulting in greater likelihood of recidivism than either variable alone.

Research Question 5: Is there a relationship between education and recidivism?

- $H5_0$ : There is no significant relationship between education and recidivism.
- $H5_A$ : There is a significant interrelationship between education and recidivism.

Research Question 6: Is there a relationship between employment and recidivism?

- $H6_0$ : There is no significant relationship between employment and recidivism.
- $H6_A$ : There is a significant relationship between employment and recidivism.

Research Question 7: Is there a relationship between association, and recidivism?

- $H7_0$ : There is no significant relationship between peer association, and recidivism.
- $H7_A$ : There is a significant relationship between peer association, and recidivism.

Using multiple logistic regression and performing a cross tabulation of recidivism, and computing Chi-square this study regressed whether an offender

recidivated, regressing that on to offender's mental illness, substance use disorder, employment, education, and peer association.

### **Population**

The participants from the archival data for this study consisted of new ex-offender intakes in FY 2012 who had a supervision term of at least 12 months. This population included both male and female ex-offenders released to community supervision under the supervision of CSOSA. The Court Services and Offender Supervision Agency for the District of Columbia provides supervision for adult offenders released by the Superior Court for the District of Columbia on probation or the U.S. Parole Commission on parole or supervised release. Based on the use of multiple logistic regression analysis with five predictor variables and estimating a moderate effect size of .02, the power analysis software, GPower calculated a sample size of 315 for the study to be moderately sufficiently powered (95%).

### **Sample Procedures Using Archival Data**

The goal of Court Services and Offender Supervision Agency (CSOSA) is to promote public safety and offenders' successful reintegration into the community, while also providing efficient supervision through the use of comprehensive risk and needs assessments. The Court Services and Offender Supervision Agency (2013) "supervises approximately 15,500 offenders daily and 24,000 unique offenders over the course of a year" (p. 1). During FY 2012, 9,417 offenders were released to CSOSA by the releasing authorities for community supervision in the Washington, DC (CSOSA, 2013, p. 1).

The total participants from the archival data for this study included 1,492 offenders released to CSOSA during the organization's fiscal year FY 2012 (October 1, 2012 through September 30, 2013). The total number of participants from the archival data was reduced to 618 due to exclusions because of missing data and participants not meeting specific inclusion criteria (i.e., mental illness criteria, drug test results, loss of contact with the supervising agency). Prior to analysis, the data set was cleaned and participant's archival data was reduced to 618. The sampling frame for this study was extracted from self-reported archival data of offenders under community supervision with CSOSA. Offenders' information was obtained through ID SMART, a relational database that removes personal identifiers. Identification of the sample was accomplished by abstracting the offender ID SMART (status, arrest, violation). Identifying offender's ID SMART to my sample from the AUTO Screener data allowed for the collection of the identified population.

#### **AUTO Screener: Instrumentation**

The AUTO Screener was developed by CSOSA in 2006 and underwent substantial testing and enhancements through 2008. Prior to the agency wide full deployment of the AUTO Screener the agency employed numerous pilot programs to test the AUTO Screener reliability and validity. The AUTO Screener was deployed agency-wide in May 2011. The AUTO Screener is comparable to the Level of Service Inventory Revised (LSI-R) assessment, Compos, and the Wisconsin Client Management Classification System. These assessment tools were designed to measure offenders' risks and needs with regards to recidivism. The AUTO Screener comprises 300-plus questions

covering multiple dimensions. These dimensions include criminal history, substance use, community supervision history, employment, education, community support, physical/mental health. The AUTO Screener is an actuarial assessment, which collects relevant facts about the offender, apply numeric weights to the facts, sums the weights to produce a numeric score, and applies decision rule(s) to translate score to recommendation(s) (Grann & Langstrom, 2007).

The AUTO Screener is a module that assesses needs through SMART case management system, which automatically recommends referrals for services based on applying expert rules to AUTO Screener data. The AUTO Screener comprises two service level inventories, which include supervision level and needs and services and both are divided into subject domains which are represented by multiple, adaptive questions items (CSOSA, pp. 39-40). The supervision level assesses across seven domains. These domains include the following: education, community support/social networking, residence, employment, criminal history, victimization, and supervision failures (CSOSA, pp. 39-40). The needs services assesses across five domains, which include substance use and history, mental health, physical health and disability, leisure time, and attitude and motivation (CSOSA, pp. 39-40). The AUTO Screener is completed no later than 5 weeks of the start of supervision and is readministered in 6 months intervals.

### **Supervision and Management Automated Tracking System: Instrumentation**

The Supervision and Management Automated Tracking System (SMART) is an automated tracking data base utilized by CSOSA that tracks offenders' contacts (office

and home visits), drug testing results, changes in supervision level, program participation, revocations, rearrests, and technical violations of all offenders released to community supervision. SMART is the case management operating system which corresponds with the identical identification number in the AUTO Screener. All entries are electronically time and date stamped. Rearrests are tracked in SMART under arrest notification. Rearrests are captured for arrest occurring in the District of Columbia, Maryland, and Virginia. Revocations of release conditions are tracked in SMART under the supervision status module. Noncompliance is tracked in SMART under violation module, allowing supervisor officers to generate violation reports to the release authority. Offender's drug testing history is obtained in SMART under the Drug Test module.

#### **Data Collection and Analysis of Archival Data**

Data for this study were reviewed by CSOSA research review committee, which provided recommendations for the proposed study to proceed. The researcher adhered to applicable provisions of the Privacy Act of 1974, regulations to ensure that the offender's identity is protected in accordance to agency policy for data collection by the researchers. This study ensured confidentiality by requesting the removal of the offender's identification, through the use of ID SMART in accordance with agency policy for a researcher. This study utilized systems of records from the AUTO Screener; therefore, informed consent was not required by participants from the archival data.

Data for this study were collected from electronic database from CSOSA for a period of one year. Data were retrieved using the AUTO Screener, which is an assessment intended to assess an offender's risk and needs to determine the appropriate



level of supervision and the need for treatment and support services. Data were provided to the researcher stored on a file base per Agency protected protocol. The Statistical Package for the Social Sciences (SPSS) was used to analyze data for answering research questions.

### **Independent Variables**

Offender's gender was captured on the first page of the AUTO Screener under the Offenders Profile module. Offender's gender was coded as "0" for male, and "1" for female. Offender's self-reported mental health was captured under the Mental Health Needs/Services Level Inventory on Page 9 of the Auto Screener. Mental illness was measured as one variable with two categories, which included the following: identified mental illness, against their no documented mental illness counterparts, and each was coded dichotomous. This study did not reflect the severity of MI. Offenders who answered "yes" to 1 or more of the following questions were identified as mental illness and was coded as "1."

Question 2: Are you currently taking medication or have you been prescribed medication for emotional problems?

Questions 4: Were you evaluated for or diagnosed with a mental disorder within the past month?

Question 5: Are you currently in a mental health treatment program?

Question 6: Have you been treated for a mental condition within the past six months?

Question 9: Have you been hospitalized for a mental condition within the past six months?

Question 12: Have you ever been treated and/or hospitalized for a psychiatric condition?

Offenders who answered “no” to all documented MI questions (2, 4, 5, 6, 9, or 12) were identified as no documented mental illness and were coded as “0”.

Offender’s substance history was retrieved from SMART which is a case management system operated through AUTO Screener. Use of illicit substances was defined by positive drug toxicology (i.e., alcohol, cocaine, opiates, marijuana, amphetamines, and phencyclidine). Substance use was dichotomous and offenders who had zero to three positive toxicology drug tests over a 12 month period was coded as “0” and was determined to not have a history of substance use. Offenders who had three or more positive toxicology drug tests over a 12 month period was coded as “1” and was determined to have a history of substance use. Offenders are referred for substance abuse treatment usually after three positive toxicology drug tests.

Offenders peer association was captured on Page 2 of the AUTO Screener under the Community Support/Social Networking module. Offenders were asked the number of contacts per week they had with peer associate. Those that answered having 1 or more contacts per week were coded as “1”. Offenders who answered “no” contact per week were coded as “0”.

Offender’s education level was captured on Page 1 of the AUTO Screener under the Education module. Offenders were asked level of education completed. Participants

from the archival data for this study began with the highest level completed as 8<sup>th</sup> grade, participants that reported completing the 8<sup>th</sup> grade through the 11<sup>th</sup> grade was collapsed and coded as “0”. Offenders completing 12<sup>th</sup> grade, obtainment of a high school diploma GED, 1 to 4 years of college (e.g., associate and/or bachelor) master’s, and/or doctorate was collapsed and coded as “1”.

Offender’s employment was captured on page 4 of the AUTO Screener under the Employment module. Offenders were asked the following questions: Offenders are asked are you currently employed? Employment is defined as either employed or not employed at the time of completing the AUTO Screener. Offenders who answered “yes” were reordered as “1”; offenders that answer “no” were recorded as “0”.

### **Dependent Variables**

Revocation was operationalized as the removal of offender from the community by the releasing authority for violation of conditions of release. Revocation may include new conviction, technical violation resulting in termination of community supervision. Rearrests was operationalized as having 1 or more new convictions over a period of 1 year but while on supervision. Successful supervision was operationalized to include those offenders termination from supervision satisfactorily. Unsuccessful supervision included those offenders whose supervision was terminated by the U.S. Parole Commission, or Superior Court for the District of Columbia due to revocation.

For this study, technical violation was operationalized as having a positive drug test, and/or not reporting as instructed for scheduled contacts with probation/parole officer. Case closed to death or without a specified reason for closure was not captured in

this study. Noncompliance included one or more rearrests, conviction for a new offense, technical violation of release conditions, which may or may not resulted in removal from community supervision. Recidivism was operationalized to included revocation, rearrest, and noncompliance. Participants from the archival data that had 1 or more revocation, rearrest, or noncompliance were coded at “1” and participants from the archival data that had no revocation, rearrest, or noncompliance were coded as “0.”

### **Threats to Validity**

This study presented some threats to validity, which included the following:

- This study did not include measures of mental illness based on diagnostic categories meeting particular symptoms, as categorized in the *DSM 5*. Identification of MI levels was based on developed proxy by researcher presented threats to validity.
- The use of AUTO Screener data, which is a combination of self-report and officer’s investigation of administrative record data presented a threat to validity of the study given that some data may have not been captured or recorded correctly by the supervising officer, or accurately self- reported by the offender.

Despite these threats to validity no other agency provides the level of supervision comparable to CSOSA. In 1997, CSOSA became a federal agency under the provisions of the National Capital Revitalization and Self Government Improvement Act of 1997, making CSOSA financial and management responsibilities that of the federal government. This allowed for higher levels of resources; therefore making the CSOSA

budget not comparable to other state agencies. This allows for enhanced risk services. Withstanding this CSOSA supervising officers are not trained clinicians allowing them to make decisions as to the level of mental health severity, they are required to have a minimal of a Bachelor of Science or Bachelor of Art degree, which is not required of state supervision agencies. This study, like other outcome studies on MI and SUD, is based on a single jurisdiction in Washington, DC, thus caution should be taken in generalizing to other rural or urban jurisdictions.

### **Ethical Procedures**

The protocol of the study was approved by the University of Walden research review board, CSOSA, and the Pretrial Services Agency (PSA) research review board. The Court Services and Offender Supervision Agency and PSA research and review committee (RRC) reviews research proposals and monitor research projects to ensure compliance with federal regulations with respect to protection of human subjects, confidentiality, compliance with agency policies, and consistency with agency priorities and/or interest. This study could contribute to the agency and society as a whole as it offers advancement in knowledge concerning assessment of risk, community supervision and corrections.

Only archival data were used for this study therefore; as a result, participants' consent was not required. The ethical protection of the participants' data followed the protocol of Walden University and CSOSA for protection to avoid and incur no harm. Offender identifiers and proxy indicators were removed for the specific mental history

data requested. This allowed for the research questions to be answered while adhering to confidentiality guidelines and privacy.

### **Summary**

This study employed a quantitative approach using self-reported archival data obtained from CSOSA. Data for this study were collected covering a period of one year while participants were on community-supervised release. Participants' confidentiality was protected using offender's anonymous identification known as ID SMART. Identification of the sample was accomplished by abstraction the offender ID SMART (status, arrest, violation).

The methodology for this study was designed to investigate mental illness, which was measured as one variable with two categories, which included: mental illness, and no documented mental illness. This design allowed for inquiry to be made as to whether there was a relationship between mental illness, substance use, gender, education, employment, peer association, and the likelihood for recidivism. Chapter 4 provides detailed explanations of the study, data collection, and the results of the study.

## Chapter 4: Results

### Introduction

This chapter begins with an introduction of the study and research question. The next section includes data collection beginning with a description of the study participants from the archival data. The next section is the study results and the final section summarizing the chapter. Differential associations and feminist pathway theory served as the theoretical foundations for examining whether sex differentiates pathways to recidivism in MI and SUD offenders. The purpose of this study was to identify predictors of recidivism. A quantitative approach was used to investigate the relationship between mental illness, substance use disorder, employment, education, peer association and the likelihood of recidivism.

The following research questions and hypotheses guided this study:

- Research Question 1: Is the presence of mental illness associated with greater likelihood of recidivism?
  - $H_{1o}$ : There is no significant difference in presence of mental health issues and the likelihood of recidivism.
  - $H_{1A}$ : There is a significant difference in presence of mental health issues and the likelihood of recidivism.
- Research Question 2: What is the relationship between substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and recidivism?

- $H2_0$ : There is no significant relationship with substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and greater likelihood of recidivism.
- $H2_A$ : There is a significant relationship with substance use (cocaine, marijuana, alcohol, phencyclidine, and opiates) and greater likelihood of recidivism.
- Research Question 3: What is the relationship between gender and likelihood of recidivism?
  - $H3_0$ : There is no significant relationship between gender and likelihood of recidivism.
  - $H3_A$ : There is significant relationship between gender and likelihood of recidivism.
- Research Question 4: Is there an interaction between mental illness and substance use such that the presence of both factors is associated with greater likelihood of recidivism than either variable alone?
  - $H4_0$ : There is no significant interaction between mental health and substance use resulting in greater likelihood of recidivism than either variable alone.
  - $H4_A$ : There is a significant interaction between MI and SUD resulting in greater likelihood of recidivism than either variable alone.
- Research Question 5: Is there a relationship between education and recidivism?



- $H5_0$ : There is no significant relationship between education and recidivism.
- $H5_A$ : There is a significant interrelationship between education and recidivism.
- Research Question 6: Is there a relationship between employment and recidivism?
  - $H6_0$ : There is no significant relationship between employment and recidivism.
  - $H6_A$ : There is a significant relationship between employment and recidivism.
- Research Question 7: Is there a relationship between peer association and recidivism?
  - $H7_0$ : There is no significant relationship between peer association and recidivism.
  - $H7_A$ : There is a significant relationship between peer association and recidivism.

### **Data Collection and Preparation**

The participants from the archival data included 1,492 offenders released to CSOSA during fiscal year FY 2012 (October 1, 2012 through September 30, 2013). The total number of participants from the archival data was reduced to 618 due to missing data and specific inclusion criteria (i.e., mental illness criteria, drug test results, loss of contact with supervising agency). Identification of the sample was accomplished by linking the offender personal identification number (PIN) to the criteria (status, arrest,

and violation) of this study sample. Then participants from the archival data were further screened for inclusion based on their having provided a response for this study's questions of interest. Data for this study were obtained from self-reported archival data of offenders under community supervision with CSOSA in Washington, DC.

This study did not use covariate demographic variables of age and race because neither did not display a moderate relationship with the outcome variables as determined in other studies to influence recidivism associated with female and male criminality (Matejkowski, Drine, Solomon, & Salzer, 2011). This study tested age and race as covariates by examining the relationships these variables had with recidivism. For a variable to be used as a covariate, it should display a moderate relationship with the outcome variable (Tabachnick & Fidell, 2012). In this case, chi square analyses were conducted for race and age. The chi square for race was not significant,  $X^2(1) = 0.55, p = .459$ , along with the chi square for age,  $X^2(4) = 5.55, p = .236$ . Because these variables were not significantly related to the outcome, they were not controlled for in subsequent analyses. The variables education, peer association, and gender were dropped from the analyses as they were so skewed that they could not be utilized with any confidence.

The geographic scope of this study was limited to a single jurisdiction in Washington, DC. As a result, caution should be taken in generalizing its results to other rural or urban jurisdictions on MI, SUD, gender, education, employment, and peer association.

## Results

### Frequencies and Percentages

The participants archival data included data for offender that was represented in various ranges and did not display a common trend. The majority of participants from the archival data were male (535, 87%), with female participants accounting for 13% of the participants in the archival data. The majority of participants from the archival data did not recidivate (371, 60%). A majority of the participants highest education level was below 11th Grade (568, 92%). A majority of participants were categorized as not having mental illness (386, 62%). The majority of participants from the archival data fell into the category of not having a substance use disorder (369, 60%). The majority of participants from the archival data were not employed (421, 68%). Frequencies and percentages for nominal and ordinal variables are presented in Table 1.

Table 1

*Frequencies and Percentages for Nominal and Ordinal Variables (n = 618)*

Variables	<i>n</i>	%
Recidivism		
Did not	371	60
Recidivated	247	40
Education		
11 <sup>th</sup> Grade and Below	568	92
12 <sup>th</sup> and Above Diploma	50	8
Mental Illness		
No	386	62
Yes	232	38
Substance Abuse		
No	369	60
Yes	249	40
MI and SUD Interaction		
No	497	80
Yes	121	20
Gender		
Female	83	13
Male	535	87
Employment		
No	421	68
Yes	197	32
Peer Association		
Did not contact	597	97
1 or more times per week	21	3

### **Preliminary Bivariate Correlations**

Preliminary bivariate correlations were conducted to reduce the number of predictors to only those that were related to recidivism. The results of the correlations showed that mental illness, substance use, and the combination (i.e., interaction) of mental illness and substance use were each positively associated with recidivism.

Employment was negatively associated with recidivism. These variables were then entered into the logistic regression model. Table 2 presents all the results of the preliminary correlations.

Table 2

*Preliminary Bivariate Correlations between Predictors and Recidivism*

Source	Recidivism
Mental Illness	.09*
Substance Use	.18**
Mental Health/Substance Use	.12**
Gender	-.05
Education	-.06
Employment	-.15**
Peer Association	-.03

\*Correlation is significant at the 0.05 level (2-tailed)

\*\*Correlation is significant at the 0.01 level (2-tailed)

### Multiple Logistic Regression Model

Multiple logistic regression was performed to assess if mental illness, substance use, gender, education, employment, peer contact predicted recidivism. However, due to the preliminary correlations, only mental illness, substance use, mental illness and substance use interaction, employment, and peer association were entered into the model. Recidivism was coded as 1 and *did not recidivate* was coded as 0. Since mental illness was a nominal variable, it was dummy-coded to have No as the reference category. Since substance use was a nominal variable, it was dummy-coded to have No as the reference category. Since substance and mental illness interaction was a nominal variable, it was dummy-coded to have No as the reference category. Since employment was a nominal variable, it was dummy-coded to have No as the reference category.

Results of the full analysis showed a significant model,  $\chi^2(6) = 33.46, p < .001$ , Nagelkerke  $R^2 = .07$ , suggesting that 7% of the variance in recidivism was accounted for by all the predictors. The classification table showed that 77% of those that had not recidivated were correctly predicted. However, only 40% of those that recidivated were correctly classified as such. Overall, 62% of the participants from the archival data were correctly classified. The percentages suggest that the multiple logistic regression model was under-predicting recidivism, and thus caution should be taken in the interpretation of the results. Table 3 presents the full results of the multiple logistic regression model individual predictors.

Table 3

*Multiple Logistic Regression Predicting Recidivism*

Source	<i>B</i>	<i>SE</i>	$\chi^2$	<i>p</i>	<i>OR</i>	95% CI for <i>OR</i>
Mental Health	0.22	0.24	.865	.352	1.25	[.778, 2.02]
Substance Use	0.79	0.23	12.05	.001	2.19	[1.40, 3.47]
Mental Health/Substance Use	-0.39	0.35	0.54	.461	0.77	[.388, 1.537]
Employment	-0.61	0.20	9.98	.002	0.54	[.368, .791]

Research Question 1 examined the relationship between mental illness and recidivism. Results of the coefficients of the logistic regression model showed that having mental illness was not a significant predictor,  $B = 0.22, p = .35, OR = 1.25$ . This suggests that mental illness did not increase the likelihood of recidivism.

Research Question 2 examined the relationship between substance use and recidivism. Results of the coefficients of the logistic regression model showed that substance use was a significant predictor of recidivism,  $B = 0.79, p = .001, OR = 2.19$ .

These results suggest that those who had a substance use disorder were 2.20 times more likely to recidivate than those that did not have a substance use disorder. This also indicates substance use disorder predicted recidivism, as indexed by the  $\beta$  value of 0.79, was shown that substance use had a very strong positive relationship to recidivism. Therefore, as substance use increased recidivism also increased.

Research Question 3 examined the relationship between gender and recidivism. However, due to the preliminary bivariate correlations, gender was not included in the logistic regression model, as gender was skewed (87% male). Thus, gender was not related to recidivism.

Research Question 4 examined the relationship between the interaction of mental health and substance use with recidivism. Results of the logistic regression model showed that the interaction between mental health and substance use was not significant,  $B = -0.39, p = .46, OR = 0.77$ , suggesting that the interaction of mental illness and substance use disorder did not result in a greater likelihood of recidivism than either variable alone.

Research Question 5 examined the relationship between education and recidivism. However, due to the preliminary bivariate correlations, education was not included in the logistic regression model. Thus, education was not related to recidivism.

Research Question 6 examined the relationship between employment and recidivism. Results of the logistic regression showed that employment significantly predicted recidivism,  $B = -0.61, p = .002, OR = 0.54$ . This suggests that if the participant was employed, they were 1.82 times more likely to *not* recidivate than to recidivate

compared to those that were not employed. As indexed by the  $\beta$  value of -0.61, employment was shown to have a strong negative relationship to recidivism. Therefore, as employment increased recidivism decreased.

Research Question 7 examined the relationship between peer association with recidivism. However, due to the preliminary bivariate correlations, peer association was not included in the logistic regression model. Thus, peer association was not related to recidivism.

### **Summary**

This study found the majority of participants from the archival data were male (535, 87%), while females accounted for 13% of the participants from the archival data. The majority of participants from the archival data did not recidivate (371, 60%). The majority of the participant's education level was below 11th Grade (568, 92%). The majority of participants from the archival data fell into the category of not having mental illness disorder (386, 62%). The majority of participants from the archival data fell into the category of not having a substance use disorder (369, 60%). The majority of participants from the archival data were not employed (421, 68%).

This study found that the presence of SUD increased the likelihood of recidivism, while being employed was associated with decreased recidivism. This study also found that individuals who did not have weekly contact with peers to be associated with recidivism. This study did not find MI to be associated with the likelihood of recidivism. When examining the interaction between MI and SUD results indicated that there was no interaction between mental health and substance use disorder to be associated with the



likelihood of recidivism. This study also did not find gender to be associated with the likelihood of recidivism. Lastly, this study did not find education to be a predictor of recidivism.

Chapter 5 provides a summary of the results, a discussion of their potential implication, limitations of the study, recommendations for further research, and implications for potential impact for positive social change.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The purpose of this study was to test the theories of differential associations and feminist pathway by examining whether peer associates and gender differentiate pathways to recidivism. The study used a quantitative approach using archival data from the AUTO Screener to investigate differences in peer associate to test whether association with other criminals lead to criminal behavior. It also explored other risk factors that were hypothesized to impact recidivism, included mental illness, substance use disorder, education, and employment for offenders released to community supervision under Court Services and Offender Supervision Agency (CSOSA). Study data were analyzed using multiple logistic regression analysis. Key findings from this study were that the presence of substance use disorder increased the likelihood of recidivism, that employment decreased recidivism.

This study did not find that mental illness increased the likelihood of recidivism. In addition, the interaction of mental illness (MI) and substance use disorder (SUD) was not associated with a greater likelihood of recidivism than either variable alone. Results indicated no significant relationship between being male or female and recidivism. Male participants represented a higher percentage (87%) to female participants (13%) from the archival data in this study. Although the percentage of female offenders has increased in the U.S. criminal justice system, men continue to represent a higher percentage in the general offender population. According to the Bureau of Statistic (2014) in 2008, men accounted for 76% and women accounted for 24% of adults on probation. During the

same period adults on parole was inclusive of 88% male and 12% female (BJS, 2009). Results did not indicate a significant relationship with peer association and recidivism. Regardless of the level of education completed, education level did not predict recidivism, and employment decreased recidivism.

Chapter 5 of provides a detailed discussion an interpretation of the findings of this study. The limitations of the study are addressed. Additionally, recommendations for further research studies are encouraged. These recommendations are grounded in the strengths and limitations of the current study.

### **Interpretation of the Findings**

Some findings of this study have been confirmed by other research, while other findings have been disconfirmed. For example, the study findings indicated that participants from the archival data who had a mental illness were no more likely to recidivate than those without mental illness, suggesting no statistically significant association between mental illness and recidivism. Although the results of this study disconfirms what current literature states about mental illness being a significant predictor of recidivism, this may be explained by Court Services and Offender Supervision Agency's (CSOSA) ability to provide services that other community supervision agencies are not able to provide due to CSOSA receiving federal funding.

This study found that SUD significantly increased the likelihood of recidivism, suggesting that participants who used substances were 2.20 times more likely to recidivate than those without substance use. The study also found that 40% of the participants from the archival data set used illicit substances. These finding aligns with a

Bureau of Justice Statistics Special Report (2006c) that reported that in 1997, 45% of the prisoners met the DSM-IV criteria for drug dependence or abuse, and that 50% of prisoners reported drug use before their offense. The present study was also consistent with prior studies indicating that SUD increased the likelihood of recidivism (Adams et al., 2011; Baillargeon, 2009a, Castillo & Alarid, 2011; Penn, Williams, & Murray, 2009; Derry & Batson, 2008; Wood, 2011). According to BJS (2006c) in 2004, 4% of the inmates in state prisoners, and 10.2% in federal prisoners had prior criminal history for drug recidivism. The gender pathways to crime theory posit that women's role in society places them in a higher risk to substance use (Daly, 1992); this was not confirmable by this dissertation study due to the high percentage of male offenders in the dataset. This study did, however, conclude that male participants archival data showed that substance use places them in a higher risk for recidivism.

Contrary to other research, this study did not find a significant interaction between mental illness and substance use; the presence of both factors was not associated with greater likelihood of recidivism than either variable alone. Therefore, moderation cannot be supported. This study finding was not consistent with Baillargeon et al.'s (2009b) finding that inmates with major psychiatric disorders (e.g., major psychiatric disorder, major depression, bipolar disorder, and schizophrenia or schizophreniform disorder) and SUD had an increased risk of multiple incarcerations compared to those with either MI alone or SUD alone. The findings in the present study may be the result of this study not accounting for severity of mental illness, which may have affected the outcome. Therefore, one plausible reason the present study did not find an association of

MI with recidivism may be the way mental illness was measured, because it collapsed all mental health conditions into one variable without considering the conditions' severity.

The study results indicated no significant relationship with gender as a predictor of recidivism. The current study findings is not consistent with findings from prior studies that examined gender as a risk factor in recidivism (BJS, 2006b). Research conducted by the Bureau of Justice Statistics (BJS, 2006b) found that women accounted for the highest proportion of individuals with mental health disorders in both jail and prison, as well as in the general population. Although men are more likely to be offenders than women, the number of women in the criminal justice system is increasing (National Criminal Justice Reference Service, 2013; Tripodi, Bledsoe, Kim, & Bender, 2011; National Institute of Justice, 1998). Although, past research has studied gender in relation to offenders' risk for recidivism, as with this study there continues to not be a clear distinction of the risk factors particular to men and women in the criminal justice system.

Despite the above findings, in the current study sample men continue to represent an overwhelming 87% of the sample. The relatively small number of women in this study sample may have contributed to the failure to identify an association between gender and recidivism. As with feminist pathway theories women reoffending is often due to relation; therefore, the small percentage of female archival data collected in this study failed to conclude such association As most feminist scholars agree, female offending is greatly impacted by relational factors (Dale, 1992, Van Voorhis, Salisbury, Wright, & Bauman, 2008). Additionally, this study peer relationships failed to predict recidivism in men and women.

Several previous studies have investigated education level and employment and the likelihood of recidivism among offenders. These studies have yielded similar findings suggesting that lower levels of education present significant barriers to employment leading to recidivism (Lockwood, Nally, Ho, & Knutson, 2012; Makarios, Steiner, & Travis, 2010). These studies concluded that offenders released back into the community after incarceration often recidivated due to their inability to secure sustainable employment as a result of their lower levels of education. The current study partially confirmed this by finding lack of employment to be associated with increased likelihood of recidivism. However, no relationship between lack of education and recidivism was found.

The findings of the current study demonstrate a striking parallel with Tripodi, Kim, and Bender (2009). Tripodi et al. found that employed parolees released from prison between 2001 and 2005 remained in the community longer before reincarceration, when compared to unemployed recidivists. Employed recidivists averaged 31.4 months before returning to prison, whereas unemployed recidivist averaged 17.3 months before returning to prison. The current study found that if a participant was employed they were 1.82 times more likely to *not* recidivate than to recidivate compared to those that were not employed.

In regards to education, 92% of the participants from the archival data in the present study completed the 11<sup>th</sup> grade or lower and 8% obtained a general educational development (GED), completed 12<sup>th</sup> grade or higher. These findings were not consistent to the findings of Lockwood, Nally, Ho, and Knutson (2012), which indicated that

educated offenders were less likely to become recidivists. The failure of the present study to find an association between education and recidivism may be due to how education was measured in the current study. Participants from the archival data for this study began with the highest level completed as 8<sup>th</sup> grade, and those participants that reported completing the 8<sup>th</sup> grade through the 11<sup>th</sup> grade was collapsed which 92% of the participants archival data fill into this category. Offenders completing 12<sup>th</sup> grade, obtainment of a high school diploma, GED, 1 to 4 years of college (e.g., associate and/or bachelor) master's, and/or doctorate was collapsed which 8% of the participants archival data fill into this category.

Lastly, the current study tested commonly held beliefs regarding peer association and other relational beliefs about factors that increased the likelihood of recidivism. Both Differential association and Pathway theories assert that relational bond and peer association are major factors that increase the likelihood of recidivism. In general, this study's findings were not consistent with prior research that concluded that offenders who engage in criminal behavior activities often do so as a result of their association or social bonds with others that hold similar beliefs or behaviors (Cobbina et al., 2012; Sutterland, 1994).

The failure of the present study to find a consistent relationship between peer association and recidivism may have been the result of offenders not being transparent with respect to their peer associations. Releasing authorities often place stringent release conditions restricting ex-offenders association with other offenders. Therefore, offenders may have withheld the truth of their peer association because doing so present as a barrier

to their community release. Overall, this study could not analyze these factors because base rates were so low among associates.

### **Limitations of the Study**

There were several limitations specific to the nature and scope of the study, as well as procedural limitations. The procedural limitation was the presences of missing values in the data source of drug specimens, such that this study was not able to categorize specific illicit substances (phencyclidine, amphetamines, opiates, cocaine, alcohol, and marijuana specifically). Therefore, use of illicit substance had to be generalized as SUD when examining the relationship of this variable to recidivism. The second limitation was the use of offender's self-reported documented mental illness as use of self-reported mental illness may not have fully represented an accurate mental illness history. A third limitation was that supervising parole and probation officers may not have accurately documented and reported violations, and practiced truthfulness and honesty when reporting non-compliance. As a result of the lack of efficient record keeping, the study findings may be inaccurate.

Another limitation was that this study did not include measures of mental illness based on *DSM-5* (APA, 2013) diagnostic criteria. As a result the nature of the relationship between mental illness and recidivism cannot be determined definitively. The results of this study generalize MI without referencing a specific mental disorder as categorized in the *DSM-5*. This may have significantly impacted the outcome as those with diagnosed severe and persistent MI may be more likely to recidivate. A final limitation is that this study was limited to offenders residing in the community within the



geographic boundaries of the Washington, DC while under the supervision and authority of CSOSA. This makes it difficult to generalize to offenders in rural jurisdictions for which compliance with supervision conditions may differ.

### **Recommendations**

Based upon the findings of this study, several recommendations can be made for future studies to address the incidence of recidivism for offenders with SUD and employment. Future studies are recommended to look at predictors of recidivism among *only* female offenders, or uses a sample with a larger group of female offenders so differential predictors could be examined in a way this study did not allow.

A final recommendation for future research is to explore a broader range of jurisdictions over a longer time frame. This study included offenders residing only in the Washington, DC while under supervision authority of CSOSA. Exploring a broader range of jurisdictions would make the study findings more generalizable. Equally, considering a longer time frame may help clarify the nature of the relationship between the various risk factors examined in this study and recidivism.

### **Implications for Social Change**

Historically, research has found that substance use and employment are significant predictors for recidivism, demonstrating why the need for investment in prevention is warranted. Taking into account the particular findings of this study in regards to employment and avoiding substance use are important for success. The results of this study identified primary needs of offenders decreasing the likelihood for recidivism. Programs offering enhanced employment skill training may offer positive

social change through the increased need for services for the criminal justice population, resulting in possible higher rates of success, and possible reduction in crime, as well as increase in public safety.

The findings from this study may offer benefit with implications for social change through better understanding the increasing needs substance abuse programs that not only offer intervention but also prevention services for offenders with or without substance use disorder and how the lack of these programs may exacerbate recidivism. For example, Lockwood, Nally, Ho, and Knutson, 2012; Makarios, Steiner, and Travis, 2010 found that offenders returning from incarceration that were unemployed present significant barriers leading to recidivism. Likewise, Adams et al., 2011; Baillargeon, 2009a, Castillo and Alarid, 2011; Penn, Williams, and Murray, 2009; Derry and Batson, 2008; Wood, 2011, found that substance abuse is a major contributing factor that leads to higher rates of recidivism. Oftentimes, offenders commit criminal acts to support their substance use (Hiday & Wales, 2009). As reported by BJS (2006c), inmates reported committing their crime to obtain the financial means to obtain drugs.

Differential association theory (DAT) posits that behavior is learned, and criminal behavior is acquired through social interaction (Sutherland & Cressey, 1960).

Additionally, Gender pathways theory asserts that repeated criminal behavior is often observed in employment (Blanchette, & Taylor, 2009; Daly, 1994). Results of this study also support the findings of Salisbury and Voorhis (2009) who found that employment was directly correlated with incarceration. Holtfreter, Reisig, and Morash (2004) found that by providing services to support offender's economic needs such as opportunities for

increasing employment, and job training reduced recidivism. Therefore, if social change is the goal then society must develop initiatives that mediate the problem of SUD and employment needs by offer programs that address these issues for the criminal justice population, which will not only reduce recidivism, but also improve public safety as a whole.

### **Conclusion**

The results of this study highlight the need for future exploration of the social, economic, and behavioral health needs of offenders released to community supervision. Both mental illness and substance use disorder are becoming increasing concerns among the criminal justice system as evidenced by the increasing number of offenders entering the justice system meeting diagnostic criterion for mental illness and substance use disorders (BJS, 2006b). However, future research on the differences between gender and the pathways to recidivism is warranted given the increasing number of women entering the criminal justice system.

As confirmed in other studies this study also concluded that substance use disorder increased the likelihood of recidivism, and employment decreased the likelihood of recidivism. The current study did not find that participants from the archival data that peer associates predicted recidivism. Prior research has found education level increased the likelihood of recidivism the present study failed to find such association.

Developing a specific understanding of the behavioral determinants of recidivism and the need for these services may assist supervising authorities with formulating intervention services that may lessen the likelihood of recidivism for both men and

women. With these services both men and women may significantly improve mental illness and substance use disorder outcomes and reduce recidivism, thereby, increasing their chances of becoming productive law abiding members of society.

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