Walden University
ScholarWorks

Walden Dissertations and Doctoral Studies

Walden Dissertations and Doctoral Studies Collection

2016

# Integrated and Reducing Re-Entry into the Criminal Justice System

Scott Huntington
*Walden University*

Follow this and additional works at: https://scholarworks.waldenu.edu/dissertations

Part of the Psychiatric and Mental Health Commons, and the Psychology Commons

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Scott Huntington

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Stephen Lifrak, Committee Chairperson, Psychology Faculty
Dr. Marlon Sukal, Committee Member, Psychology Faculty
Dr. Brent Robbins, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2016

Abstract

# Integrated Treatment and Reducing Re-Entry into the Criminal Justice System

by

Scott Huntington

MA, Pepperdine University, 1998

BA, University of Redlands, 1995

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

August 2016

Abstract

Numerous studies have focused on the effectiveness of integrated treatment services for people with cooccurring disorders (CODs) within the criminal justice system (CJS). However, there has been a paucity of research on the effectiveness of community-integrated treatment services with CODs and influences on decreasing their interaction within the CJS. This study quantitatively examined the possible relationships between integrated treatment services and CODs and their effect on decreasing interactions within the CJS. The sample ($N$ = 320) consisted of people with CODs from a community-based facility. The statistical analysis was a 2-way (2 x 2) and 3-way (2 x 2 x 2) mixed factorial analysis of variance. Results indicated a statistically significant difference in the number of interactions within the CJS between integrated treatment services and single treatment services, as well as a statistically nonsignificant difference between male and female. Future studies are recommended to examine the predictive value of the long-term effects of integrated treatment services in decreasing interactions within the CJS. The social implications of the study could be integral to community behavioral health care agencies and administrators of correctional institutions in demonstrating how pertinent integrated treatment services can be in decreasing the overrepresentation of people with CODs within the CJS. Furthermore, it will contribute to the continuous need for developing evidence-based programming and practices for CODs within community-based programs, increasing public safety to communities, and the tremendous cost-effectiveness to correctional programs.

Integrated Treatment and Reducing Re-Entry into the Criminal Justice System

by

Scott Huntington

MA, Pepperdine University, 1998

BA, University of Redlands, 1995

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

August 2016

Dedication

This dissertation is dedicated to my wife Sara Huntington and my children Elizabeth Huntington, Gregor Huntington, and Alex Huntington. I want to thank them all for their support during this process.

## Acknowledgments

I want to acknowledge my gratitude to Dr. Stephan Lifrak and Dr. Marlon Sukal, who were gracious enough to be my chair and committee members. In addition, I want to acknowledge their support and guidance in completing my dissertation.

Table of Contents

List of Tables ..... iv

Chapter 1: Introduction to the Study ..... 1

Introduction ..... 1

Background ..... 7

Statement of Problem ..... 11

Purpose of the Study ..... 13

Research Questions and Hypotheses ..... 14

Definitions of Theoretical Constructs ..... 15

Definition of Terms ..... 16

Significance ..... 16

Assumptions, Delimitations, and Limitations ..... 18

Summary ..... 20

Chapter 2: Literature Review ..... 23

Introduction ..... 23

CODs and Overall Issues ..... 25

Integrated Treatment Services versus Single Treatment Services ..... 29

Research on Integrated Treatment ..... 30

Treatment Approaches ..... 32

Clinical Challenges of Integrated Treatment ..... 34

Integrated Treatment Services within the CJS ..... 36

Prevalence Rates of CODs in the CJS ..... 36

Treatment Services within CJS ........ 39
Development of Policy and Practices within CJS for CODs ........ 41
Social Implications with Proper Treatment for CODs ........ 43
Integrations of Services ........ 44
Retrospective Studies on CODs ........ 47
Integrated Treatment Implication within the Community ........ 48
Implications of Integrated Treatment within the CJS ........ 50
Implications of Past Research on Present Research ........ 51
Literature Relating to Differing Methodologies ........ 54
Chapter 3: Research Method ........ 57
Introduction ........ 57
Purpose of the Study ........ 57
Research Design and Approach ........ 58
Setting and Sample ........ 61
Participants ........ 61
Procedure ........ 62
Instrumentation ........ 63
Demographics ........ 64
Data Analysis ........ 64
Ethical Considerations ........ 67
Biases.. ........ 67
Assumptions ........ 68

Limitations ........ 68
Chapter 4: Results ........ 70
Introduction ........ 70
Sample Demographics ........ 70
Hypothesis 1 ........ 73
Descriptive Statistics ........ 75
Hypothesis 2 ........ 76
Descriptive Statistics ........ 79
Summary ........ 80
Introduction ........ 81
Summary and Interpretation of Findings ........ 81
Type of Treatment Service ........ 83
Gender. ........ 84
Implications for Social Change and Practice ........ 85
Limitations ........ 89
Future Recommendations ........ 91
Conclusion ........ 93
References ........ 95
Appendix A: Permission to Use Data ........ 111
Appendix B: Permission to Conduct Study ........ 112

List of Tables

Table 1. Demographic Characteristics of Study Sample ($N$ = 320)....................................72

Table 2. ANOVA of Number of Interactions with the CJS by Type of Treatment
Service and Time ..........................................................................................75

Table 3. ANOVA Descriptive Statistics for Type of Treatment Services and Time.........76

Table 4. ANOVA of Number of Interactions with the CJS by Gender, Type of
Treatment Service, and Time .......................................................................78

Table 5. ANOVA Descriptive Statistics for Gender, Type of Treatment Service,
and Time ......................................................................................................80

# Chapter 1: Introduction to the Study

## Introduction

Over the last decade local, state, and federal agencies have witnessed a large volume of people with cooccurring disorders (CODs), approximately 50%, entering into their facilities (Kronberg, Visscher, Goossens, Brink, & Archterberg, 2014; Laker, 2006). To address the dynamics of treating people with CODs, professionals in the behavioral health field need to develop a stronger foundation that supports effective integrated treatment services for this specific population (Hiser, Hamilton, & Niv, 2009). This dissertation was written to provide a theoretical framework that will consider the necessity for establishing integrated treatment services in order to properly treat the uniqueness and individualization of people who have CODs. Furthermore, I examined the social implications surrounding the implementation of integrated treatment services. This dissertation placed an emphasis on various integrated treatment services that may decrease contact and exposure into the criminal justice system (CJS).

When researching CODs, scholars have identified that this population produces poorer outcomes, including higher rates of recidivism in treatment services, rehospitalization, and most importantly an increase in a range of offending outcomes that result in exposure with the CJS (Ogloff, Talevski, Lemphers, Wood, & Simmons, 2015). Despite a plethora of research on CODs and integrated treatment services, there is still a gap in the literature as to the significance of integrated treatment services on detering people with CODs from entering into the CJS (Copello, Walsh, Graham, Tobin, Griffith, Day, & Birchwood, 2013). This dissertation aimed to evaluate the importance of

providing integrated treatment services and to examine the possible effectiveness of integrated treatment services in decreasing contact and exposure to the CJS.

Historically, people who have battled mental illness and substance abuse have been treated from a single treatment model (Cherry, 2008). This single treatment model operates from a system that provides either mental health services or substance abuse services, rather than an integrated treatment model that infuses both practices and approaches from both respected fields (Perron, Bunger, Bender, Vaughn, & Howard, 2010). Over the last decade, the United States has spent over $85 billion in services for mental health and substance abuse. Additionally, behavioral health providers have recognized that an alarming amount of people entering into treatment services are enduring numerous physical, psychological, social, and economical problems as a result of their coexisting mental health and substance abuse problems (Perron et al.). As a result of these complex problems, there continues to be a paradigm shift to instill integrated treatment services including providing mental health and substance abuse services simultaneously (Minkoff & Cline, 2006).

Minkoff and Cline (2006) pointed out that several community agencies are struggling with managing the complexities of these coexisting problems due to policy and procedures not being conducive to addressing the multiple issues simultaneously. Furthermore, Sterling, Chi, and Hinman (2011) indicated that in addition to establishing policy and procedures, mental health clinicians and substance abuse counselors operate from different belief systems, trainings, behaviors, and ideologies that lead to further barriers of incorporating an effective integrated treatment system. Therefore, a question

of pressing importance for local agencies, state agencies, and federal agencies is to assess the direct connection between the two types of services that would provide a system that could properly assist people with mental health and substance abuse problems. This movement to revamp the system clinically would allow agencies to incorporate clinically sound treatment services that will utilize evidence-based programming and practices for cooccurring disorders (CODs). In addition, current literature has highlighted the struggles and barriers concerning clinical operations within agencies in the effort to move into a bidirectional model that utilizes integrated treatment services (Wyman & Castle, 2006). Today, an alarming amount of people with CODs are not receiving proper treatment, thus leading to an increase in exposure to the criminal justice system (CJS; Conrod & Stewart, 2005). Consequently, the CJS has become the primary delivery system for adults that are battling with mental illness, substance use disorder, and other health service needs (Balyakina, Mann, Ellison, Sivernell, Fulda, Sarai, & Cardarelli, 2014).

Much of the existing research on integrated treatment and its effectiveness in treating CODs has displayed a strong interest in establishing evidence-based practices and programming that will engage people with CODs in comprehensive integrated treatment services (Evans, Huang, & Hser, 2011). These services continue to place a strong emphasis on behavioral health providers in utilizing evidence-based practices and programming that will address the complexity of the coexisting disorders since research has indicated that integrated treatment services appear to demonstrate a stronger effectiveness in comparison to those services that provide mental health and substance abuse treatment from two separate systems (Zewben, 2000). In addition, Wilson and

Crisanti (2009) pointed out that clinical programs in the community that provide integrated treatment services have shown to improve consumer outcomes that are directly linked to decreases in medical problems, less adverse social issues, and better outcome measurements for behavioral health agencies. However, one pertinent area that continues to lack research is how effective integrated treatment is on decreasing the interaction with the CJS.

Recent literature has indicated that people with coexisting mental illness and substance abuse has increasingly been involved in the CJS over the past decade. In fact, Alemagno, King, Tonkin, and Hammel (2004) highlighted the importance of being cognizant of this current issue and recognizing the disproportionately represented CODs within local jails and prisons across the United States. The alarming overrepresentation of CODs within the CJS today has led to a paradigm shift in local jails and prisons becoming the surrogate hospitals within the state systems (Alemagno et al.). Understanding this paradigm shift within the CJS, it is imperative that community agencies instill policies and practices that support an integrated treatment model that is conducive to addressing the coexistence of people’s symptomology with regards to their mental health and substance abuse problems.

Although research has identified the need to incorporate integrated treatment to treat people with CODs effectively, there appears to be a continuous gap in the clinical significance of incorporating integrated treatment services within community agencies to evaluate if this specific type of service will demonstrate a relevant decrease in the entry into the CJS (Greenberg, Rosenheck, Erickson, Desal, Stefanovics, Swartz, … Stroup,

2011). Furthermore, jails and prisons are struggling to divert offenders with CODs, as well as provide significant treatment services. This diversion has played an integral role in contributing to the recidivism rates of incarceration and cycles of offenses, thus leading to an influx of people with CODs entering into the CJS (Mitchell, Wilson, & Mackenzie, 2007). Balyakina et al. (2014) indicated that probationers with CODs are associated with higher risk of offense, crime, and violence in comparison to those probationers who only have either a mental illness or substance use disorder. Therefore, understanding the necessity for developing effective treatment to address the prevalent comorbidity with people who battle with CODs may reduce CJS involvement, reduce stigma and pain associated with the CJS, and reduce public expenditures (Greenberg et al.).

Some of the most recognizable benefits of integrated treatment services are the cost-effectiveness to county, state, and federal jails and prisons, an increase in the safety within the communities, and the role they play in strengthening family systems (Moser, Monroe-DeVita, & Teague, 2013). People receiving comprehensive integrated treatment services may have the opportunity to address their identified problems in a more supportive and safe environment, along with decreasing the precipitating cycle of their illnesses that only exacerbated when exposed to the CJS. Furthermore, VanderWaal, Taxman, Faye, and Gurka-Ndanyi (2008) pointed out that for every $1 spent on treatment services, $7 is spent on incarceration. Not only is this a financial constraint to communities, it has also proven ineffective in deterring recidivism rates; hence lack of access to services leads to recidivism and continuous drug use and crime when entering

back into the community (Staring, Blaauw, & Mulder, 2012). Therefore, my study addressed the likelihood that people with CODs who received adequate integrated treatment services would have less of a representation within the CJS, as well as would significantly decrease associated crime and violence, reduce drug usage, and improve the lives of those locked into a cycle of drug use, as suggested by VanderWaal et al..

The remainder of the chapter that follows will critically review the contemporary literature regarding integrated treatment and its effectiveness in assisting people with CODs in the CJS. Early studies in the area of integrated treatment and the CJS generally conclude the presence of adults with mental health and substance abuse disorders within the CJS has become increasingly evident over the past decade (Booth, Curran, Han, & Edlund, 2013). However, Sterling et al. (2011) pointed out that these studies have not been conducted extensively. In addition, these studies have failed to distinguish between CODs and effective integrated treatment in decreasing the entrance into the CJS, thus, their conclusions were suspect. Later researchers have corrected this flaw, and those were the focus of the review that follows. Initial sections will discuss what CODs entail, the differences between integrated treatment models and single treatment models, the role integrated treatment within the CJS, and the social implications of properly treating CODs. The review will conclude with a summary and critique of existing literature, followed by a discussion of the specific research questions and hypotheses suggested by the review and examined in this dissertation.

## Background

The uniqueness of CODs has been something of a challenge for agencies and individual practitioners over the last decade. In addition, this specific population has led the CJS to be exposed to these challenges, causing jails and prisons to begin to look to behavioral health providers to assist in managing this population within correctional settings. The unfortunate issue greater than the question of what to do with people who have CODs when incarcerated has become the question indicated by Sterling et al. (2012): How do we treat people with CODs and eliminate recidivism? These questions have perpetuated the ongoing research and development of treatment programs that adequately address the complexities of CODs. This has led to the movement of implementing evidence-based practices and programming that operate from an integrated treatment model (Chandler, 2011).

While current literature has highlighted the barriers to move into a bidirectional model that utilizes an integrated treatment approach, there is still an alarming amount of individuals with CODs who are not being properly treated, which is a contributing factor to having interaction in the CJS (Conrod & Stewart, 2005). Apart from the community challenges, Sacks, Melnick, and Grella (2008) pointed out that there has been limited research to the functioning and treatment of the CODs population to eliminate entrance into the CJS. Researchers estimated that annually nearly 1.5 million arrestees in the United States were reported high risk of mental illnesses and substance use disorders and were not receiving adequate treatment for these coexisting problems (Bhati & Roman, 2013). Although researchers identified the need to incorporate integrated treatment

services to effectively treat individuals with CODs, there still appears to be a question on whether or not integrated treatment services will decrease entrance into the CJS (Greenberg et al., 2011).

In an integrated treatment model, the definition of integrated treatment model involves the relationship between the incorporation of mental health services and substance abuse services in an integrated systematic process. Sterling et al. (2011) highlighted that the models of integrated treatment for people with CODs fall into four identified categories:

- *Serial treatment*-sequential treatment services; separate treatment systems
- *Simultaneous/parallel*- treatment services to treat all or both simultaneously; separate treatment systems; non-coordinated
- *Coordinated/parallel*- treatment services to treat all or both simultaneously; separate treatment systems, but well-coordinated
- *Integrated care*- treatment services to treat all or both simultaneously by the same cross-trained clinician within one system

Researchers have viewed these four categories as effective approaches for health care providers to assist in treating the concomitant symptoms that are common with CODs (Sterling et al.). In addition, operating from a theoretical perspective that incorporates one of these four categories enhances positive outcome measurements in reducing recidivism for CODs (Sterling et al.).

The ability to manage the coexistence of the presented symptoms with CODs has led to the necessity to develop these various models. In addition, the overlap of symptoms

is called into question with traditional diagnostic treatment that has demonstrated misdiagnosing and ineffective long-term treatment, wherein the relapse and recidivism is greater (O'Conghaile & DeLisi, 2015). Consequently, these barriers continue to demonstrate increasing evidence of higher rates of recidivism within the CJS, poorer treatment outcomes in community outpatient clinics, rehospitalization, and the lack of interventions and programming have highlighted the importance of establishing effective integrated treatment services to people with CODs (Chandler, Peters, Field, & Juliano-Bult, 2004). Therefore, it would be beneficial to evaluate if integrated treatment services can provide a model of treatment that will divert people with CODs from the CJS, decreasing poorer outcome measures, reducing rehospitalization, and establishing effective interventions and programming.

Researchers have considered Minkoff, Mueser, and Drake to be the leading experts in the area of CODs and integrated treatment (McKee, Harris, & Cormier, 2013). Many of these researchers' studies have assisted the fields of mental health, addiction, and corrections to recognize that people who have CODs frequently struggle with the intertwined factors and dynamics of psychiatric disorders and substance abuse issues (Torrey, Tepper, & Greenwold, 2011). These may present complexities requiring an integrated approach to navigate through the dynamics that surround the interwoven symptoms and barriers linked to CODs (Drake & Bond, 2010).

Contemporary studies have just begun to address the complexities of CODs and the overrepresentation of this specific population within the CJS. In fact, Bailargeon, Binswanger, Penn, Williams, and Murray (2009) pointed out that over the past 40 years

there has been a steady incline of psychiatric disorders and substance use in the U.S. prison system. With the influx of people with CODs entering into the CJS, researchers have dedicated their time to begin to examine how interventions and programming can be expanded to reduce the recidivism among CODs inmates. Furthermore, the continuity of care within the community has also been an area of focus to help eliminate poor outcomes with people who have CODs. The challenge in implementing integrated treatment services is the lack of experience and the slow process of getting health care providers to move into a bidirectional model that utilizes research supported practices and programming to address the coexisting symptoms that are common with people with CODs (Drake & Bond, 2011).

Since the initial work of these early researchers, integrated treatment service and CODs research continues to increase. Today, much of the focus has been on the quality of care for people with CODs in order to help decrease the higher rates of hospitalizations, poorer treatment outcomes, and involvement in the CJS (Hogan, 2011). Secondly, contemporary research on integrated treatment services and CODs has focused on implementation of practical interventions that are evidence-based, as well as examining if the integrated treatment services appropriately address the coexisting symptoms that are intertwined between mental health and substance abuse problems. Furthermore, contemporary researchers in the area of CODs have begun to delineate the conceptual framework that providing traditional single treatment services separately to address the mental health and substance use problems is less effective than establishing integrated treatment services that will infuse mental health and substance use services

cohesively (McKee et al., 2013). This specific area of interest is what I examined. Furthermore, the examination of coping skills is of great importance when addressing people with CODs.

It is possible that people with CODs can be equipped to psychologically and emotionally manage daily stresses in healthier ways. In order to properly provide people with CODs the skills to cope with their daily stresses and symptoms, it will be imperative for community providers and state and federal agencies to begin to establish protocol, procedures, and programming that embrace the conceptual framework outline in integrated treatment services. In doing so, people with CODs may have a better opportunity to examine and treat their disorders in a healthier manner.

As discussed in the previous sections, people who are battling with CODs are engaging in unhealthy behaviors that often lead them to commit crimes; thus, being exposed to the CJS only inhibits them from getting effective treatment services to properly address and manage their disorders. The influence of receiving integrated treatment services to address the coexistence of one’s mental health and substance abuse issues properly is just one issue within the complexity of CODs that researchers can continue to explore and enhance in order to decrease the interaction of this population with the CJS.

## Statement of Problem

CODs are not a singular issue, but rather a coexisting issue. With that said, existing research has delineated multiple factors that have dispelled the prior notion that people with CODs can receive single treatment services to separately address the

symptomology that surrounds their mental health and substance use problems (Surface, 2008). Instead, current researchers have placed a stronger emphasis on developing integrated treatment services that simultaneously provide services that will treat both the mental health and substance abuse problems together (Covell, Margolis, Smith, Merrens, & Essock, 2011; Hiser, Hamilton, & Niv, 2009). The brunt of integrated treatment service research has focused almost exclusively on the implementation of evidence-based practices and programming to treat CODs, without giving equal attention to the community challenges in ensuring that proper integrated treatment services are being provided to people with CODs in order to reduce entrance into the CJS.

In order to better understand how to properly treat CODs, researchers continuously examine the influence of integrated treatment services in the area of positive outcome measures that are directly linked to addressing the social implications of an overrepresentation within the CJS. Identifying positive integrated treatment interventions that might enhance treatment effectiveness and reduce the damaging effects of higher rates of entrance into the CJS and other community factors such as poorer outcome measures within community outpatient programs and rehospitalization is relevant to developing a better understanding the dynamics of CODs. Psychology scholars in the area of CODs must improve the understanding of how integrated treatment services can influence the reduction of people with CODs to establish healthier lifestyles. Moreover, this will contribute to the significant social implications of developing stronger communities, healthier families, and most importantly reduce the entrance into the CJS.

In addition, these social implications will contribute to profound financial benefits to local, state, and federal legal systems (Baillargeon et al., 2009; Hintz & Mann, 2006).

Torrey et al. (2011) added to the psychological research on the influence of implementing integrated treatment services for adults with CODs. These authors examined the organization-level implementation factors to effectively treat adults with CODs. This organization-level approach allows for exploration of how integrated treatment services take significant time and effort from an operational, clinical, and social level (Torrey et al.). The researchers sought to better understand how early implementation leads to success when on-site leadership, clinical staff, and social and political support is prevalent in establishing integrated treatment services to properly address the dynamics that surround treating CODs. In addition, due to the lack of CODs, CJS, and integrated treatment studies, Torrey et al. highlighted the anticipated challenges that health care providers will have in incorporating integrated treatment services.

## Purpose of the Study

The purpose of this quantitative study was to examine the possible relationship between integrated treatment services and CODs and its effect on contact and exposure to the CJS. For this quasiexperimental study, CODs were assessed using measures of integrated treatment services (substance abuse treatment and mental health treatment) and single treatment services (substance abuse treatment). The goal was to examine and evaluate people with CODs who received integrated treatment services and whether they were less likely to have contact and exposure to the CJS in comparison to those who only received single treatment services.

## Research Questions and Hypotheses

The following research questions and hypotheses have been derived from the review of existing literature in the area of CODs, integrated treatment services, and CODs interaction within the CJS. There is a more detailed discussion of the nature of the study in Chapter 3.

*Research Question 1*: Will the number of interactions with the CJS before the beginning of participation, while participating, and after participation for individuals with CODs decrease as a result of being involved in integrated treatment services in comparison to those individuals with CODs involved in single treatment services?

*Null Hypothesis 1*: There will be no statistically significant decrease in the number of interactions with the CJS before the beginning of participation, while participating, and after participation with individuals with CODs who are involved in integrated treatment services in comparison to those individuals with CODs involved in single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

*Alternative Hypothesis 1*: There will be a statistically significant decrease in the number of interactions with the CJS before the beginning of participation, while participating, and after participation with individuals with CODs who are involved in integrated treatment services in comparison to those individuals with CODs involved in single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

*Research Question 2*: Is there a difference between males and females with CODs and their number of interactions with the CJS before the beginning of participation, while participating, and after participation in integrated treatment services in comparison to single treatment services?

*Null Hypothesis 2*: There will not be a statistically significant difference between males and females with CODs and their number of interactions with CJS at the end of treatment and 6 months after the completion of treatment for those who receive integrated treatment services in comparison to those who receive single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

*Alternative Hypothesis 2*: There will be a statistically significant difference between males and females with CODs and their number of interactions with CJS at the end of treatment and 6-months after the completion of treatment for those who receive integrated treatment services in comparison to those who receive single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

## Definitions of Theoretical Constructs

The term *integrated treatment services* in psychological research can be used in a sundry of ways. According to Burnett, Porter, and Stallings (2011), "This term may refer to "forms of individual psychotherapy to family therapy to using contingency management to psychopharmacology" (p. 849). As a result, it is important in research to be specific in the definition of integrated treatment services. The theoretical construct and

framework of integrated treatment services for the purpose of this study were defined as "receiving both mental health and addiction services together" (Burnett et al., p. 850).

## Definition of Terms

*Co-occurring disorders (CODs)* are conditions with both substance use and mental disorders (Woods, 2011).

*Comorbidity* is frequently exhibiting severe manifestation of the disorders linked to substance use and mental health (Gouzoulis-Mayffrank, 2008).

*Integrated treatment services* are when a client receives both mental health and addiction services together (Burnett et al., 2011, p. 850).

*Sequential treatment services* are multiple treatments taking place one system at a time (Fava, Ruini, & Rafanelli, 2005).

*Criminal justice system (CJS)* is a series of organizations involved in apprehending, prosecuting, defending, sentencing, and jailing those involved in crimes (The National Center for Victims of Crime, 2012).

## Significance

This study contributes to integrated treatment services and CODs research, specifically in the area of the CJS. The potential benefits include identifying whether integrated treatment services connected to evidence-based practice and programming for the treatment of CODs can show significant outcome rates associated with reduction of symptomology, hospitalizations, treatment cost, dysfunctional family systems, and incarceration (Covell et al., 2011). The United States has become increasingly inundated with people battling with CODs and not receiving adequate treatment services, which in

turn has placed a severe burden on families and society (Thylstrup & Johansen, 2009). This current environment created by challenges and barriers has the potential to continue to create a foundation that people with CODs will go without proper treatment. Consequently, this leads to more activity in the legal system and an overflow of people entering the CJS who are enduring severe and debilitating symptoms that are only exacerbated by the environment that the CJS provides. According to Conrod and Stewart (2005), exploring the concept of a bidirectional model within the behavioral health system of care may contribute to a stronger understanding of CODs and the operational and clinical relevance of integrated treatment services that may protect this population from having a profound representation with the CJS.

A review of the literature revealed a need for studies that specifically explore the relationship between integrated treatment services and the effects they have on entrance into the CJS with people who have CODs. The beneficial effects of integrated treatment services with CODs have been well established in research (Drake, Mueser, Brunette, & McHugo, 2004). However, a majority of studies examined the specific interventions and programming in regards to treating CODs. According to Tiet and Schutte (2012), clinical studies have been able to document therapeutic interventions and programming to address the high prevalence of people entering psychiatric programs who are displaying CODs. Additionally, integrated treatment services and CODs research has suggested a strong role in the construction of evidence-based practices and programming that can guide and assist behavioral health providers in establishing standard and effective treatment programs (Burnett et al., 2011). Relatively new research on integrated

treatment services and CODs has suggested that there may be a connection between the type of interventions and practices and the delivery of services that will improve the treatment outcomes for people suffering from CODs. In one particularly relevant study, Miller (2014) pointed out that environment stability that incorporates integrated treatment services is conducive to effective rehabilitation for inmates that will decrease reoffending. In aligning with some of these contemporary studies, my intention with this specific study was to add to the body of literature on whether integrated treatment services may be an effective approach to addressing CODs and decreasing the high activity within the CJS and other community entities through a pretest-posttest nonequivalent group design.

## Assumptions, Delimitations, and Limitations

For the purposed of this research, I assumed that, by using archival data, all recognizable personal health information (PHI) was pre-identified, thus eliminating experimenter bias. I also assumed that every participant had an equal opportunity to access the same type of treatment services and that the size of the dataset represented the general population of people entering into treatment services. Additionally, it is presumed that all data were examined ex-post-facto by the director of quality of assurance.

In this study, I examined the relationship of integrated treatment services with people who have CODs and the role it had on entrance into the CJS. This study was conducted in the interest of identifying the clinical significance of integrated treatment services with people who have CODs. In addition, the study explored how to enhance treatment services to people with CODs and eliminate the negative impacts, such as

interaction within the CJS. Based on this specific population, the study focused on people diagnosed with CODs who attended outpatient treatment services from the year 2009 to 2014. The study targeted a set population from a Midwestern region, who were predominately Caucasian, male and female, who had a primary diagnosis of substance use disorders and/or psychiatric disorders based on the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV-TR*; American Psychiatric Association, 2004) criteria. The use of *DSM-5* was due to the time frame of data collection before the *Diagnostic and Statistical Manual of Mental Disorders* (5h ed.; *DSM-5*; American Psychiatric Association, 2013) was published.

The generalizability of this study was restricted since the archival data were collected from a large dataset from a Midwestern state for-profit community-based clinical agency. Therefore, as the researcher I was limited to "what" and "how" data were collected. However, the data being archival did eliminate any researcher bias. In this study, I wanted to examine the possible relationship between the independent variables (type of treatment service, gender, and time) that would not involve randomly assigning individuals to a group and not manipulating variables. Therefore, the study was a pretest-posttest nonequivalent group design in nature. These designs are frequently used when it is not logistically feasible or ethical to conduct a randomized controlled trial. Due to the nature of the study, I was able to demonstrate and assess for causation. Furthermore, this design can be used to make inferences about possible relationships or to gather preliminary data to support further research and experimentation. It should also be noted that with this specific type of study, it is subject to concerns regarding internal validity,

because the treatment and control groups may not be comparable at baseline; thus, the internal validity is weaker in comparison to experimental designs.

With pretest-posttest nonequivalent group design there is a limitation in proving that the groups are comparable in all possible ways that are relevant to the study outcome. In this study, I hypothesized that people with CODs who received integrated treatment services would have less contact and exposure to the CJS, thus this study employed a linear regression analysis that determined the direction of the relationship between variables. In addition, pretest-posttest nonequivalent group design often utilizes intact groups that a researcher thinks are similar as the treatment and control groups. Therefore, I decided that for the purpose of this study a pretest-posttest nonequivalent group design was appropriate despite its limitations, because the intention of this study was to determine if people with CODs who received integrated treatment services might correlate to less contact and exposure to the CJS.

## Summary

A good deal of research has established the significance of integrated treatment services for the treatment of people with CODs (Sterling et al., 2011). Integrated treatment services appear to be beneficial in the coordination of services that can adequately treat all conditions with which a person with CODs may suffer. Furthermore, the integration of care for people with CODs has become a major emphasis for current literature, because it has demonstrated that this specific population continued to show a steady incline in representation in the CJS (Bhati & Roman, 2013).

It seems ironic that behavioral health providers along with local, state, and federal agencies are enduring this influx of people entering into their agencies but continue to struggle to implement interventions and programs conducive to treating the clinical dynamics that surround CODs. In fact, Croghan and Brown (2010) noted that it is evident that changes in health care systems and models of treatment services need to be service delivery based in order to properly treat CODs. Research has suggested that people with CODs who receive a structured diagnostic interview and are placed into integrated treatment services benefit from services by displaying lower rates of relapse, decrease in suicide rates, lower rates of readmissions to hospitals, and decrease in illegal activities (Tiet & Schutte, 2012). The hope of these findings among various research studies will stimulate future studies in exploring how integrated treatment services can concentrate on specific components associated with better outcomes, especially in the area of entrance into the CJS.

Chapter 2 will address a review of the existing literature and how new research has suggested an association between people seeking treatment services to address their CODs will produce better treatment outcomes when receiving integrated treatment services in comparison to the traditional practices of treating the CODs from a single treatment model. The chapter begins with a description of CODs and integrated treatment model, which was the theoretical framework for this dissertation, as well as a brief overview of the representation of CODs within the CJS, which also lends support to the possible association between people with CODs receiving integrated treatment services and their interaction within the CJS. There are discussions of what CODs are, integrated

treatment versus single treatment, the representation of CODs within the CJS, and the role of integrated treatment services within the CJS. Chapter 2 also includes a discussion of literature that challenges the outcomes of the research in these areas. The chapter ends with implications of past research and its influence on this current research.

Chapter 3 focused on the methodology used to study the research questions. This chapter includes discussion of how a quantitative study statistically comparing archival data through two-way (2 x 2) and three-way (2 x 2 x 2) mixed factorial analysis of variance to analyze the possibility of a relationship between people with CODs and receiving integrated treatment services may demonstrate less effect on contact and exposure to the CJS. The study design was quasiexperimental due to the lack of random assignment of participants using preexisting treatment groups. The chapter includes a description of the sample population, procedures, ethical considerations, measures, and analysis of the data.

Chapter 4 focuses on the statistical results of the study. This chapter provides discussion of the overall results of the statistical analysis for all hypotheses. The chapter provides a summary of the results along with tables to provide additional information.

Chapter 5 focuses on the discussion of the entire study. The chapter specifically outlines the summary and interpretation of the results as discussed in Chapter 4. Furthermore, the chapter provides a discussion on the implication of social change and practice, along with the limitations and future recommendations based on the results of the study.

# Chapter 2: Literature Review

## Introduction

This literature review establishes the need for continued research concerning incorporating integrated treatment services within the community to properly treat CODs and eliminate the overrepresentation within the CJS. Wusthoff, Waal, and Grawe (2014) stated that this transition with infusing integrated treatment services into public and private agencies is difficult due to the simple fact that there is a lack of sufficient combined expertise when treating the comorbidity between mental illness and substance use disorders resulting in the continuous use of a sequential treatment approach. Studies within the last 10 years have begun to emphasize the necessity of treating CODs as an expectation, rather than as an exception due to the alarming statistics that have shown that people with CODs are flooding the CJS, as well as local hospitals. The quality of care and type of services are critical elements in the development of effective treatment approaches to adequately treat CODs and, in return, decrease the involvement within the CJS.

The theoretical framework of this dissertation is rooted in the use of integrated treatment services to properly treat CODs. Key to an integrated treatment model is the tenet that it is imperative to simultaneously address mental health and substance abuse issues, rather than treat them separately at different times and/or places. Empirical research in the area of integrated treatment services and CODs appears to have been prevalent not only in current peer-reviewed articles, but even in longstanding medical,

criminal justice, and social work journals. A search of literature was conducted digitally through electronic psychology and medical databases such as PsycINFO, PscyARTICLES, MEDLINE, and EBSCO Host as well as through Walden University Library database. The list of search terms used to conduct the literature search included *co-occurring disorders, dual disorders, integrated treatment,* and *criminal justice system*. The articles reviewed for this study were obtained digitally utilizing the Internet and websites. In addition, this study utilized other journal magazines that provided clinical research and history on CODs and integrated treatment services.

This chapter provides a review of the current development of integrated treatment services, as well as discussion on the dynamics that surround the challenges of treating CODs. In addition, examination of the differences between integrated treatment services and traditional single treatment services, specifically in the approach to address the CODs, will be reviewed. Furthermore, the study will discuss the use of integrated treatment services in the CJS and the types of programming being incorporated to reduce recidivism rates. Lastly, research on integrated treatment services for CODs and the role it can play in reducing entry into the CJS will be included for analysis. In order to have an objective discussion of the literature, this chapter will include a discussion of research that challenged some of the outcomes of research in these areas and the social implications it can have on CODs and CJS. The chapter will culminate with an explanation of how past research has influenced this study.

## CODs and Overall Issues

The occurrence of CODs, in a specific population, is defined by presumed etiological mechanisms with people who have a primary substance use disorder and psychiatric disorder (Abou-Saleh, 2004). In addition, CODs can be classified as having one or more substance use disorders along with one or more psychiatric disorders. Furthermore, the severity and complexity of the comorbidity that comes along with CODs can vary between the diagnosis and special settings (Abou-Saleh). The Center of Substance Abuse Treatment (2005) extended the common definition of CODs, by indicating CODs exist "when at least one disorder of each type can be established independent of the other and is not simply a cluster of symptoms resulting from [a single] disorder" (p. 3).

McHugo et al. (2006) clearly pointed out that CODs are a major public health problem due to the unstable diagnostic complexities, and the difficulty to engage this population in treatment services has challenged health care providers to reevaluate the way they provide clinical treatment services. Zweben (2000) elaborated on these sentiments of the complexity of CODs as a public health concern by pointing out that clinical settings are struggling with resources and guidelines to treat CODs properly, which is why moving toward an integrated treatment approach is desperately needed. This can be supported by the statistical outcomes that indicated the United States has spent over $185 billion in treatment services just in substance abuse services, and which has still led to poor outcome measurements in regards to recidivism rates, legal ramifications, and hospitalizations (Cohen, Feinn, Arias, & Kranzelr, 2007).

In examining the dynamics of CODs and what they entail with this specific population, it is crucial to understand that CODs have existing comorbidity that consists of substance use disorders and psychiatric disorders. Schatzberg, Weiss, Brady, and Culpepper (2008) stated that CODs have a unique complexity that encompasses a bidirectional relationship. Hser, Hamilton, and Niv (2009) elaborated on this bidirectional relationship by pointing out that CODs have extensive comorbid issues that not only entail the diagnostic challenges of substance use disorders and psychiatric disorders, but also severe medical conditions that make this population a challenge to treat. Therefore, Rosenberg (2008) indicated that there is a public health call for integrated treatment services to properly treat CODs since Substance Abuse and Mental Health Services Administration (SAMSHA) research produced alarming statistics that highlighted that, of the 4.6 million people with CODs, only 6% received integrated treatment services.

The cooccurrence of both substance use disorders and psychiatric disorders place a strong burden on the individual, along with their families and communities, due to the combination of illnesses that tend to have an overlap with symptomology (Thylstrup et al., 2009). Furthermore, people with CODs manifest very pronounced psychiatric and substance use patterns that coexist in various patterns, thus leading to the fundamental issue for a health care provider to make the decision to address and treat the psychiatric disorder in the presence of substance use/abuse (Schatzberg et al., 2008). These challenges propose the need to work on developing comprehensive treatment services that provide an integrated treatment approach. Rush and Koegl (2008) indicated that in their study, when they examined the prevalence and profile of people with CODs (*n* =

9,839), there was evidence of tremendous overlap in symptoms that caused numerous social, psychological, and emotional issues within various in-patient, out-patient, and other community-based programs. In a current study, Ruglass, Hein, Hu, and Campbell (2014) discovered similar outcomes to that of Rush and Koegl when they studied women with posttraumatic stress disorder (PTSD) and substance used disorders. Ruglass et al.'s results indicated that integrated treatment may be more effective than general psychoeducational treatment in assisting in decreasing distress tolerance and reduction of traumatic symptoms, wherein it led to a decrease in the usage of drugs and alcohol as reported among these participants ($n$ = 141).

Recognizing that the tightly interwoven complexities of CODs have emerged as the common theme among public health agencies that provide treatment services for substance use disorders and psychiatric disorders has challenged researchers to examine the possible biological components that are closely linked to CODs (Burnett et al., 2011). In fact, the major overlap with the physiological symptoms among CODs suggested that the comorbidity makes it extremely difficult from a medical model to effectively identify and treat the symptoms strictly from a medical model (Burnett et al.). These exact complexities of the cooccurrence of substance use disorders and psychiatric disorders have forced public health providers to recognize this as a public health problem across the United States (Abou-Saleh, 2004).

Previous researchers have discovered that CODs are directly associated with serious clinical and social implications that revolve around higher rates of recidivism in the areas of hospitalization, treatment programs, and the CJS. Gournay, Glorney, and

Thornicoft (2000) highlighted that increases in human services programming have been needed to monitor, address, and treat people with severe psychiatric disorders who have apparent substance use disorders. This alarming need for additional services is directly connected to the high prevalence of CODs: 41% to 65% of the population, according to epidemiological studies (Thylstrup et al., 2009).

An additional issue that surrounds CODs is the chronology and etiology within this population, which have contributed to higher prevalence rates of recidivism in hospital settings and criminal justice settings. Sterling et al. (2011) went on to point out that CODs have become such a complexity and challenge for health care providers due to the predispositions that are common with people who have substance abuse disorders, and are also directly related to psychiatric disorders. Therefore, researchers have recognized that the origin of the development of symptomology and social problems only complicates the therapeutic process and treatment approach for CODs (Sterling et al.). Unfortunately, with the reoccurrence of instability with CODs, treating people in community-based hospital and the CJS has become a struggle because health care providers are not equipped clinically and operationally to address the multifaceted psychological, physiological, and social problems that a person with CODs endures (Thylstrup et al., 2009).

In order to properly address and treat CODs, researchers have begun to examine and compare the effectiveness of integrated treatment services in assisting health care providers in becoming more skilled and trained at treating CODs. According to Torrey et al. (2011), integrated treatment services take ample time to implement, as well as take

significant time and effort to sustain the quality of this model of service. With that said, McHugo et al. (as cited in Torrey et al.) conducted a quantitative study utilizing the integrated dual disorder treatment model that demonstrated this type of model is slow to establish, but shows steadier gains over a longer period of time in comparison to the traditional single treatment model. This leads to the next area of discussion, which focuses on what integrated treatment services entail and how that compares to the traditional single treatment model.

## Integrated Treatment Services versus Single Treatment Services

In the area of treatment for CODs there has been a tremendous division between health care providers in operating from an integrated treatment model and a single treatment model. Based on this division, it is imperative that one recognizes the differences between these two forms of treatment services and how they are defined. Integrated treatment services is a combination of therapeutic modalities that entails various psychosocial interventions including mental health and substance abuse services, along with possible psychopharmacological interventions, case management, living skills, etc. (Hipolito, Carpenter-Song, & Whitley, 2011). These various interventions are implemented in a wraparound process by a health care provider who has developed specialized knowledge and training in both substance use disorders and psychiatric disorders. A single treatment model involves psychosocial interventions that are delivered on a separate basis and usually entails multiple health care providers who are specialized and trained in one area: substance use disorders or psychiatric disorders. Therefore, single treatment models are viewed as solo treatment modalities that aren’t

concerned with addressing the other set of disorders; thus its primary focus is treating either the substance abuse issues or the mental health issues.

**Research on Integrated Treatment**

CODs and the implementation of integrated treatment services has become an area of interest as a direct result of the dynamics that surround the types of interventions and the level of effectiveness of integrative approaches (Hintz et al., 2006). Efforts over the last 10 to 15 years by researchers have led to considerable challenges to health care providers in how they approach, address, and treat CODs, which is why the current literature concerning the development of integrated treatment services has become a contributing factor to the science of treatment modalities (Torrey et al., 2011). Burnett et al. (2011) elaborated on this notion of integrated treatment services by indicating that the high sensitivity of an increase of people with CODs entering into community-based programs, hospital settings, and the CJS is forcing the hand of health care providers within the U.S. to become aware and trained in the elements of integrated treatment services from an operational and clinical standpoint.

When exploring the theoretical concepts of integrated treatment services, health care providers need to recognize that it encompasses a variety of treatment services founded on a ‘holistic’ perspective that entails comprehensive services (Burnett et al., 2011). These comprehensive services include substance abuse treatment, recovery models, psychopharmalogical interventions, outreach program, mental health services, case management, etc. However, Green and Drake (2011) indicated that in order for these comprehensive services to be highly effective in treating CODs, health care providers

need to be cognizant of the lack of disconnect between them and administrators to ensure the key element of integrated treatment services are incorporated into a daily flow of practice. Furthermore, the integrative approach needs to utilize evidence-based practices and programming that support CODs and navigates away from the traditional single treatment models that place an emphasis on treating substance abuse issues separately from mental health issues (Green and Drake).

Those who embrace integrated treatment services have touted that this approach, in comparison to the traditional single treatment service, is more effective as a result of having a stronger knowledgebase of the dynamics surrounding CODs that will not prohibit or limit the health care provider in addressing and treating the entire issue (Bride, MacMaster, & Webb-Robins, 2006). Torrey et al. (2011) goes onto elaborate on this notion, stating that those who continue to operate from a single treatment model will seamlessly produce poorer outcome measurements and those people with CODs will continue to overpopulate hospitals and the CJS. Therefore, the role of incorporating integrative treatment approaches along with evidence-based practices and programming is a dialogue that health care providers need to have to ensure that clinical interventions and practices are being adopted for the essence of treating CODs (Rozas & Grady, 2011).

Tiet and Schutte (2012) performed a quasiexperimental study that is a primary example of demonstrating the significant difference between the integrated treatment services and the traditional single treatment services. In the study, the authors examined three types of groups with participants ($n$ = 257) entering into dual diagnosis programs, substance abuse program, and psychiatric program. The study discovered that participants

who enter into the dual diagnosis program in comparison to those in the substance abuse program and psychiatric program displayed lower rates of suicide attempts, increase of abstinence in alcohol and other drug abuse, and decrease in psychiatric symptoms (Tiet & Schutte). This specific study demonstrated the importance of integrated treatment services in comparison to single treatment services.

**Treatment Approaches**

Studies like Tiet and Schutte (2012) force the discussion to the perspectives on treatment approaches when dealing with CODs. In fact, Green et al. (2011) focused on the recovery model from an integrated treatment approach by outlining that single treatment models operate from a unidirectional model rather than a bidirectional model which prohibits health care providers in utilizing a multiintervention approach that will deem essential elements in treating CODs and assisting these people with developing a long-term recovery lifestyle. With that said, people with CODs who enter into treatment have fewer problems and longer periods of abstinence. These notions are supported by a 1-year longitudinal study conducted by Weisner, Matzger, and Kaskutas (2003) who examined participants ($n$ = 482; $n$ = 111 no treatment & $n$ = 371 received treatment) in treatment programs and discovered that those who were in treatment had fewer problems (40% vs. 23%, P = 0.001) than those people who didn't receive any treatment.

Increased focus on early interventions to treat substance use disorders and psychiatric disorders is important, and the aim to establish specialize treatments that encompasses services that address substance abuse and mental health needs is equally imperative. Sigrunarson, Grawe, and Morken (2013) conducted a study utilizing patients

with schizophrenia and substance use disorders (*n* = 50) and randomized participants into two groups: integrated treatment (*n* = 30) and treatment-as-usual (*n* = 20). The goal of the study was to compare the two groups for two years to see if integrated treatment services produced better outcome measurements versus treatment-as-usual. Results indicated that those in the integrated treatment group had fewer involuntary admissions to hospitals and decreased needing to seek additional services (Sigrunarson et al.). This particular study demonstrated the clinical implications that integrated treatment services can have on the strengths and effectiveness for treating CODs in comparison to operating from the single treatment model.

Hesse (2009) demonstrated that integrated treatment services in comparison to single treatment services showed a major necessity to move into a bidirectional model. Hesse examined patients with comorbid anxiety or depression and substance use disorders and discovered that psychotherapeutic approaches that utilized an integrated treatment approach produced promising results in comparison to single-focus treatments within the area of number of day's abstinent, retention in treatment services, and decrease in depressive symptoms. As a result of these findings by Hesse, there is a continued call for the discussion of a paradigm shift in how health care providers are operating and treating people with CODs.

When looking at treatment options that only operate from a single treatment model can hinder the health care provider to combine services that can address a person's coexisting issues that emerge with many CODs. Burnettt et al. (2011) supported the discussion by pointing out that forms of integrated treatment services have several

advantages including long-term solutions in assisting people with CODs in managing their symptoms, staying active within their communities, and establishing stronger support systems including their families and other community resources. Furthermore, Burnett et al. explained that the emergence of the conceptual framework of integrated treatment services suggests that it will decrease the gaps in health care provider's practices because it will strengthen their knowledge base in both disciplines (mental health and substance abuse). Perron et al. (2010) aligned with what Burnett et al. discussed and added that practice guidelines are important tools in infusing an integrated treatment model for improving the delivery of services to those people with CODs. In doing this, it is believed that reduction in symptoms, rehospitalizations, and interactions within the CJS will decrease, results not demonstrated by single treatment models (Perron et al.).

**Clinical Challenges of Integrated Treatment**

Efficacy of integrated treatment services continues to be in question, along with its superiority over the use of the traditional single treatment model. According to Oortmerssen et al. (2013), behavioral therapy that utilizes integrative approaches can be a very efficient therapeutic approach in addressing comorbidity. In fact, Oortmeressen et al. took a randomized control trial (RCT) of clients with attention deficit hyperactivity disorder (ADHD) and substance use disorders and discovered that those who received integrated treatment services reported decreases in their symptoms and produced better outcome measurements in completing treatment in comparison to those who only received substance use disorder treatment. To further strengthen the questioning of the

efficacy of integrated treatment services, McGovern, Harris, Alterman, Xie, and Meier (2011) also conducted a RCT using integrated CBT versus individual substance use disorder counseling to treat substance use disorder and PTSD, during which they witnessed that those who were delivered the integrated treatment reported an astonishing reduction in PTSD reexperiencing symptoms and abstinence from substance use in relation to those who only received individual substance use disorder counseling.

Drake and Mueser (2000) stated that the clinical challenges that precede the implementation of integrated treatment services come directly from the recent research that elucidates the barriers to move from a single treatment model. Furthermore, an overwhelming awareness has surfaced with health care providers to acknowledge the problem with CODs is growing quickly, and areas like the CJS are being inundated with people with CODs with limited knowledge to adequately treat this population. Two fundamental problems that are associated with CODs are the simple fact that many are undiagnosed and secondly many aren't receiving treatment services or having difficulty accessing services (Drake & Mueser). Lastly, people with CODs report more severe complaints and have higher risk factors that are not being properly addressed through treatment-as-usual, therefore leading to an abundance of untreated comorbidity which clinical practices within various communities are unfortunately neglecting or unable to provide the necessary integrative approaches (Dam, Ehring, Vedel, & Emmelkamp, 2013).

One struggle with moving away from the single treatment model is the lack of time and effort to incorporate an integrated treatment model. Hogan (2011) stated that the

gap in America's health care is the fact that health care providers have become accustomed to the single treatment model supporting the idea of treating substance use disorders and psychiatric disorders in a separate manner. Failure to use methods that entail evidence-based practices and programming to treat CODs have hindered today's society and weaken the health care system for treating substance use issues and mental health issues because there continues to be an incline in rates of rehospitalizations and entrance into the CJS. In return, Hogan stated that if the health care system continues to use traditional and unproven single treatment models that it will be fatal to those people who are battling CODs as well as to their families and communities.

## Integrated Treatment Services within the CJS

### Prevalence Rates of CODs in the CJS

Apart from the clear indication that the health care system needs to invest in the paradigm shift to begin to fully operate from an integrated treatment approach, there is a prevalent issue with CODs and their involvement within the CJS. According to Baillargeon et al. (2009), epidemiological studies have produced alarming statistical outcomes that have pointed out that 15%-24% of the U.S. inmate population have been identified as having CODs. In addition, it is estimated that 75% of people who are booked into jails annually within the U.S. have CODs (Rothard, Wald, Zubritsky, Jaquette, & Chhatre, 2009). Furthermore, crime, psychiatric disorders, and substance use disorders are increasing among juvenile offenders, which can be directly linked to the lack of integrated treatment services (Elonheimo et al., 2007). As a result of these statistical numbers, U.S. local jails, state prisons, and federal prisons have been subjected

to being in a reactive mode on how to properly treat and manage inmates with CODs within the CJS.

Despite the magnitude of this overrepresentation of CODs within the CJS, correctional settings are still looking at how to provide integrated treatment services within the walls of correctional institutes. In return, this has led to continued research in examining the relationship between CODs, the CJS, and proper treatment services (Baillargeon et al., 2009). To further this complication, the prevalence of an overlap in the dynamics associated with CODs and the CJS is becoming a glaring issue (Booth et al., 2013). Booth et al. stated that criminal justice involvement with people who have CODs continues to heighten and entry into some source of treatment within the CJS is very much a realistic challenge; in fact 30% of those arrested reported having a substance abuse problem along with some type of mental health problem and 8% never received services. As a result of the lack of access to treatment services, about 15% of those people involved in the CJS reported reoffending within the past year; this included being arrested for property crimes, dealing or possessing narcotics, hate crimes, and driving under the influence (Booth et al.).

Based on the association between CODs and the CJS, the U.S. legal system has been challenged with the extensive recidivism rates that appear to be prominent today. Baillargeon et al. (2009) outlined in the six year longitudinal study of U.S. inmates that the inmates with CODs were at greater risk of multiple incarcerations and discovered that in comparison to other inmates across the U.S. prison system those with CODs were 3.3 times more likely to recidivate. With this prevalence of CODS engaging in numerous

incarcerations, it is clear community-based treatment programs have not established effective interventions that would divert people with CODs from the CJS. With that said, Belenko and Peugh (2005) have discussed the necessity of developing dual diagnosis outpatient and residential programs along with aftercare programs within the communities that can yield the reduction of relapse and recidivism within the CJS. Unfortunately, people within the CJS who are also identified with CODs are not receiving ideal treatment services or proper level of care, which has perpetuated the reincarceration and the deterioration of people with CODs (Belenko & Peugh).

Reducing the amount of reoffending and reincarceration is a social issue within the United States that definitely needs to be addressed, especially with people with CODs who are being represented within the CJS. Examining the effectiveness of types of treatment interventions that can reduce post-release offenses is crucial, according to Mitchell et al. (2007). Therefore, the request to evaluate drug treatment programs and mental health programs is an element that needs continued research. What supports this reason for continued reevaluation is the inflated number of inmates within the United States (approximately 40%-45%) who have indicated that they are battling with one or more drug dependency and have some level of mental health issue (Mitchell et al.). Greenberg et al. (2011) expressed the same sentiments as Mitchell et al., by indicating that comorbidity is a growing concern within the CJS and there continues to be a limitation of services. In addition, Greenberg et al. stated that CODs are a strong predictor for CJS involvement, especially for people who aren’t receiving integrated treatment services.

The overrepresentation of persons with CODs within the CJS has garnered high attention to the U.S. legal system. As a result of these great concerns, the CJS has been forced to infuse health care providers into their prison walls and develop programs in an attempt to properly manage and treat those inmates with CODs. The appreciation of CODs factors have proven to be potentially increased risk factors for nonadherence, recidivism, and reoffending, thus leading to large populations of inmates within the CJS. This overrepresentation continues to grow immensely as discussed by McCabe et al. (2012) who studied patterns of criminal arrest and CODs over a 10-year period. They discovered that nationally 10% of jail populations, 18% of state prison populations, and 16% of federal prison populations have inmates that are battling with CODs (McCabe et al.). Again, these statistical outcomes have forced the hand of the CJS to implement treatment services for inmates with CODs in the effort to limit and decrease the overrepresentation and recidivism rates that are glaring realties in the U.S. correctional settings.

**Treatment Services within CJS**

Currently, the CJS has made some efforts in incorporating effective treatment services to properly address CODs. In particular, Peters, Kremling, Beckman, and Caudy (2012) examined CODs in treatment-based courts where they discovered that these fairly new drug courts and mental health courts, in collaboration with community-based treatment facilities, along with implementing integrated treatment services that encompass extended supervision, mental health services, alcohol and drug treatment, and using dually credentialed staff to work these offenders has produced better outcomes and

decreasing early termination, rearrest, and relapse. Similar outcomes have been observed in drug treatment services for adult offenders from a state-to-state national survey that identified that it is critical to provide treatment services within the CJS to eliminate the excessive recidivism rates that have crippled the U.S. legal system over the last decade (Taxman, Perdoni, Harrison, 2007).

Shafer, Arthur, and Franczak (2004) indicated that the frequent interaction with people with CODs and the CJS is undeniable, and diversion programs that have been established nationwide within jails and prisons have shown to play an integral role in decreasing the interaction between CODs and the CJS. In fact, a Shafer et al. study on post-booking jail diversion programs discovered that those people with CODs ($n$ = 248) who were placed in diversion programs at the time of booking, in comparison to those in nondiversion programs, revealed that the effectiveness of the integrated services demonstrated a reduced rate in various factors revolving around criminality and violence. This particular study demonstrated that by recognizing the complexities of COD and diverting this population from jail would act as a stimulus for people with COD who are involved in the CJS to access more of their community-based services to eliminate further criminal activity and divert them from entering into correctional settings (Shafer et al.).

Similar to the Shafer et al. (2004) study on jail diversion programs, other prominent studies have been conducted within the jail and prison settings that have substantial outcomes that point in the direction of the relevance and significance of integrated treatment services. One particular study is Rothbard et al. (2009), which

studied in-jail treatment programs that utilized integrated treatment approaches where programs produced positive outcomes that showed a reduction of incarceration and increases community tenure (Rothbard et al.).

**Development of Policy and Practices within CJS for CODs**

Apart from the discussion regarding treatment services, the other relevant issue regarding treatment of CODs is the development of correctional policies and practices within the CJS. Skeem, Manchak, and Peterson (2011) indicated that poorly matched policy goals have played an integral role in the continuous incline in recidivism rates. The need for a multidimensional conceptual framework incorporating research and best practices that adequately addresses CODs can assist in establishing more effective policies and practices allowing people with CODs and involved in the CJS to "exit from the criminal justice system" (Skeem et al., p.111) in a manner that gives them the ability to reintegrate back into their communities and decreases the likelihood to recidivate. Furthermore, cooperative agreements between the CJS policy makers and health care providers in recognizing that the propensity for recidivism is higher with offenders with CODs will continue to drive the initiative to develop integrated treatment services within the CJS that are significant and effective (Sacks et al., 2008).

With empirical exploration of policies and treatment interventions, it can be difficult and time consuming, according to Sung, Belenko, Feng, and Tabachnick (2004), because of the complexity of the biopsychosocial factors associated with people with CODs; hence increasing public awareness and developing integrated treatment services that properly address the needs of the CODs population is instrumental in making a

movement toward decreasing recidivism and reoffending. In essence, state provisions for treating people with CODs within the CJS need to place a stronger emphasis on integrated treatment services and move away from the traditional standards of punitive fines and sanctions (VanderWaal et al., 2008). Creswell (2014) supports this notion because many CJS treatment programs have only offer a "one-size fits-all services" that has failed the CODs population. As result of these failures, Creswell identified that effective integrated components of treatment for CODs is greatly needed, especially women with CODs because they have unique risks and needs associated with their complex diagnosis.

Program effectiveness can be achieved not only by the development of policy goals and best practices, but also tailoring the integrated treatment services to the specific population who are battling with CODs; these include female offenders and juvenile offenders primarily. Grella and Greenwell (2007) conducted a study examining treatment services for women offenders ($n$ = 1,404) and discovered that many needed integrated treatment services that could effectively address the high prevalence of sexual and physical abuse, housing, mental health problems, substance abuse problems, and parenting issues. Unfortunately, the influx of women entering into the CJS has led to a barrier in criminal justice policies addressing the necessity of gender-responsive integrated treatment services for female offenders (Grella & Greenwell). In addition to the struggles with women offenders, juvenile offenders is another specific population within the CJS that has its own challenges and barriers. Henderson, Young, Jainchill, Hawke, Farkas, and Davis (2007) pointed out that with the lack of resources and

disconnect between juvenile justice system and community-based systems has led to ineffective treatment practices and services of delivery to the juveniles with CODs.

As a result of this disconnect between the two entities when dealing with women and juveniles, a tremendous disservice has been caused to those women and juveniles and their families and communities. The most feasible approach to combat these challenges and barriers with women and juveniles is for the CJS and community-based programs to adopt gender-responsive practices that wraparound various services for the needs of women and juveniles; thus limiting the reentry back into the CJS.

Although policy makers and administrators within the correctional setting have been active in recognizing the necessity of providing treatment services for offenders within the CJS, a prevalent gap still exists as to how to be proactive in decreasing those numbers of people with CODs from entering into the CJS. Therefore, establishing effective integrated treatment services to people with CODs prior to entrance into the CJS is an area that is extremely important to address. Current literature provides evidence that those who receive integrated treatment show better outcome measurements in the areas of recidivism decreased legal charges, stabilization within their communities and homes, and less rehospitalizations.

## Social Implications with Proper Treatment for CODs

With the evident need to establish better treatment approaches when dealing with people with CODs, there is a transition phase for community-based programs and correctional programs to accept and develop policies, practices, and programming that embrace an integrated treatment approach. In doing so, developing treatment typology

that can differentiate between treatment needs and identify mental health or substance abuse as the primary need of services and treat with an integrated approach can eliminate oscillation and recidivism (Sacks et al., 2008).

Until recently, those who were battling with CODs where treated for their disorders separately and treatment services did not play an integral role in decreasing the negative outcomes that many endured, such as recidivating within the CJS. According to Moore, Young, Barett, and Ochshorn (2009), the commonalities that are clearly displayed between substance use disorders and psychiatric disorders, such as "high relapse rates and complex etiologies" (p.323), the implementation of integrated treatment can properly and efficiently address the overlapping concerns that are directly correlated with poorer outcomes. Furthermore, Kileen, Back, and Brady (2011) go on to state that people with CODs often "lead chaotic and stressful lives," (p.199) typically characterized by having unstable living environments, poor social skills, disconnected families, and extensive legal problems. These negative factors identified by Moore et al. (2009) and Kileen et al. point to the prevalent clinical obstacles that community-based programs and correctional programs face in the wrath of navigating through the dynamics of CODs.

**Integrations of Services**

Morrissey et al. (2002) examined the relevance of system change strategies when addressing CODs. They discovered that service delivery systems that utilize an integrated approach properly establish interorganizational relationships that can effectively treat people with CODs and assist in the areas of substance abuse services, mental health services, housing, employment, family reintegration, and overall social welfare. This type

of delivery system is surmountable in the need for developing integrated treatment services and showing positive impacts on the social climate regarding proper treatment for people with CODs in order to diminish the overshadowing representation within the CJS.

A combination of services that encompass the use of evidence-based practices and programming that addresses the large spectrum of needs of people with CODs is indisputable. The strengths of developing dual-focused treatment services will properly address the comorbidity that is the main factor to why people with CODs have poorer outcome measurements (Conrod & Stewart, 2005). Best et al. (2009) indicated that infusing services that are woven together provides effective treatment services that will substitute for the traditional single treatment model which has not fared well with people battling with CODs. Reducing substance use, risky behaviors, noncompliance with medication, and noncompliance with offending is mediated by the effectiveness of treatment delivery; behaviors addressed through an integrated treatment approach tailored to address the comorbidity associated with CODs will adequately assist in the continuity of care and support (Best et al.).

In essence, the development of integration of services established by the foundation of an integrated treatment approach versus single treatment approach will produce better results of stabilization. Cherry (2008) argued that a model is needed that selects the best interventions from each field and discards the remaining. This author expressed concerns with needing to move towards integrating philosophies and policies from substance abuse field and mental health field, hence developing best components

from each field. In return, integrating the two fields and adopting the best components will streamline services and make them more cost-effective and significant (Cherry). Mangrum, Spence, and Lopez (2006) had similar sentiments, recognizing in their study of residential programs that began to utilize an integrated treatment model to address CODs showed a dramatic reduction in hospitalizations and arrests, thus improving long-term community reentry.

Although researchers have demonstrated the necessity for integrated treatment services, especially in the CJS, there are some extremely prevalent challenges that are being discovered when dealing with CODs. Chandler et al. (2004) indicated that implementing evidence-based practices and programming for CODs in the CJS is challenging due to complex treatment needs and lack of collaboration to meet those needs within the CJS. Conrod and Stewart (2005) have expressed similar concerns by pointing out that there is still a strong need to establish effective combinations of treatment modalities and services in order to properly treat CODs. To concur with Chandler et al. and Conrod and Stewart, researchers Best et al. (2009) examined evidence-based treatment interventions for criminal justice drug treatment in Birmingham, England. The study focused on the effectiveness of treatment services and the role it plays in offending behaviors. Best et al. discovered that the delivery of specific services that are integrated and tailored to meet the individual’s needs can have an impact on the level of effectiveness.

**Retrospective Studies on CODs**

Weisner (2001) conducted an interesting study on the high prevalence rates that substance abuse disorder are occurring in many health, mental health, and substance abuse, welfare, and CJS agencies. The study explored the screening procedures, mainstreaming treatment services, and access to services for this population. Weisner used data from the Community Epidemiology Laboratory (CEL) in California to determine where this population ends up within the community agencies. The study indicated that a large volume of this population found themselves in welfare system (8%), hospitals (42.1%), and the CJSs (41%) as a result of substance abuse and/or mental health problems (Cherry 2001). These findings propose the need for provisions of treatment, the continued need for research, and the call for integrative treatment to properly address CODs.

A similar study conducted by Wyman and Castle (2006), examined the prevalence of CODs and the treatment implications of this specific population. The study broadens the understanding of the dynamics surrounding treatment of CODs, Wyman and Castle explored the differences between the four explanatory models (common factor model, secondary substance use model, secondary psychopathology model, and bidirectional model). The study identified that those clinicians who operated from the bidirectional model were effective in providing treatment suitable to address the comorbidity that exist between substance use disorders and psychiatric disorders; thus promoting the necessity of being aware of the extent of cooccurrence between the two types of disorders (Wyman & Castle).

A third study conducted by Altinbas and Evren (2013) examined the clinical relationship between patients with bipolar and substance use disorders. This specific study enhances the understanding that comorbidity between psychiatric illnesses and substance use disorders is very prevalent and demonstrates a clinical course with more severe and worse outcomes. The study identified that those people with CODs, specifically bipolar disorder and substance use disorders require treatment modalities that are evidence-based and integrated in order to properly address the comorbidity between the psychiatric illness and substance use disorders (Altinbas & Evren).

All three of these studies by Cherry (2001), Wyman and Castle (2006), and Altinbas and Evren (2013) suggest that future research is needed to look at clarifying the specific factors and components of moving into an integrative model that will effectively address the coexistence between substance use disorders and psychiatric disorders.

**Integrated Treatment Implication within the Community**

Many individuals who seek treatment services are entering programs with prevalent issues consisting of substance abuse and mental health. Killeen et al. (2011) indicated that specifically people who have PTSD are “two to three times more likely that people without PTSD to have a comorbid substance use disorder” (p. 194). As a result of these statistics, programs such as concurrent treatment of PTSD and substance use disorders with prolonged exposure have demonstrated the clinical significance on stabilization and decreasing recidivism rates in the areas of hospitals and the CJS. Furthermore, Killen et al. pointed out that integrated treatment programs such as COPE

help patients understand the interrelationship between their substance use disorders and psychiatric disorders; thus improving life functioning.

Another area of significance with integrated treatment within the community is addressing the large volume of people with CODs being homeless. In fact, statistics indicated that those with CODs are four times more at risk of homelessness in comparison to people without CODs (Moore et al., 2009). Moore et al. conducted a study that examined the CODs model called Comprehensive, Continuous, Integrated, Systems of Care (CCSIC) regarding those who were homeless or on the verge of homelessness. This specific study demonstrated glaring support to the notion that integrated treatment services are highly effective in assisting people with CODs in stabilizing their living environment, as well as life areas of employment, relationships, and stabilization of their mental health and substance abuse (Moore et al.).

In addition, people who are homeless and have CODs are more likely to have some type of interaction within the CJS. According to Calsyn, Yonker, Lemming, Morse, and Klinkenberg (2005) there is a considerable amount of people who have CODs and homeless engaged in criminal activity. The study conducted by Calsyn et al. took homeless people with CODs who were involved in the CJS ($n$ = 196) and randomly assigned them to three types of services (Standard Treatment, Assertive Community Treatment, and Integrated Treatment). The study produced results that indicated that those who were involved in the Assertive Community Treatment and Integrated Treatment had fewer hospitalizations and exhibited better outcomes in stable housing. It was suggested that stabilization of mental health and substance abuse along with stable

housing decreases the likelihood of criminal activity. Fries, Fedock, and Kubiak (2014) concur with Calsyn et al. study, because Fries et al. study recognized that incarcerated people, especially women potentially placing them at a higher risk of homelessness. The primary risk factors from Fries et al. study identified that those with dual disorders are often the most prevalent to become homeless upon released from jail or prison.

**Implications of Integrated Treatment within the CJS**

Apart from the clinical implications of integrated treatment services within the community, research has also demonstrated that it is also effective within the CJS. One specific area was court-supervised treatment programs for offenders needing substance abuse and mental health services. Evans et al. (2011) examined a set of high-risk offenders with the California CJS, and discovered that there was a high rate of recidivism among those offenders who did not receive adequate treatment services that addressed not only their substance abuse and criminal problems, but their mental health problems as well. The authors' conclusion from the study was that offenders who had five or more convictions experienced a higher recidivism rate and were identified as having severe substance abuse and mental health problems and did not receive integrated treatment services (Evans et al.). Wood (2011) concurred with the study by Evans et al. examining similar population that consisted of parolees ($n$ = 500,000) who were dually diagnosed and their ability to be successful within the community and not reoffend. Woods discovered an alarming statistic that showed those parolees with dual diagnosis ($n$ = 1,121) compared to nondually diagnosed parolees were rearrested about 3 to 5 months sooner and reported not receiving adequate treatment services.

Lastly, criminal justice institutions are discovering that addressing CODs within the correctional setting is becoming a tremendous challenge due to the fact that enormous flood of inmates that are being identified having psychiatric illness along with comorbidity of substance use disorders (Houser & Belenko, 2015). Houser and Belenko findings suggested that correctional institutes are not fully equipped to clinically manage this population, which has led to responses in a punitive manner rather than in a clinical manner. With that said, Houser and Belenko identified in their study of a Pennsylvania female prison, the glaring need to develop and implement integrated treatment services that can accommodate the needs and risk factors associated with CODs within the CJS.

**Implications of Past Research on Present Research**

The clinical challenges of treating CODs and the overrepresentation within the CJS are well documented within the fields of psychology, addiction, and criminal justice. Incorporating treatment services and the type of delivery of those services to people with CODs has broadened our understanding of the complex dynamics and the role they play in the person's ability to stabilize. As Alemagno, Shaffer-King, Tonkin, and Hammel (2004) pointed out, coexisting disorders are reported to be a factor in higher risk of arrest and establishing a strong relationship with the CJS; therefore diverting people with CODs to treatment is apparently more effective in decreasing the habitual cycle of offenses and incarceration.

In an attempt to better understand the importance of treatment services for people with CODs who are connected to the CJS, researchers have examined the clinical significance of treatment during incarceration and postincarceration in order to reduce

recidivism. Substance abuse and mental health researchers began to use collective treatment modalities, programming, and interventions that focused on addressing the persons CODs and criminogenic behaviors. According to Young, Barrett, Engelhardt, and Moore (2014), upon examining individuals with CODs who completed an assertive community treatment (ACT) program in a 6-month outcome follow-up, it was discovered that a significant amount of the participants ($n$ = 60) reported a significant improvement in their mental health symptomatology and residential stability.

Similar outcomes have been discovered in other past research that Young et al. (2015) recently has examined. The study by Draine, Blank, Kottsieper, and Solomon (2005) examined two large counties in Pennsylvania concerning their jail diversion programs and in-jail services, where it was discovered that a vast majority of the participants ($n$ = 187) showed significant relations to having depression and substance use along with a history of being on probation. Those participants from the in-jail services:

> were 3.57 times more likely to have been previously supervised on probation/parole and 2.7 times more likely to have recently received only drug and alcohol treatment, while those in the diversion program were 13.29 times more likely to have a diagnosis of psychosis not otherwise specified (Draine et al., p.177).

These outcomes support the concepts and ideas that integrated treatment services are needed to assist those people with CODs in diverting them from the CJS and guiding them to community behavioral health programs that demonstrate more positive outcomes (Draine et al.).

Davis, Baer, Saxon, and Kivlahan (2003) studied the other element of treatment services with the criminal justice population by examining at postincarceration treatment and its significance on recidivism. This specific study conducted a randomized clinical trial (RCT) with a 2-month post-incarceration population. The studies' participants were veterans ($n$ = 73) who were in the county jail system. Davis et al. studied two groups (motivational interviewing feedback vs. control) and discovered that those who received the motivational interviewing and addiction treatment in comparison to those receiving no services demonstrated that interventions and services had a positive impact on retention in treatment services as well as decreasing the likelihood of reoffending (Davis et al.).

There is support within the literature for a strong connection between integrated treatment services and CODs and their interaction within the CJS. Early studies have substantiated the increased number of people within the CJS who are battling with CODs and having worse outcomes in comparison with other offenders in the area of recidivism. As Farkas and Hrouda (2007) pointed out, these challenges with CODs within the CJS is even more prevalent with female detainees. In fact, Farkas and Hrouda examined two urban jails and discovered that the women in these jails met criteria for multiple mental health and substance dependencies and had lengthy complicated psychosocial histories, along with being involved in the CJS at least five times. The study pointed out the need to develop comprehensive treatment strategies and interventions to increase rates of treatment engagement and reduce recidivism is imperative (Farkas & Hrouda).

**Literature Relating to Differing Methodologies**

The relationship between integrated treatment services and CODs and treatment's role in reduction of interaction within the CJS has been relatively unexplored, although literature suggests a possible connection. Correlational studies employing regression analyses such as the study by Fletcher et al. (2009) have opened the door for other researchers to explore the association.

The quality of research derived from studies is dependent upon the rigor of the methodology incorporated in the studies. Different methodological approaches have been employed in past research on the effectiveness of integrated treatment services with people who have CODs. Cross-sectional designs to study integrated treatment services and single treatment services typically employ outcome measurements based on successful completion of services, data on recidivism, and self-reports of stability. The strength of cross-sectional approaches is that they allow for long-term examination of factors such as recidivism and stabilization. Additionally, cross-sectional approach attempts to describe and assess the strength of the relationship between variables without experimental manipulation.

For the purposes of this study it would be impossible for the researcher to manipulate the past experience of type of treatment services, therefore employing a cross-sectional design due to the nature of the archival data. In addition, as participants were not randomly assigned by the researcher, the variables couldn't be controlled, thus a cross-sectional design will be implemented. The specific type of quasiexperimental design being used is a pretests-posttests nonequivalent group design, which includes an

existing group of participants who received a treatment and another existing group of participants to serve as a comparison group. Participants are not randomly assigned to conditions, but rather are assigned to the treatment or control conditions along with all the others in their existing group.

In summary, the research that has been conducted on integrated treatment services for treating people with CODs is still relatively new, as well as understanding how to incorporate integrated treatment services in private, state, and federal programs within the community. As it has been stated earlier in this literature review, the last 10 years has displayed a paradigm shift that is focusing on treating CODs as an expectation, rather than as an exception due to the alarming statistics that have indicated an overrepresentation in the CJS and hospital settings. Furthermore, research has recognized the operational and clinical challenges incorporating integrated treatment services because it encompasses a comprehensive approach that is derived from various theoretical orientations (Burnett et al., 2011), as well as determining the efficacy of this model of treatment. Lastly, in attempt to better understand the importance of integrated treatment services and CODs within the CJS, there has been more of an emphasis on treatment services while incarcerated and post-incarceration; thus leaving a gap in the research in examining the effectiveness of integrated treatment services in decreasing interaction in the CJS.

The following chapter (Chapter 3) will describe the methodology employed in this research to contribute to the study of effectiveness of integrated treatment services in decreasing the exposure and contact within the CJS with the CODs population.

Furthermore, Chapter 3 will discuss the procedures and steps I took to access data, as well as providing an outline of the research questions and hypotheses for this study.

# Chapter 3: Research Method

## Introduction

This chapter includes a description of my study's design, sample, instrumentation, data analysis, and ethical considerations. An overview of my study's design includes a rationale for why this particular research design was selected. The sample characteristics and size is presented as well as a description of the instrumentation. The data collection process and analysis is also discussed. My study was conducted upon approval of the Institutional Review Board (IRB). The IRB approval number for my study is 12-09-15-0195826.

## Purpose of the Study

The purpose of this quantitative study was to examine the possible relationship between integrated treatment services and CODs and its effect on contact and exposure to the CJS. The goal was to evaluate the outcome of people with CODs who received integrated treatment services as compared to those who received single treatment services and whether they were likely to have less contact and exposure to the CJS. When discussing these comparisons, it should be noted that integrated treatment services entail psychotherapy (individual and group), psychiatric services, and substance abuse services simultaneously, whereas single treatment services entail only substance abuse services. Despite the extremely high prevalence of CODs in society and literature pointing towards the positive outcomes and benefits of integrated treatment (Lubman, King, & Castle, 2010), a considerable gap in research demonstrating the effectiveness of integrated treatment services in decreasing the number of interactions with the CJS still exists.

Increased attention has been directed toward research on cooccurring psychiatric illness and substance use disorder in CJS. Ogloff et al. (2015) indicated that the complex clinical picture with CODs has established a link between treatment services and CJS recidivism rates, but the quality of treatment services plays more of an integral role in the delivery of services that are associated with CODs and the CJS. Lubman et al. pointed out that there is no one-size-fits-all approach to treatment services, but rather integrated treatment services have continued to be proven as a more flexible approach that gives the health care provider the ability to hone in on the specific components of care that are required.

## Research Design and Approach

This quantitative study was meant to help better understand the relationship between integrated treatment services with CODs and their interactions with the CJS. My study used a quasiexperimental approach that specifically utilized parametric measures by conducting a pretest-posttest nonequivalent group design in order to statistically evaluate and examine the possible extent in which the variations of type of treatment service and gender related to the number of interactions with the CJS. Specifically, my study examined the possible relationship between integrated treatment services and traditional single treatment services with regards to the number of interactions with the CJS for people who had CODs, as measured by the number of arrests at various points in time.

In conducting this quantitative research, archival data were statistically compared as a dataset through a two-way (2 x 2) mixed factorial analysis of variance for Hypothesis 1 and three-way (2 x 2 x 2) mixed factorial analysis of variance for Hypothesis 2 that

included both within-subjects/between-subjects. A pretest-posttest nonequivalent group design was utilized because it provided the most statistical power when conducting a mixed analysis and the most common with this type of study. This specific design allowed a number of distinct analyses, giving me the tools to filter out experimental noise. The independent variables (IV) are identified as type of treatment service (single treatment and integrated treatment), gender (male and female), and time (before treatment, at the end of treatment, and a 6-month follow-up), while the dependent variable (DV) was identified as the number of arrests from the pretest-posttest. The sample size was $N$ = 320 with $n$ = 259 (single treatment service) and $n$ = 61 (integrated treatment services). The breakdown for the sample size with regards to gender was $n$ = 241 male and $n$ = 79 female. The pretest-posttest nonequivalent group design included an existing group of participants who received a treatment and another existing group of participants to serve as a comparison group. In addition, the pretest-posttest nonequivalent group design was utilized because I did not explicitly control the assignment of the groups; thus traditional randomized design was not conducted. Participants are not randomly assigned to conditions, but rather are assigned to the treatment or control conditions along with all the others in their existing group. For the purpose of this study, the identified comparison group was the single treatment group, while the experimental group was the integrated treatment group.

The scale of measurement used in this study to properly interpret the data from the variables was a ratio measurement. This specific measurement was employed due to the fact that there is always an absolute zero that is meaningful (Gravetter & Wallnau,

2009). The purpose of employing a ratio measurement was to ensure that I could measure the direction and the size of the difference between the two groups and their number of interactions with the CJS, as measured by number of arrests.

The quasiexperimental approach was appropriate for this study because participants were retrospectively being tracked by the type of treatment service and the number of arrests. Participants were not randomly assigned to a particular group for they were already identified by the Midwest state for-profit community-based clinical agency's data system regarding the type of treatment service they were receiving. I had the archival data inquired by the quality assurance director of the agency in order to gain from the dataset those participants who sought out treatment services from the years 2009 to 2014 in the two areas (single treatment and integrated treatment) that meet the specific criteria I requested as the researcher. All participants had diagnosis of substance abuse and/or psychiatric disorders according to the *DSM-IV-TR* (2000) criteria. The *DSM-IV-TR* criteria were utilized because it was the identified manual used during the time period when the data were collected.

Additionally, the effectiveness of integrated treatment services with CODs is a relatively new arena of psychological exploration and corrections. Although CODs research has delineated a strong relationship between treatment services and recidivism in the areas of hospitalization and the CJS, integrated treatment services research is just in its infancy stage of exploring this relationship. Clinical settings incorporating integrated treatment services have shown to produce improving consumer outcomes directly linked to decrease in medical problems, less adverse social issues, and limiting legal

consequences (Wilson & Crisanti, 2009). Cross-sectional and causal comparative research with CODs and integrated treatment services have begun to uncover the efficiency and efficacy of services delivery to people with CODs (Minkoff & Cline, 2006). Retrospective studies of dual disorder treatment approaches have demonstrated a clinically significant relationship between integrated treatment services and positive outcomes measures for people with CODs (this includes decreases in readmissions, rehospitalizations, recidivism rates; Drake et al., 2004; Wilson & Crisanti).

## Setting and Sample

### Participants

The participants of this study were derived from an archival data sample that was obtained from a Midwestern state for-profit community-based clinical agency's data system. I sent a letter requesting the use of the archival data (Appendix A) and I received a permission letter from the executive director to conduct a study with people who sought out treatment services for either substance abuse or both substance abuse and mental health (Appendix B). Participants were selected for the following reasons: (a) they would be an accessible population; (b) they would be unable to be identified by de-identifying them using a number system; (c) they would be identified as having sought out treatment services in the two areas the research would examine (single treatment services and integrated treatment services); (d) they were being tracked by the agency's outcomes profile on the number of arrests; (e) they would be made up of both men and women; and (f) all participants would have an identified substance use disorder and/or psychiatric disorder based on the *DSM-IV-TR* (2000) criteria.

Participants from this database were chosen by having the data queried to produce participants who participated in the treatment programs. The treatment programs were identified as being a 12-week program to 16-week program for the substance abuse, and individual mental health programming that was between 12 and 16 weeks. These services were being tracked between the years 2009 and 2014. The standard for a minimum of a 12-week treatment program was determined, because Deemadaylaan, Perraton, Machotka, and Kumar (2010) and National Institute on Drug Addiction (2012) indicated that programming that is at least 90-days in length increases treatment effectiveness and better outcome measurements. Participants were predominately Caucasian, both male and female, with an average age ranging from 21 years old to 60 years old. The participants all resided in the county within the same Midwestern state.

**Procedure**

By utilizing a pretest-posttest nonequivalent group design, I recognized that the study enhanced the internal validity. In such as design, the key internal validity issue is the degree to which the groups are comparable before the study. Therefore, the internal validity of this design was strong, because the pretest ensured that the groups were equivalent. Furthermore, this design allowed me to compare the final posttest results between the two groups, giving an idea of the overall effectiveness of the integrated treatment services. The main problem with this design was that it improved internal validity but sacrificed external validity to do so. Therefore, I recognized that there were no ways of judging whether the process of pretesting actually influenced the results as there were no baseline measurements against groups that remained completely untreated.

I analyzed the data and ensured that all participants had a primary diagnosis of substance use disorder and psychiatric disorder based on the *DSM-IV*-TR (2000) criteria. In ensuring the participants from the two groups had a diagnosis based on the *DSM-IV-TR* criteria, I limited the possibility of selection bias or selection threat.

## Instrumentation

The archival data was placed in an excel spreadsheet that was clearly separated into the two identified groups (Single Treatment Services and Integrated Treatment Services). Data on each participant was logged and categorized (general demographics, type of treatment service, diagnosis, number of arrests at two points in time) using the data system, which was inquired by the quality assurance director from the for-profit community-based clinical agency based on my request regarding participants who meet the criteria identified in the study. The clinical agency utilizes the Wisconsin Outcome Profile Survey (WI-Profile) in order to properly code the number of arrests for the previous 6 months at the time of admissions, discharge, and 6-month follow-up after completion of treatment. This information is logged manually into the data system of the clinical agency by the quality assurance director. The WI-Profile is utilized by the clinician at the agency who logs the number of arrests based on the self-report of the client during the admissions and discharge, while the 6-month follow-up is done by the client through a mailed survey. It should be noted, that for the section that tracks number of arrests "at time of admission" it is based on within 6-months of admissions, while the number of arrests "at discharge" is tracked at the clients last treatment session.

**Demographics**

The participant's demographics were obtained through the identified for-profit community-based clinical agency's data system that gathered basic information regarding the participants' age, gender, ethnicity, diagnostic impressions, type of treatment services, and number of arrests.

## Data Analysis

The study utilized a two-way (2 x 2) for Hypothesis 1 and three-way (2 x 2 x 2) mixed factorial analysis of variance for Hypothesis 2 to properly analyze the data. A two-way (2 x 2) mixed factorial analysis of variance for Hypothesis 1 and three-way (2 x 2 x 2) mixed factorial analysis of variance for Hypothesis 2 were utilized because the researcher measured continuous data that had identified three categorical independent variables and one continuous dependent variable. To properly evaluate the mixed analysis, a pretest-posttest nonequivalent group design was conducted since it was recognized as the most common and statistically powerful design in looking at the interaction with type of treatment service and gender using the measures of the number of arrests. The data was computer scored by using the Statistical Package for Social Sciences (SPSS) version 21.0. The examination of the data was described utilizing descriptive statistics that examined if integrated treatment services are correlated with the number of interactions with the CJS in comparison to single treatment services, along with examining if a direct effect between gender and type of treatment service in decreasing the number of interactions with the CJS. The distribution was categorized by the type of treatment service; which are single treatment services and integrated treatment

service, gender; which are male and female, and time; which are admission and discharge.

The research questions and the hypotheses reflected this type of analyses. The research questions and hypotheses are listed again for review.

*Research Question 1***:** Will the number of interactions with the CJS before the beginning of participation, while participating, and after participation for individuals with CODs decrease as a result of being involved in integrated treatment services in comparison to those individuals with CODs involved in single treatment services?

*Null Hypothesis 1***:** There will be no statistically significant decrease in the number of interactions with the CJS before the beginning of participation, while participating, and after participation with individuals with CODs who are involved in integrated treatment services in comparison to those individuals with CODs involved in single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

*Alternative Hypothesis 1***:** There will be a statistically significant decrease in the number of interactions with the CJS before the beginning of participation, while participating, and after participation with individuals with CODs who are involved in integrated treatment services in comparison to those individuals with CODs involved in single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

*Research Question 2***:** Is there a difference between males and females with CODs and their number of interactions with the CJS before the beginning of participation, while

participating, and after participation in integrated treatment services in comparison to single treatment services?

*Null Hypothesis 2***:** There will not be a statistically significant difference between males and females with CODs and their number of interactions with CJS at the end of treatment and 6 months after the completion of treatment for those who receive integrated treatment services in comparison to those who receive single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

*Alternative Hypothesis 2:* There will be a statistically significant difference between males and females with CODs and their number of interactions with CJS at the end of treatment and 6-months after the completion of treatment for those who receive integrated treatment services in comparison to those who receive single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment.

It should be noted that with regards to the two hypotheses, I conducted a specific pretest-posttest nonequivalent group design. I utilized a interrupted time-series design since the study looked for changes over time to determine trends and patterns within-subjects; thus observing the integrated treatment group and single treatment group before the beginning of treatment and from the beginning of treatment to end of treatment. I choose an Interrupted time –series design because it is viewed as one of the most promising quasi-experimental designs (Jaeger, 1997).

## Ethical Considerations

Careful consideration was given to the nature of this study and its possible effects on the participants. Therefore, I utilized archival data that was approved by executive director of the clinical agency. I obtained a written letter of permission to ensure any legal and ethical factors were taken into consideration (see Appendix B). The archival data was queried and retrieved by clinical agency's quality assurance director who operates and manages the data system. The quality assurance director ran an analysis of the data system and provided me with an excel spreadsheet of only the participant's general demographic information (age, gender, & ethnicity), diagnosis, number of arrests, type of treatment service, and gave them a basic number (example 1, 2, 3) to ensure further confidentiality and eliminate any risk factors. There were no physical risks or benefits anticipated for participation in the study. Lastly, all electronic documents were password protected and only numbers were assigned to the data sheets to ensure anonymity.

### Biases

I recognized that the participants in the study are individuals who have extensive substance abuse and/or mental health conditions that are not issues I had experienced. In addition, the participants have been involved in the CJS which I have not had any personal experience by being under supervision/parole or being incarcerated. I anticipated that these identified differences could impeded the ability to not overgeneralize, as well as display a lack of sensitivity to the complexities of the individual's challenges and struggles.

**Assumptions**

I believed that the participants are individuals who actually sought the treatment services from various treatment providers within the county and have been clinically evaluated and received a proper diagnosis that meets the criteria for *DSM-IV-TR* (2000). Lastly, the archival data was set and I assumed that the participants represented the population that will be studied and evaluated.

**Limitations**

With this specific study and the broad analysis of whether or not integrated treatment services will lessen the number of interactions with the CJS for those people with CODs, the author understood that there are limitations to what can be studied. In examining the dynamics of integrated treatment services, I did not place an emphasis on specific evidence-based practices and programming that can be utilized within integrated treatment services. Furthermore, I did not examine the length of services to determine if that was a factor in the effectiveness of integrated treatment services.

In essence to my study, I hoped that by examining the relationship of integrated treatment services and single treatment services on decreasing the number of interactions with the CJS, it would provide a foundation for further research on the specific types of curricula (i.e., evidence-based practices and programming), prevention techniques, and length of services to decrease the number of people with CODs in exposure to the CJS. Furthermore, my study wanted to demonstrate that integrated treatment services do indeed decrease the number of interactions with the CJS, which would be beneficial in building on the foundation of treatment and prevention services for people with CODs.

With that said, this study could be improved by doing a mixed design that would entail qualitative elements including conducting surveys and interviews with specific people with CODs and with treatment providers. This would enhance the study by getting direct feedback from the both parties in identifying what is needed and what is working.

# Chapter 4: Results

## Introduction

The purpose of the current study was to quantitatively examine the possible relationship between integrated treatment services and CODs and its effect on interaction with the CJS. Two formal hypotheses were tested using a variety of statistical techniques. This chapter summarizes the results of these analyses and also provides a description of the participants sampled in this study.

## Sample Demographics

The participants were accessed using archival data from between the years 2009 and 2014 from a for-profit agency in the Midwest. As a result of utilizing archival data, informed consents were not required or distributed. The archival data produced 320 participants; however, of the 320 participants, only 17 responded to the 6-month follow-up survey that was sent out by the agency who tracked the data. The primary reason for the lack of responses was due to the fact that it was a mailed out survey and the dynamics of the population's inconsistent living environments presented challenges for the agency that provided the archival data in tracking those clients after they completed treatment. Based on the small sample size ($n$ = 17), it did not meet the statistical power to conduct tests for the hypotheses based on the power analysis standard (Cohen, 1988). Therefore, I was unable to conduct a factorial analysis of variance analysis using the three levels of time (admission, discharge, and 6-month follow-up); instead the analysis was completed using the first two levels of time (admission and discharge). Of those who responded, 241 (75.3%) were male and 79 (24.7%) were female, while 61 (19.1%) participated in the

integrated treatment services and 259 (80.9%) participated in the single treatment services. Table 1 summarizes the demographic characteristics of the study sample.

Table 1

*Demographic Characteristics of Study Sample (N =320)*

| Characteristic | N | Percentage |
|---|---|---|
| Age Bracket: | | |
| 21-31 | 119 | 37 |
| 32-42 | 81 | 25 |
| 43-53 | 75 | 23 |
| 54-64 | 37 | 12 |
| 64-74 | 8 | 3 |
| Ethnicity: | | |
| African American | 5 | 1.6 |
| Caucasian | 309 | 96.6 |
| Hispanic | 2 | 0.6 |
| Asian | 2 | 0.6 |
| Indian | 2 | 0.6 |
| Gender: | | |
| Male | 241 | 75.3 |
| Female | 79 | 24.7 |
| Treatment Service: | | |
| Integrated | 61 | 19.1 |
| Single | 259 | 80.9 |

The majority of the participants (37%) were between the ages of 21 and 31. The fewest number of participants (3%) were within the age brackets of 64 to 74. This study sample was not ethnically diverse because most participants (96.6%) were characterizing themselves as Caucasian.

## Hypothesis 1

The first hypothesis predicted there would be no statistically significant decrease in the number of interactions with the CJS before the beginning of participation, while participating, and after participation with individuals with CODs involved in integrated treatment services compared to those individuals with CODs involved in single treatment services, as measured by the number of arrests for 6-months before the beginning of treatment and beginning of treatment to the end of treatment. The type of treatment service might contribute to the decrease in the interactions with the CJS, but the effect might differ across time. Therefore, a two-way (2 x 2) mixed factorial analysis of variance was conducted to evaluate the effect of type of treatment service and time on the number of interactions with the CJS (number of arrests) of people with CODs. The independent variable, type of treatment service, included two levels: (a) integrated treatment services and (b) single treatment services. The independent variable, time, also included two levels: (a) admission and (b) discharge. The dependent variable was the mean of the participants' number of arrests. Participants were identified into integrated treatment services and single treatment services regarding type of treatment service received. A factorial analysis of variance was chosen as the most appropriate analysis as

the aim of the study was to simultaneously examine the two independent variables and one dependent variable.

Data are mean ± standard deviations unless otherwise stated. The number of arrests was not normally distributed for type of treatment service at the time points, as assessed by Shapiro-Wilk's test ($p > .05$). There was homogeneity of variances for number of interactions with the CJS at admission ($p = .057$), but not for discharge ($p < .05$), as assessed by Levene's test for equality of variances. Finally, the results showed that sphericity was not violated ($p < .05$), as assessed by Mauchly's Test of Sphericity.

The analysis of variance demonstrated that people with CODs who participated in integrated treatment services showed a statistically nonsignificant interaction effect between type of treatment service and time on number of interactions with the CJS, $F(1,318) = 2.197$, $p = .139$, $\eta 2 = .023$ (see Table 2). The main effect of type of treatment service showed that there was a statistically significant difference in the number of interactions with the CJS between integrated treatment services and single treatment services, $F(1,318) = 6.555$, $p =.011$, $\eta 2 = .723$. For integrated treatment services group, the number of interactions with the CJS was statistically significantly different between admission and discharge (M = .230, SE = .068, $p = .001$). With regards to single treatment services group, the number of interactions with the CJS was statistically nonsignificantly different between admission and discharge (M = .039, SE = .060, $p = .523$). The main effect of time showed a statistically significant difference in the number of interactions with the CJS at different time points, $F(1,318) = 4.334$, $p <.05$, $\eta 2 = .546$.

In addition, for time, the number of interactions with the CJS was statistically significantly different between admission and discharge (M = .134, SE = .064, $p$ = .038).

Table 2

*ANOVA of Number of Interactions with the CJS by Type of Treatment Service and Time*

| Source | *df* | *F* | *p* | $\eta^2$ |
|---|---|---|---|---|
| Type of Service x Time | 1 | 2.197 | .139 | .023 |
| Error | 318 | | | |

*Note*. Statistical significance is $p < .05$.

When examining admission and discharge, people with CODs who participated in integrated treatment services did demonstrate a decrease in the number of interactions with the CJS compared to those who participate in single treatment services. For time, the relationship was similar: People with CODs demonstrated that over time the number of interactions with the CJS decreased. Overall, most respondents did report a decrease in the number of interactions with the CJS as measured by number of arrests based on type of treatment service.

**Descriptive Statistics**

The analysis of variance descriptive statistics provide the participants mean interactions with the CJS scores for time: (a) admission and (b) discharge by type of treatment service (Table 3). In the integrated treatment services grouping, the participants reported a slightly lower number of interactions with the CJS than the participants in the

single treatment services. The average interaction with the CJS at admission for the integrated treatment services group was .33, whereas the average single treatment services score was .44. Similarly, when examining at discharge the integrated treatment services group was .10, whereas the single treatment services group was .40.

Table 3

*ANOVA Descriptive Statistics for Type of Treatment Services and Time*

| | Admission | Discharge |
|---|---|---|
| Integrated Treatment | | |
| Mean | .33 | .10 |
| SD | .57 | .30 |
| Single Treatment | | |
| Mean | .44 | .40 |
| SD | .69 | .85 |

**Hypothesis 2**

The second hypothesis predicted there will not be a statistically significant difference between males and females with CODs and their number of interactions with CJS at the end of treatment and 6-months after the completion of treatment for those who receive integrated treatment services in comparison to those who receive single treatment services as measured by the number of arrests for 6 months before the beginning of treatment and beginning of treatment to the end of treatment. The type of treatment service and gender might contribute to the decrease in the interactions with the CJS, but

the effect might differ across time. Therefore, a three-way (2 x 2 x 2) mixed factorial analysis of variance was conducted to evaluate the effect of type of treatment service, gender, and time on the number of interactions with the CJS (number of arrests) of people with CODs. The independent variable, type of treatment service included two levels: (a) integrated treatment services and (b) single treatment services. The independent variable, gender, included two levels: (a) male and (b) female. The independent variable, time, also included two levels: (a) admission and (b) discharge. The dependent variable was the mean of the participants' number of arrests. Participants were identified into integrated treatment services and single treatment services regarding type of treatment service received. A factorial analysis of variance was chosen as the most appropriate analysis as the aim of the study was to simultaneously examine the three independent variables and one dependent variable.

Data are mean ± standard deviations unless otherwise stated. The number of interactions with the CJS was not normally distributed for type of treatment service at the time points, as assessed by Shapiro-Wilk's test ($p > .05$). There was homogeneity of variances for a number of interactions with the CJS at admission ($p = .243$), but not for discharge ($p < .05$), as assessed by Levene's test for equality of variances. Finally, the results showed that sphericity was not violated ($p < .05$), as assessed by Mauchly's Test of Sphericity.

The analysis of variance demonstrated that people with CODs for both males and females who participated in integrated treatment services showed a statistically nonsignificant three-way interaction effect between gender, type of treatment service and

time on number of interactions with the CJS, F(1,316) = .025, $p$ = .874, η2 = .000 (see Table 4). In looking at the two-way interactions, there was a statistically nonsignificant interaction effect between gender and time, F(1,316) = .229, $p$ = .229, η2 = .001, as well as for type of treatment service and time, F(1,316) = 1.766, $p$ = .185, η2 = .006. The main effect of gender showed a statistically nonsignificant difference in the number of interactions with the CJS between male and female groups, $F(1,316) = .266$, $p = .607$, η2 = .001. A statistical significance of a simple two-way interaction effect using the accepted Bonferroni adjusted alpha level of .025 was conducted. There was a statistically nonsignificant simple 2-way interaction effect between gender and type of treatment service, $F(1,316) = .076$, $p = .783$.

Table 4

*ANOVA of Number of Interactions with the CJS by Gender, Type of Treatment Service, and Time*

| Source | *df* | *F* | *p* | $\eta^2$ |
|---|---|---|---|---|
| Gender x Type of Tx. Services x Time | 1 | .025 | .874 | .000 |
| Error | 316 | | | |

*Note*. Statistical significance is $p < .05$.

In examining people from both genders with CODs, who participated in integrated treatment services did not demonstrate a decrease in the number of interactions with the CJS than those who participate in single treatment services. Overall, most

respondents did report a decrease in the number of interactions with the CJS as measured by number of arrests based on time, and not by gender or type of treatment service.

**Descriptive Statistics**

The analysis of variance descriptive statistics provide the participants mean interactions with the CJS scores for time: (a) admission and (b) discharge by gender and type of treatment service (Table 5). In both type of treatment service groupings, males reported a slightly greater number of interactions with the CJS than females during admission and discharge. The average interaction with the CJS score at admission for the integrated treatment services group male was .33 and the single treatment services group male was .44, whereas the average integrated treatment services group female was .31 and the single treatment services group female was .44. The average interaction with the CJS score at admission for single treatment services group male was .13 and single treatment services group male was .41, whereas the average integrated treatment services group female was .00 and the single treatment services group female was .36. When examining both types of treatment service and gender groupings, the interaction with the CJS score for discharge for all groups showed a decreased score.

Table 5

*ANOVA Descriptive Statistics for Gender, Type of Treatment Service, and Time*

| | | Admission | Discharge |
|---|---|---|---|
| Integrated-<br>(Male) | Mean<br>SD | .33<br>.56 | .13<br>.33 |
| Integrated-<br>(Female) | Mean<br>SD | .31<br>.63 | .00<br>.00 |
| Single-<br>(Male) | Mean<br>SD | .44<br>.72 | .41<br>.92 |
| Single-<br>(Female) | Mean<br>SD | .44<br>.61 | .36<br>.65 |

## Summary

The statistical analyses of the study data did support Hypothesis 1, but did not support Hypothesis 2. The number of interactions with the CJS regarding admission and discharge was significant in relation to the type of treatment service. However, number of interactions with the CJS regarding admission and discharge was nonsignificant with regards to gender. The results did demonstrate that when solely looking at type of treatment service and time, they both were more predictive of a decrease in the number of interactions with the CJS during admission and discharge. The following chapter will summarize the study and present conclusions about the findings. Chapter 5 will also discuss the social change implications of these findings, the limitations of this study, and future recommendations for continued research in this area.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Introduction

My study was carried out to evaluate whether type of treatment service had an effect on the number of interactions with the CJS. In addition, my study looked at whether gender also had a direct effect on the number of interactions with the CJS. The study specifically targeted a community-based sample ($N$ = 320) of people with CODs. The sample was examined by using number of arrests during time of admission and discharge for both integrated treatment services and single treatment services. CODs are a product of coping and dealing with the coexistence of both mental illness and substance abuse issues. Integrated treatment service is a product of simultaneously receiving mental health and substance abuse treatment, while single treatment service is a product of receiving one or the other. Since mental health and substance abuse problems play a leading role in a litany of chaotic psychosocial stressors and disorders, it is important to identify effective treatment services that might decrease people with CODs in their interactions with the CJS.

## Summary and Interpretation of Findings

In researching the effect of integrated treatment services, Copello et al. (2013) stated there is an insufficient amount of studies to determine if an integrated treatment approach can deter people with CODs from entering into the CJS. Ogloff et al. (2015) recommended that more in-depth exploration of specific treatment interventions that properly address the issues of poorer outcomes, including higher rates of recidivism in

treatment services, rehospitalization, and most importantly an increased range of offending outcomes that result in exposure with the CJS for those who have CODs. In the current study, archival data of participants with CODs were evaluated based on the type of treatment service, gender, and interactions with the CJS as measured by the number of arrests. It was expected that participants who engaged in integrated treatment services would demonstrate a decrease in their interactions with the CJS in comparison to those in single treatment services. In addition, it was expected that gender would play a role in the number of interactions with the CJS.

The findings of this study demonstrated that participants who have CODs did demonstrate decreases in their interactions with the CJS regarding type of treatment service, but not for gender. Balyakina et al. (2014) suggested that the CJS has become the primary delivery system for adults who are battling with mental illness, substance use disorders, and other health service needs, which has called for the continuous development of effective integrated treatment services. Although this study did not examine the effects of treatment services within the CJS, it is rooted in the integrated dual disorder treatment model that underscores the importance of the bidirectional relationship between treatment services and decrease in interactions with the CJS (Greenberg et al., 2011). This current research supported the integrated dual disorder treatment model suggesting that integrated treatment services can have a sustaining positive influence with people who have CODs in decreasing their interactions with the CJS.

**Type of Treatment Service**

Hypothesis 1 examined the relationship between type of treatment service and the interaction with the CJS. Woods (2011) drew attention to the fact that there is an alarming statistic that showed those parolees with CODs compared to nondually diagnosed parolees were rearrested about 3 to 5 months sooner, which was reported as a product of not receiving adequate treatment services. This study specifically sought to begin to raise the important issue of the need to develop effective treatment services that can adequately address the complexities of CODs. Furthermore, Killen et al. (2011) pointed out that integrated treatment programs help patients understand the interrelationship between their psychiatric disorders and substance use disorders. In teaching and developing awareness of the interrelationship between psychiatric disorders and substance use disorders, it can have a positive impact on the community. These positive impacts would assist in the stabilization of their living environment, as well as making them less susceptible to engaging in the CJS (Moore et al., 2009).

The results of this study certainly begin to support the concept that type of treatment service has an important role to play in the development and implementation of effective treatment interventions and curricula that would contribute to decreasing the negative impact of CODs and their interactions with the CJS. The findings of the present study supported that contention. Perhaps specific treatment services, such as integrated treatment services, would provide people with CODs recovery skills in effort to teach them how to establish prosocial behaviors. In return, those prosocial behaviors would allow people with CODs to engage in healthy lifestyles that will deter them from the CJS.

Although there was scant literature on the long-term effects of integrated treatment services and their relationship between CODs and interactions with the CJS, it seems important, based on this study, that researchers continue to explore the nature of these and how they inform mental health providers in the incorporation of treatment interventions and practices when treating people with CODs. The results from this study indicated that there was a statistically significant main effect between integrated treatment services and the number of interactions with the CJS for CODs. However, these results from the study did not specifically provide additional support in the long-term effect of integrated treatment services in decreasing the interaction with the CJS because I was unable to examine the 6-month follow-up due to the insufficient sample size. Even though this study could not examine the 6-month follow-up data, the results still supported the importance of continuing to make efforts to combat the overrepresentation of CODs within the CJS. Therefore, future studies should continue to consider the long-term effects of integrated treatment services for people with CODs and the issue of decreasing their interactions with the CJS.

**Gender**

Hypothesis 2 examined the nature of the relationship with gender, the type of treatment service, and the interaction with the CJS. Gender was added to the number of arrests regression analyses to determine its potential effect on reports of interactions with the CJS. Although treatment and CJS research suggested that female detainees experience more challenges in battling with CODs and have worse outcomes and increase recidivism (Farkas et al., 2007), the results of this study indicated that gender was nonsignificant in

predicting the effectiveness of type of treatment service and its effect on interactions with the CJS. However, Fries et al. (2014) and Calsyn et al. (2005) recognized that incarcerated people, especially women, are potentially at higher risk of recidivism and negative impacts on social wellness (i.e., homelessness and domestic abuse).

The results of this study suggested that gender did not add to the overall predictive value of the integrated treatment model and its effect on the interactions with the CJS. A possible explanation for this finding is that the sample for this study lacked heterogeneity with regards to ethnicity and educational background, as well as the number of participants in each grouping. Majority of the participants in the study were Caucasian and the sample size was small for the integrated treatment services, and specifically for female participants within the integrated treatment services grouping. This specific sample of participants may not be representative of potential gender differences that may exist in the more diverse general population. Therefore, future studies should continue to consider gender issues.

## Implications for Social Change and Practice

For a moment, consider that through effective integrated treatment services, an individual with CODs might be able to positively establish a living environment that is conducive to recovery. Therefore, enhancing their overall wellness, family dynamics, and eliminating interactions with the CJS would greatly impact their daily lives. Furthermore, it would have a social implication that could demonstrate public safety and a level of cost-effectiveness to the community. As highly provocative as that may sound, this study focused on cultivating established treatment services within the community in order to

challenge the prominent paradigm shift that has been occurring within society, that county, state, and federal correctional facilities have become the primary current treatment providers for people with CODs. The results of the current study supported positive social change aimed at broadening the understanding of the dynamics of CODs and the impact of effective treatment services with this population, especially when looking at interactions with the CJS.

In reviewing the financial implications when treating people with CODs, the United States has spent over $85 billion in services for mental health and substance abuse (Perron et al., 2010). This excessive financial ramification has forced behavioral health providers to reevaluate their programming and practice when treating CODs because an alarming amount of people in this population entering into treatment services are enduring numerous physical, psychological, social, and economical problems as a result of their coexisting mental health and substance abuse problems. As a result of these prevalent problems, many people with CODs have found themselves caught up in the CJS (Perron et al.). These alarming statistics reflect the troubled financial costs for the United States for people with CODs and their interactions with the CJS. This study did not demonstrate a significant effect on type of treatment service and interactions with the CJS. The results did suggest a main effect in demonstrating a decline in number of interactions with the CJS for integrated treatment services at the end of treatment. The findings demonstrated that participation in integrated treatment services could be beneficial in eliminating high rates of recidivism and legal offenses, while actively participating in treatment.

Perron et al.(2010) study demonstrated consistent findings with Skeem et al. (2011) study. These consistent findings were discovered when incorporating a multidimensional framework with best practices for people who battle CODs and involvement with the CJS. In fact, the present study supported the multidimensional framework of incorporating best practices that adequately addresses CODs in a manner that gives this population the ability to reintegrate back into their communities, as well as decrease their likelihood to recidivate (Skeem et al.). Therefore, the overall findings in this study on the effect of type of treatment service on the number of interactions with the CJS supported the continuous need to continue examination of the positive implications of treatment services for people with CODs, whether that consists of specific type of treatment service, type of curricula, or the length of services.

The findings of this study also have implications for practice. Psychologists have an important responsibility to educate their clients, inform the public, and conduct research that is relevant toward shifting political agendas in ways that foster the well-being of humanity. This study offers support for continuing the education of mental health providers, policy makers, and most importantly the clients about the intricate connections between treatment services and interactions with the CJS and other entities (i.e., hospitals, detox centers, crisis centers, and homeless shelters). As Kronberg et al. (2014) suggested, over 50% of people who are seeking treatment services for mental health and substance abuse are battling with CODs. Therefore, many people with CODs struggle to sustain a healthy recovery foundation that is conducive to simultaneously addressing all their symptoms. Therefore, this study is another integral piece in raising

the question of pressing importance for local agencies, state agencies, and federal agencies of how to assess the direct connection between the type of treatment service that can provide a model to properly assist people with mental health and substance abuse problems and decrease their interactions with the CJS. This movement to clinically revamp the practices of providers and operational approaches would allow agencies to incorporate clinically sound treatment services that will support the needs of CODs.

Another implication is the tremendous cost effectiveness value in establishing programs and practices that teach and educate clients about self-initiated behaviors that can be potentially wellness fostering. As Kileen et al. (2011) stated, people with CODs often “lead chaotic and stressful lives” (p. 199) typically characterized by having unstable living environments, poor social skills, disconnected families, and extensive legal problems. Helping people with CODs understanding the bio-psycho-social elements of their mental health and substance abuse issues could not only have individual health benefits, but familial health and social health benefits as well. While I did not have the opportunity in this study to evaluate the sustainability of the treatment outcomes over time after the completion of treatment, this study contributes to these benefits by demonstrating that when people with CODs received effective treatment they had less of an immediate propensity to interact with the CJS, thus potentially allowing them to stay involved within their communities and maintain family and social connections.

While there has been a pervasive tendency in CODs research to empirically focus on the type of treatment service within the CJS, this study and studies similar to it call for a vision in psychology that substantiates the powerful force of constructive change within

treatment practices and approaches. For those practitioners working in the area of mental health, substance abuse, and corrections, it is essential that they continue to explore the connection between integrated treatment services and CODs. It is also important that they communicate with their colleagues in other specialty areas as to how integrated treatment services may prevent adverse effects on CODs, such as their interactions with CJS and other entities. Integrated treatment services may turn out to be the pinnacle determinant of decreasing the large volume of people with CODs within the CJS. Clearly, this requires further investigation of what should be incorporated with integrated treatment services before any solid conclusions can be made.

## Limitations

My study was quasiexperimental in nature therefore caution should be used when drawing conclusions about the causality of type of treatment service with a specific population. Although there was a nonsignificant inverse relationship between type of treatment service and interactions with the CJS, this relationship needs to be further explored. Harris et al. (2006) indicated, with many quasiexperiments, researchers are most often left with the question: “Are there alternative explanations for the apparent causal association?” This compromises the eventual strength of concluding that an intervention resulted in an outcome, thus utilizing traditional randomization process. In addition, due to my study being quasiexperimental, the possible lack of internal consistency is prevalent since the researcher was unable to control for all confounding variables due to the lack of the use of randomization. One potential confounding variable that may have impacted my study was the severity of illness, which may have differed in

the preintervention and postintervention time periods. My study depended upon the archival data that tracked the participant's self-reported number of arrests during the time of admissions, discharge, and 6-month follow-up based on the WI Outcome Profile that the identified agency used. Archival studies force the researcher to hunt through large quantities of documents in search of material relevant to his or her particular enquiry. Thus, these types of studies may be challenged with finding aids (exact population, adequate timeframes, size of sample, etc.) that support the goals of the study. This is a limitation that is inherent in my study. Future longitudinal studies may shed further clarity on the effect of integrated treatment services in relationship to people with CODs and their interactions with the CJS, as well as strengthen conclusions about long-term effects of integrated treatment services.

There is still much to be learned about the specific qualities of CODs and effectiveness of treatment services to address the complex comorbidity of their symptoms. I did not attempt to dissect specific treatment interventions and modalities, but rather view the general concepts of the bidirectional model for treatment services which entailed integrated treatment services. There are still many questions about the type of intervention, frequency, intensity, and duration of treatment services when treating people with CODs, questions that have been relatively limited, unexplored, and unanswered. In addition, I did not explore specific combinations of CODs; thus it is possible that there are specific treatment services and treatment modalities that are more opportune for effectively treating and sustaining recovery with those specific diagnoses of CODs. Future studies may want to explore those possibilities.

The newness of integrated treatment services requires it to be further explored as a reliable model of treatment in addressing the behaviors, symptoms, and outcomes for CODs. Although my study did not substantiate that integrated treatment services are more effective in decreasing interactions with the CJS posttreatment, the sample size was limited in regards to people responding to the follow-up survey due to the use of archival data, which may have impacted the outcomes. Future studies should look to increase the sample size.

The sample of participants used in my study came from a precise geographical location in the northern part of a Midwest state. All were Caucasians who resided in a middle class urban area. These factors contributed to the relative homogeneity of the study sample. Future studies should look to explore CODs and treatment services in more heterogeneous populations so that the generalizability of the results would be greater.

**Future Recommendations**

Although my study did not directly demonstrate a significant interaction effect specifically between type of treatment service and time in decreasing interactions with the CJS, my findings did indicate a significant main effect of integrated treatment services and time on the number of interactions with the CJS. Furthermore, my study has contributed to a better understanding that integrated treatment services and length of time have a positive effect in decreasing interactions with the CJS with people who have CODs. As result of my study, it is possible that type of treatment service that entail specific curricula in relationship to a person's CODs can play an important role in encouraging them to stay invested in treatment; thus having a positive impact on their

chaotic life and in return combating the high prevalence of exposure to the CJS. Current research tells us little about the quality and interaction with type of curricula within treatment services and people with CODs in diminishing their alarming interactions with the CJS (Young et al., 2014).

Specifically with my study, the evaluation of gender was unable to demonstrate any significance, however it is worth discussing the necessity of continuing to evaluate the relationship between gender and type of treatment service and how it can play a pertinent role in the recognition of gender-specific needs. Retrospective studies have indicated that treatment services for mental health and substance abuse are different between males and females (Farkas et al., 2007). Peters, Wexler, and Lurigio (2015) pointed out that research shows the extreme need to develop specialized COD interventions to address the unique needs of justice-involved women, since there needs vary from justice-involved men. Furthermore, the National Institute of Corrections (2003) reviewed numerous studies and discovered that gender differences are prevalent in the course of interactions with the CJS for male and female, which require specific courses of treatment. Morever, future studies could look at examining a more heterogeneity population that is a more accurate representation of the population of women in the correctional setting. Secondly, the need to evaluate specific gender-responsive integrated treatment programs for people with CODs could be beneficial in assessing the level of significance of gender tailored treatment services and their impact on decreasing interactions with the CJS. Answers to these types of questions would help paint a clearer

picture of the impact of gender-responsive treatment services on both males and females with CODs.

## Conclusion

To conclude, Hypothesis 1 provided some positive value to the body of research with CODs and CJS, specifically in regards to the level of effectiveness of integrated treatment services for people with CODs and decreasing their interactions with CJS. Unfortunately, my study was unable to provide any predictive value to the long-term effects of integrated treatment services on the interactions with the CJS due to the small sample of participants reporting on the 6-month follow-up survey. With that said, the lack of data should encourage future studies to evaluate the long-term effects of integrated treatment services on the interactions with the CJS for people with CODs.

The second hypothesis did not demonstrate a significant interaction effect between genders, type of treatment service, and time based on the number of interactions with the CJS. These findings were possibly impacted by the lack of heterogeneity and the lack of representation of females specifically in the integrated treatment services grouping. Even though my study was unable to demonstrate any statistical significance with gender, it is worth noting that my study could offer value in the continuous exploration of understanding the implications of gender-responsive treatment interventions for people with CODs and how it can impact their involvement with the CJS. As similar studies in this area have discovered that course of issues in regards to CODs and treatment needs differ between males and females (Peters et al., 2015). Morever, future studies that place an emphasis on evaluating gender-responsive

treatments could be beneficial in assessing the level of significance of gender tailored treatment services and their impact on decreasing interactions with the CJS.

Finally, the social implications of my study provides additional data that could be integral in demonstrating how pertinent integrated treatment services can be in decreasing the overrepresentation of people with CODs in the CJS; thus impacting the decrease in needing to implement further treatment programs within correctional settings, requiring correctional settings in developing new policy and procedures to adequate treat and care for people with CODs, decreasing the need for correctional facilities in hiring additional mental health professionals, and reducing the recidivism rates. Furthermore, understanding the interactions between integrated treatment services and the complex symptomatology of people with CODs will be beneficial in promoting continuous research for evidence-based practices and programming with this population, as well as increasing public safety and enhancing cost-effectiveness to county, state, and federal jails and prisons.

References

Abou-Saleh, M.T. (2004). Dual diagnosis: Management within a psychosocial context. *Advances in psychiatric treatment, 10,* 352-260. doi:10.1192/apt.10.5.352

Alemagno, S.A., King-Shaffer, E., Tonkin, P., & Hammel, R. (2004). Characteristics of arrestees at risk for co-existing substance abuse and mental disorder. *The Institute for Health and Social Policy,* 1-17. doi:10.1037/e5104020006-001

Altinbas, K. & Evren, C. (2013). Pharmacotherapy options in comorbid bipolar disorder and alcohol-substance use disorders. *Bullentin of Clinical Psychopharmacology, 23*(4), 378-389. doi:10.5455/bcp.20131122111840

American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders: DSM-IV-TR. Washington, DC: Author.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders: DSM-5. Washington, DC: Author.

Aschengrau, A. & Seage, G.R. (2007). *Essential of epidemiology in public health* (2nd ed.). Sudbery, MA: Jones and Bartlett Publishers.

Balyakina, E., Mann, C., Ellison, M., Sivernell, R., Fulda, K.G., Sarai, S.K., & Cardarelli, R. (2014). Risk of future offense among probationers with co-occurring substance use and mental health disorders. *Community Mental Health Journal, 50,* 288-295. doi:10.10007/s10597-013-9624-4

Baillargeon, J., Binswanger, I.A., Penn, J.V., Williams, B.A., & Murray, O.J. (2009). Psychiatric disorders and repeat incarcerations: The revolving prison door.

*American Journal of Psychiatry, 166*(1), 103-109. doi:10.1176/appi.ajp.2008.08030416

Belenko, S. & Peugh, J. (2004). Estimating drug treatment needs among state prison inmates. *Drug and Alcohol Dependence, 77,* 269-281. doi:10.1016/j.drugalcdep.2004.08.023

Best, D., Day, E., Morgan, B., Oza, T., Copello, A., & Gossop, M. (2009). What treatment means in practice: an analysis of the delivery of evidence-based interventions in criminal justice drug treatment services in Birmingham, England. *Addiction Research and Theory, 17*(6), 678-687. doi:10.3109/16066350802447090

Bhati, A.S. & Roman, J.K. (2013). Simulated evidence on the prospects of treating more drug-involved offenders. *Journal of Experimental Criminology, 6*(1), 133.

Booth, B.M., Curran, G.M., Han, X., & Edlund, M.J. (2013). Criminal justice and alcohol treatment: Results from a national sample. *Journal of Substance Abuse Treatment, 44,* 249-255. doi:10.1016/j.jsat.2012.07.008

Bride, B.E., MacMaster, S.A., & Webb-Robins, L. (2006). Is integrated treatment of co-occurring disorders more effective than nonintegrated treatment? *Best Practice in Mental Health, 2*(2), 43-57.

Calsyn, R.J., Yonker, R.D., Lemming, M.R., Morse, G.A., & Klinkenberg, W.D. (2005). Impact of assertive community treatment and client characteristics on criminal justice outcomes in dual disorder homeless individuals. *Criminal Behaviour and Mental Health, 15*(4), 236-248. doi:10.1002/cbm.24

Center for Substance Abuse Treatment. (2005). *Substance abuse treatment for persons with co-occurring disorders.* Treatment Improvement Protocol (TIP) Series, No. 42. DHHS Publication No. (SMA) 05-3992. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Chandler, D.W. (2012). Fidelity and outcomes in six integrated dual disorders treatment programs. *Community Mental Health Journal, 47,* 82-89.

Chandler, R.K., Peters, R.H., Field, G., & Juliano-Bult, D. (2004). Challenges in implementing evidence-based treatment practices for co-occurring disorders in the criminal justice system. *Behavioral Sciences and the Law, 22,* 431-448. doi:10.1002/bsl.598

Cherry, A.L. (2008). Mixing oil and water: Integrating mental health and addiction services to treat people with a co-occurring disorder. *International Journal of Mental Health & Addiction, 6,* 407-420. doi:10.1007/s11469-007-9074-8

Cohen, E., Feinn, R., Arias, A., & Kranzler, H.R. (2006). Alcohol treatment utilization: Findings from the national epidemiologic survey on alcohol and related conditions. *Drug and Alcohol Dependence, 86,* 214-221. doi:10.1016/j.drugalcdep.2006.06.008

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Conrod, P.J. & Stewart, S.H. (2005). A critical look at dual-focused cognitive-behavioral treatments for comorbid substance use and psychiatric disorders: Strengths, limitations, and future directions. *Journal of Cognitive Psychotherapy: An*

*International Quarterly, 19*(3), 261-284. Retrieved from http:// www.springer.com/gp/about-springer

Copello, A., Walsh, K., Graham, H., Tobin, D., Griffith, E., Day, E., & Birchwood, M. (2013). A consultation-liaison services on integrated treatment: A program description. *Journal of Dual Diagnosis, 9*(2), 149-157. doi:10.1080/15504263.2013.777987

Covell, N.H., Margolies, P.J., Smith, M.F., Merrens, M.R., & Essock, S.M. (2011). Distance training and implementation supports to scale up integrated treatment for people with co-occurring mental health and substance use disorders. *Journal of Dual Diagnosis, 7*(3), 162-172. doi:10.1080/15504263.2011.593157

Creswell, L.M. (2014). A critical Black feminist ethnography of treatment for women with co-occurring disorders in the psychiatric hospital. *Journal of Behavioral Health Services & Research,* 167-184.

Criminal Justice System. (n.d.). *Dictionary.com's 21st Century Lexicon*. Retrieved April 13, 2014, from Dictionary.com website. Retrieved from http://dictionary.reference.com/browse/criminal justice system

Croghan, T.W. & Brown, J.D. (2010). Integrating mental health treatment into patient centered medical home. *Agency for Healthcare Research and Quality.*

Dam, D.V., Ehring, T., Vedel, E., & Emmelkamp, P.M. (2013). Trauma-focused treatment for posttraumatic stress disorder combined with CBT for severe substance use disorder: A randomized controlled trial. *Biomed Central Psychiatry, 13,* 1-13. Retrieved from http://www.biomedcentral.com/1471-

244X/13/172

Davis, T.M., Baer, J.S., Saxon, A.J., & Kivlahan, D.R. (2003). Brief motivational feedback improves post-incarceration treatment contact among veterans with substance use disorders. *Drug and Alcohol Dependence, 69,* 197-203. Retrieved from http://www.elsevier.com/locate/drugalcdep

Deemadaylaan, Y., Perraton, L., Machotka, Z., & Kumar, S. (2010). Day therapy programs for adolescents with mental health problems: A systematic review. *The Internet Journal of Allied Health Science and Practice, 8*(1), 1-14.

Draine, J., Blank, A., Kottsieper, P., & Solomon, P. (2005). Contrasting jail diversion and in-jail services for mental illness and substance abuse: Do they serve the same clients? *Behavioral Sciences and the Law, 23,* 171-181. doi:10.1002/bsl.637

Drake, R.E. & Bond, G.R. (2010). Implementing integrated mental health and substance abuse services. *Journal of Dual Diagnosis, 6,* 251-262.

Drake, R.E. & Bond, G.R. (2011). Implementing integrated mental health and substance abuse services. *Journal of Bulletin, 36,* 48-70.

Drake, R.E. & Mueser, K.T. (2000). Psychosocial approaches to dual diagnosis. *Schizophrenia Bullentin, 26*(1), 105-118. Retrieved from http://schizophreniabullentin.oxfordjournals.org

Drake, R.E., Mueser, K.T., Brunette, M.F., & McHugo, G.J. (2004). A review of treatments for people with severe mental illnesses and co-occurring substance use disorders. *Psychiatric rehabilitation Journal, 27*(4), 360-374. Retrieved from http://Ebscopublishing

Elonheimo, H., Niemela, S., Parkola, K., Multimaki, P., Helenius, H., Nuutila, A.M., & Sourander, A. (2007). Police-registered and psychiatric disorders among young males. *Social Psychiatry and Psychiatric Epidemiology, 42,* 477-484. doi:10.1007/s00127-007-0192-1

Evans, E., Huang, D., & Hser, Y.I. (2011). High-risk offenders participating in court-supervised substance abuse treatment: Characteristics, treatment received, and factors associated with recidivism. *The Journal of Behavioral Health Services & Research, 38*(4), 510-525. Retrieved from http://www.Ebscopublishing.com

Farkas, K.J. & Hrouda, D.R. (2007). Co-occurring disorders among female jail detainees: Implications for service delivery. *Journal of Social Work Practice in the Addiction, 7*(1/2), 51-67. doi:10.1300/J160v07n01_04

Fava G, Ruini C, Rafanelli C. (2005). Sequential treatment of mood and anxiety disorders. *Journal of Clinical Psychiatry*, 66, 1392-1400.

Fletcher, B.W., Lehman, W. E.K., Wexler, H.K., Melnick, G., Taxman, F.S., & Young, D.W. (2009). Measuring collaboration and integration activities in criminal justice and substance abuse treatment agencies. *Drug and Alcohol Dependence, 103,* 54-64. doi:10.1016/j.drugalcdep.2009.01.001

Fries, L., Fedock, G., & Kubiak, S.P. (2014). Role of gender, substance use, and serious mental illness in anticipated post jail homelessness. *Social Work Research, 38*(2), 107-116. doi:10.1093/swr/svu014

Gouzoulis-Mayfrank, E. (2008). Comorbidity of substance use and other psychiatric disorders-theoretical foundation and evidence based therapy. *Fortschr*

*Neurological Psychiatric, 76*(5), 263-271.

Gravetter, F.J. & Wallnau, L.B. (2009). *Statistics for the behavioral science* (8th, ed.). Belmont, CA: Wadsworth, Cengage Learning.

Green, A.I. & Drake, R.E. (2011). Perspectives on treatment. *Journal of Dual Diagnosis, 7*(3), 115-116. doi:10.1080/15504263.2011.593414

Greenberg, G., Rosenheck, R.A., Erickson, S.K., Desal, R.A., Stefanovics, E.A., Swartz, M., . . .Stroup, T.S. (2011). Criminal justice system involvement among people with schizophrenia. *Community Mental Health Journal, 47,* 727-736. doi:10.1007/s10597-010-9362-9

Grella, C.E. & Greenwell, L. (2007). Treatment needs and completion of community-based aftercare among substance-abusing women offenders. *Women's Health Issue, 17,* 244-255. doi:10.1016/j.whi.2006.11.005

Harris, A.D., McGregor, J.C., Perencevich, E., Furuno, J.P., Zhu, J., Petersen, D.E., and Finkelstein, J. (2006). The use and interpretation of quasi-experimental studies in medical informatics. *Journal of the American Medical Informatics Association, 13*(1), 16-23.

Hartwell, S. (2004). Triple stigma: Persons with mental illness and substance abuse problems in the criminal justice system. *Criminal Justice Policy Review, 15*(1), 84-99.

Henderson, C.E., Young, D.W., Jainchill, N., Hawke, J., Farkas, S., & Davis, R.M. (2007). Program use of effective drug abuse treatment practices for juvenile offenders. *Journal of Substance Abuse Treatment, 32,* 279-290.

doi:10.1016/j.jsat.2006.12.021

Hesse, M. (2009). Integrated psychological treatment for substance use and co-morbid anxiety or depression vs. treatment for substance use alone. A systematic review of the published literature. *BioMed Central Psychiatry, 9*(6), 1-8. doi:10.1186/147-244x-9-6

Hintz, T. & Mann, K. (2006). Co-occurring disorders: Policy and practice in Germany. *The American Journal on Addiction, 15,* 261-267. doi:10.1080/10550490600754275

Hipolito, M.S., Carpenter-Song, E., & Whitley, R. (2011). Meanings of recovery from the perspective of people with dual diagnosis. *Journal of Dual Diagnosis, 7,* 141-149.

Hogan, M. (2011). Focus on integrated treatment. *Journal of Dual Diagnosis, 7*(3), 173-174.

Houser, K. & Belenko, S. (2015). Disciplinary responses to misconduct among female prison inmates with mental illness, substance use disorders, and co-occurring disorders. *Psychiatric Rehabilitation Journal, 38*(1), 24-34. doi:10.1037/prj0000110

Hser, Y.I., Hamilton, A., & Niv, N. (2009). Understanding drug use over the life course: Past, present, and future. *Journal of Drug Issues, 39*(1), 231-236. Retrieved from http://Proquest.com

Hussey, D.L., Drinkard, A.M., & Flannery, D.J. (2007). Comorbid substance use and mental disorders among offending youth. *Journal of Social Work Practice in the Addiction, 7*(1/2), 117-138. doi:10.1300/J160v07n01_07

Jaeger, R. M. (1997). *Complementary methods for research in education, 2nd ed.*, 589-608. Washington D. C.: American Educational Research Association.

Killeen, T.K., Back, S.E., & Brady, K.T. (2011). The use of exposure-based treatment among individuals with PTSD and co-occurring substance use disorders: Clinical considerations. *Journal of Dual Diagnosis, 7*(4), 194-206. doi:10.1080/15504263.2011.620421

Kronenberg, L., Visscher, K.S., Goossens, P., Brink, W., & Achterberg, T. (2014). Everyday life consequences of substance use in adult patients with a substance use disorder (SUD) and co-occurring attention deficit/hyperactivity disorder (ADHD) or autism spectrum disorder (ASD): A patient's perspective. *BMC Psychiatry, 14*, 1-16. doi:10.1186/s12888-014-0246-1

Laker, C. (2006). How successful is the dual diagnosis good practice guide? *British Journal of Nursing,* 1-4. Retrieved from http://www.markallenpublishing

Lubman, D.I., King, J.A., & Castle, D.J. (2010). Treating comorbid substance use disorders in schizophrenia. *International Review of Psychiatry, 22*(2), 191-201. doi:10.3109/09540261003689958

Magnum, L.F., Spence, R.T., & Lopez, M. (2006). Integrated versus parallel treatment of co-occurring psychiatric and substance use disorders. *Journal of Substance Abuse Treatment, 30*(1), 79-84.

McCabe, P.J., Christopher, P.P., Druhn, N., Roy-Bujnowski, K.M., Grudzinskas, A.J., & Fisher, W.H. (2012). Arrest types and co-occurring disorders in persons with schizophrenia or related psychoses. *Journal of behavioral Health Services &*

*Research, 39*(3), 271-284. doi:10.1007/s11414-011-9269-4

McHugo, G.J., Drake, R.E., Brunette, M.F., Xie, H., Essock, S.M., & Green, A.I. (2006). Enhancing validity in co-occurring disorders treatment research. *Schizophrenia Bulletin, 32*(4), 655-665. doi:10.1093/schbul/sb1009

McKee, S.A., Harris, G.T., & Cormier, C.A. (2013). Implementing residential integrated treatment for co-occurring disorders. *Journal of Dual Diagnosis, 9*(3), 249-259.

Miller, J.M. (2014). Identifying collateral effects of offender reentry programming through evaluative fieldwork. *American Journal of Criminal Justice, 39,* 41-58.

Milligan, K., Niccols, A., Sword, W., Thabane, L., Henderson, J., & Smith, A. (2011). Length of stay and treatment completion for mothers with substance abuse issues in integrated treatment programmes. *Drugs: Education, Prevention & Policy, 18*(3), 219-227. doi:10.3109/09687637.2010.511638

Minkoff, K. & Cline, C.A. (2006). Dual diagnosis capability: Moving from concept to Implementation. *Journal of Dual Diagnosis, 2*(2), 121-134. doi:10.1300/J374v02n02_09

Mitchell, O., Wilson, D.B., & MacKenzie, D.L. (2007). Does incarceration-based drug treatment reduce recidivism? A meta-analytic synthesis of the research. *Journal of Experimental Criminology, 3,* 353-375. doi:10.1007/s11292-007-9040-2

Moore, K.A., Young, M.S., Barrett, B., & Ochshorn, E. (2009). A 12-month follow-up evaluation of integrated treatment for homeless individuals with co-occurring disorders. *Journal of Social Service Research, 35,* 322-335. doi:10.1080/01488370903110829

Morrissey, J.P., Calloway, M.O., Thakur, N., Cocozza, J., Steadman, H.J., & Dennis, D. (2002). Integration of service systems for homeless persons with serious mental illness through ACCESS program. *Psychiatric Services, 53*(8), 949-957. Retrieved from http://psychservices.psychiatryonline.org

Moser, L.L., Monroe-DeVita, M., & Teague, G.B. (2013). Evaluating integrated treatment within assertive community treatment programs: A new measure. *Journal of Dual Diagnosis, 9*(2), 187-194. doi:10.1080/15504263.2013.779480

Mueser, K.T., Drake, R.E., Sigmon, S.C., & Brunette, M.F. (2005). Psychosocial interventions for adults with severe mental illnesses and co-occurring substance use disorders: A review of specific interventions. *Journal of Dual Diagnosis, 1*(2), 57-82. doi:10.1300/J374v01n02_05

O'Conghaile, A. & DeLisi, L.E. (2015). Distinguishing schizophrenia from posttraumatic stress disorder with psychosis. *Current Opinion Psychiatry, 28*(3), 249-255.

Ogloff, J.R.P., Talevski, D., Lemphers, A., Wood, M., & Simmons, M. (2015). Co-occurring mental illness, substance use disorders, and antisocial personality disorder among clients of forensic mental health services. *Psychiatric Rehabilitation Journal, 38*(1), 16-23. doi:10.1037/prj000088

Oortmerssen, K.E., Vedel, E., Koeter, M.W., Bruijn, K., Dekker, J.J.M., Brink, W., & Schoevers, R.A. (2013). Investigating the efficacy of integrated cognitive behavioral therapy for adult treatment seeking substance use disorder patients with comorbid ADHD: Study protocol of a randomized controlled trial. *BioMed Central Psychiatry, 13*(132), 1-11. Retrieved from http://www.biomedcentral.com/1471-244X/13/132

Osher, F. C. (2007). Integrated mental health/substance abuse responses to justice

involved persons with co-occurring disorders. *Journal of Dual Diagnosis, 4*(1), 3-33. doi:10.1300/J374v04n01_02

Perron, B.E., Bunger, A., Bender, K., Vaughn, M.G., & Howard, M.O. (2010). Treatment guidelines for substance use disorders and serious mental illnesses: Do they address co-occurring disorders? *Substance Use & Misuse, 45,* 1262-1278. doi:10.3109/10826080903442836

Peters, R.H., Kremling, J., Bekman, N.M., & Caudy, M.S. (2012). Co-occurring disorders in treatment-based courts: Results of a national survey. *Behavioral Sciences and Law, 60,* 800-820. doi:10.1002/bsl.2024

Rapp, C.A., Etzel-Wise, D., Marty, D., Coffman, M., Carlson, L., Asher, D., Callaghan, J., & Holter, M. (2010). Barriers to evidence-based practice implementation: Results of a qualitative study. *Community Mental Health Journal, 46,* 112-118.

Rosenberg, L. (2008). Co-occurring disorders-progress? *Journal of Behavioral Health, 35*(1), 1-2. Retrieved from http://www.springer.com/gp/about-springer

Rothbard, A.B., Wald, H., Zubritsky, C., Jaquette, N., & Chhatre, S. (2009). Effectiveness of a jail-based treatment program for individuals with co-occurring disorders. *Behavioral Sciences and Law, 27,* 643-654. doi:10.1002/bsl.882

Ruglass, L.M., Hein, D.A., Hu, M.C., & Campbell, A.N.C. (2014). Associations between post-traumatic stress symptoms, stimulant use, and treatment outcomes: A secondary analysis of NIDA’s women and trauma study. *The American Journal on Addictions, 23,* 90-95. doi:10.1111/j.1521-0391.2013.12068.x

Rush, B. & Koegl, C.J. (2008). Prevalence and profile of people with co-occurring

mental and substance use disorders within a comprehensive mental health system. *Canadian Journal of Psychiatry, 53*(12), 810-821.

Sacks, S., Melnick, G., & Grella, C.E. (2008). Introduction to this issue: Studies of co-occurring disorders in the criminal justice system. *Behavioral Sciences and Law, 26,* 347-349. doi:10.1002/bsl.833

Schatzberg, A.F., Weiss, R.D., Brady, K.T., & Culpepper, L. (2008). Bridging the clinical gap: Managing patients with co-occurring mood, anxiety, and alcohol use disorder. *Primary Psychiatry, 15*(4). Retrieved from http://www.primarypsychiatry.com

Shafer, M.S., Arthur, B., & Franczak, M.J. (2004). An analysis of post-booking jail diversion programming for persons with co-occurring disorders. *Behavioral Sciences and the Law, 22,* 771-785. doi:10.1002/bsl.603

Sigrunarson, V., Grawe, R.W., & Moorken, G. (2013). Integrated treatment vs. treatment-as-usual for recent onset schizophrenia; 12 year follow-up on a randomized controlled trial. *BioMed central Psychiatry, 13*(200), 1-8. Retrieved from http://www.biomedcentral.com/147-244X/13/200

Skeem, J.L., Manchak, S., & Peterson, J.K. (2011). Correctional policy for offenders with mental illness: Creating a new paradigm for recidivism reduction. *Law and Human Behavior, 35,* 110-126. doi:10.1007/s10979-010-9223-7

Staring, A.B.P., Blaauw, E., & Mulder, C.L. (2012). The effects of assertive community treatment including integrated dual diagnosis treatment on nuisance acts and crimes in dual-diagnosis patients. *Community Mental Health Journal, 48,* 150-

152. doi:10.1007/s10597-011-9406-9

Sterling, S., Chi, F., & Hinman, A. (2011). Integrating care for people with co-occurring alcohol and other drug, medical, and mental health conditions. *Alcohol Research & Health, 23*(4), 338-349.

Sung, H.E., Belenko, S., Feng, L., & Tabachnick, C. (2004). Predicting treatment noncompliance among criminal justice-mandated clients: A theoretical and empirical exploration. *Journal of Substance Abuse Treatment, 26,* 13-26. doi:10.1016/S0740-5472(03)00144-2

Surface, D. (2008). Integrated dual disorders treatment-A new wave in recovery. *Social Worker Today, 8*(6), p.14.

Taxman, F.S., Perdoni, M.L., & Harrison, L.D. (2007). Drug treatment services for adult offenders: The state of the state. *Journal of Substance Abuse Treatment, 32,* 239-254. doi:10.1016/j.jsat.2006.12.019

The National Center for Victims of Crime (2012). The criminal justice system. *The National Center for Victims of Crimes.*

The National Institute of Drug Abuse (2012). Principles of Drug Addiction Treatment: A Research-Based Guide, 3rd ed.

Thyslstrup, B. & Johansen, K.S. (2009). Dual diagnosis and psychosocial interventions-Introduction and commentary. *Journal of Dual Diagnosis, 7*(3), 202-208. doi:10.1080/08039480802571069

Tiet, Q.Q. & Schutte, K.K. (2012). Treatment setting and outcomes of patients with co-occurring disorders. *Journal of groups in Addiction & Recovery, 7,* 53-76. doi:10.1080/1556035x.2012.632330

Torrey, W.C., Tepper, M., & Greenwold, J. (2011). Implementing integrated services for adults with co-occurring substance use disorders and psychiatric illnesses: A research review. *Journal of Dual Diagnosis, 7*(3), 150-161. doi:10.1080/15504263.2011.592769

VanderWaal, C.J., Taxman, F.S., & Gurka-Ndanyi, M.A. (2008). Reforming drug treatment services to offenders: Cross-system collaboration, integrated policies, and a seamless continuum of care model. *Journal of Social Work Practice in the Addiction, 8*(1), 127-153. doi:10.1080/15332560802112086

Weisner, C. (2001). The provision of services for alcohol problems: A community perspective for understanding access. *The Journal of Behavioral Health Services & Research, 28*(2), 130-142. Retrieved from http://www.JBHSR.com

Weisner, C., Matzger, H., & Kaskutas, L.A. (2003). How important is treatment? One-year outcomes of treated and untreated alcohol-dependent individuals. *Addiction, 98,* 901-911. Retrieved from http://Ebscopublising.com

Wilson, D.C. & Crisanti, A.S. (2009). Psychometric properties of the dual-disorder treatment fidelity scale: Inter-reliability and concurrent validity. *Community Mental Health Journal, 45,* 171-178. doi:10.1007/s10597-008-9167-2

Wood, S.R. (2011). Co-occurring psychiatric and substance dependence disorders as predictors of parolee time to rearrest. *Journal of Offender Rehabilitation, 50,* 175-190. doi:10.1080/10509674.2011.571076

Wusthoff, L.E., Waal, H., & Grawe, R.W. (2014). The effectiveness of integrated treatment in patients with substance use disorders co-occurring with anxiety

and/or depression- a group randomized trial. *BMC Psychiatry, 14*(1), 1-26.

Wyman, K. & Castle, D.J. (2006). Anxiety and substance use disorders comorbidity: Prevalence, explanatory models and treatment implications. *Journal of Dual Diagnosis, 2*(4), 93-119.

Young, M.S., Barrett, B., & Engelhardt, M.A. (2014). Six-month outcomes of integrated assertive community treatment team serving adults with complex behavioral health and housing needs. *Community Mental Health Journal, 50,* 474-479. doi:10.1007/s10597-013-9692-5

Zweben, J.E. (2000). Severly and persistently mentally ill substance abusers: Clinical and policy issues. *Journal of Psychoactive Drugs, 32*(4), 383-389. Retrieved from http://www.Ebscopublishing.com

# Appendix A: Permission to Use Data

At 1:00 PM 08/24/2015, you wrote:

Executive Director,

My name is Scott Huntington and I am a PhD student in clinical psychology at Walden University. I have a bachelor's degree in psychology and a master's degree in psychology. My background is in mental health and substance abuse treatment services. I am interested in pursuing my dissertation in the area of integrated treatment and co-occurring disorders. I have been searching for secondary data that would explore individuals with co-occurring disorders and the type of services they receive as well as any contact with criminal justice system. As this type of data has been collected by the Genesis Behavioral Services, Inc., I am inquiring if you would give me permission to use the data from Genesis Behavioral Services Data System? I appreciate your assistance in this matter and any direction you might offer. Please feel free to contact me at scott.huntington3@waldenu.edu.

Sincerely,

Scott Huntington

# Appendix B: Permission to Conduct Study

Corporate Offices
6737 West Washington Street, Suite 2210 * West Allis, WI 53214 * (414) 777-1570 * FAX: (414) 777-1565

December 1st , 2015

To: Scott Huntington

RE; PERMISSION TO USE Genesis Behavioral Services, Inc. Data System

Dear Mr. Huntington

As the Executive Director of Genesis Behavioral Services, Inc., I have reviewed your letter requesting to use Genesis Behavioral Services, Inc. Data System. I am granting the approval for the for the purpose of your research and educational endeavors. Within granting you data from Genesis Behavioral Services, Inc. Data System I understand that you will be using data from the years 2009 to 2014. In addition, I understand that the following specific information is being requested: basic information regarding the participants' age, gender, ethnicity, diagnostic impressions, type of services, and number of arrests both pre-and-post interventions from the WI-UPC. This information will be granted to you and placed in a excel spreadsheet derived from the data system that the Director of Quality Assurance will compose and provide to you. Please contact me if you need further assistance.

Pauline Ortloff, Executive Director

Genesis Behavioral Services, Inc.

(414) 777-1570, ext. 5315