2018

Differential Treatment Outcome Factors for Custodial and Noncustodial Mental Health Care Programs

Sheila Fay Waters
Walden University

Walden University

College of Social and Behavioral Sciences

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Sheila F. Waters

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Review Committee
Dr. James Castleberry, Committee Chairperson, Human Services Faculty
Dr. Nicole Hamilton, Committee Member, Human Services Faculty
Dr. Nathan Moran, University Reviewer, Human Services Faculty

Chief Academic Officer

Eric Riedel, Ph.D

Walden University

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Abstract

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by

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MA, Georgetown University, 1999

BS, Washington Adventist University, 1992

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

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Abstract

Researchers have suggested that jails and prisons in the United States are becoming the new mental health clinics, contributing to the phenomenon of mass incarceration and costing upwards of $15 billion per year in public revenue. The problem is no conclusive evidence exists that treatment in these custodial environments is more effective than that provided by noncustodial programs; especially for substance users. Additionally, the continuing incarceration of people with mental health problems by the hundreds of thousands poses a difficult ethical dilemma regarding why this population does not receive noncustodial or hospital treatment instead. The study addressed the research question of whether there is a significant difference in individual patient treatment plan completions that points to differences in the effectiveness of custodial and noncustodial mental and substance use disorder treatment programs. The study was guided by self-determination theory. Archival data reported through the Statewide Maryland Automated Tracking System comparing the number of complete and incomplete treatment plans of 1 custodial (n = 940) and 1 noncustodial (n = 534) mental health treatment program in Maryland, were analyzed using a Pearson's chi-square test of independence .The analysis showed that while custodial treatment plans were more effective, both custodial and noncustodial had high failure rates, and custodial plan success may be limited to the period within custody. This study may impact social change by informing justice policy and lawmakers about the need for continued research to provide effective interventions for substance users that transcends custodial boundaries.

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Dedication

I dedicate this milestone document to my parents, Bertha S. and Lester A. Waters, whose steadfast appreciation of and emphasis on lifelong learning has been as strong and positive an influence on me as the air I breathe, and to my six siblings, along with their progeny, who have all supported me morally and in a thousand other ways, such as excusing my absences from important family matters and taking up the slack for other duties I have been unavailable to perform. I also dedicate this work to Amanda Poppei and Hugh Taft Morales, leaders in our family religious tradition, Ethical Culture and Congregational Humanism. Their unwavering adherence to human rights and social justice continues to "kindle within [me] the warmth of compassion, the light of understanding, and the fire of commitment to build a brighter future for all," as we regularly recite in our Sunday Platform Services.

Acknowledgments

I am entirely grateful to my Dissertation Committee, especially chairman, Dr. James Castleberry, whose able guidance and kindness has been a stellar contribution to my ability to maintain intellectual stamina, push past obstacles, and remain curious about the subject of inquiry. I also must acknowledge Dr. Richard Greggory Johnson III, who has been not only like a brother to me but also my steady mentor since our student days at Georgetown University, for his confidence in my ability to pursue this most challenging path and his consistent encouragement throughout the journey. Dr. Nicole Hamilton, my methodology committee member, has provided so much valuable support and guidance. She has greatly assisted in helping me to more comfortably maneuver the details of the analysis despite my lifelong reticence to more freely embrace mathematical concepts and principles. I have been extremely fortunate that she not only is a brilliant academician but also has been a natural fit in working smoothly and pleasantly with the committee chairman and myself. My former classmate and "go-to" person, Dr. Patricia Smith, has been a superlative role model for me. As a recent Walden graduate, her swift grasp of the many student supports and the dissertation process and her generous willingness to share what she knows with me has been invaluable. I am extremely grateful for the interventions of The Honorable Jaime Raskin, United States Congress 8th District of Maryland, his Constituent Services Representatives, Jarrett T. Moore and Kathleen Connor, and The Honorable Larry Hogan, Governor, State of Maryland for their assistance in unraveling misunderstandings regarding who in my state and county have

authority to disseminate the statistical information used in this study. I am also very grateful to Iva Jean Smith at the Maryland Health Administration (MHA) for her part in facilitating written correspondence to the Walden University Institutional Review Board from the MHA Deputy Secretary attesting that the data set being provided to me did not involve human test subjects, and to Susan Bradley, who reviewed and delivered the raw secondary data to me with monumental patience and expertise. I cannot complete these acknowledgements without mentioning Amber Ivey, former statistician for the State of Maryland, who initially showed me what the data sets should look like and more recently made every effort to help me contact others who could get me closer to the information I was seeking. Dr. LaTasha Blanding has helped me considerably, going beyond her responsibilities as my supervisor at Adventist Healthcare by providing me with both moral and practical support, including suggesting Jessica Wood as a tutor to assist me with greater understanding of the latest version of SPSS. As a mathematical wizard (by my standards, at least), Ms. Wood helped me become more adept at applying the numerical data to the program.

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Chapter 1: Introduction to the Study

Introduction

As the number of inmates with mental illness continues to increase (Angell, Matthews, Barrenger, Watson, & Draine, 2014; Buckmon, 2015; Epperson et al., 2014; Lurigio, Epperson, Canada, & Babchuk, 2012), care of incarcerated offenders has become more complicated because jails and prisons are not generally equipped to provide adequate mental health treatment (Bewley & Morgan, 2011). Dafoe and Stermac (2013) and Hean et al. (2015) suggested that incarceration is inconsistent with the aims of best practices in mental health treatment or recovery-oriented approaches. According to the World Health Organization (WHO; 1996), Mental Health America (MHA; 2015), and the American Bar Association (Teplin, 1990), best practices call for mental health treatment in the least restrictive environments. Unlike community-based treatment programs, however, jails and prisons constitute one of the most restrictive environments in society.

The purpose of this study was to determine whether treatment of mental health and substance use disorders in custodial settings can be as effective as that provided in noncustodial settings. To accomplish this purpose, I compared outcomes of custodial and noncustodial treatment programs, which allowed me to determine which programs are most effective. I used the meaning of effectiveness defined by Clark, Hendricks, Brown, and Cropsey (2014), who posited that treatment completion means the same as treatment effectiveness.

Determining what, if any, differences exist between custodial and noncustodial treatment outcomes have the potential to drive positive social change. For example, stakeholders such as lawmakers, medical and mental health professionals, and the public could use study results to inform any needed changes in approaches to mental health treatment. These changes could include reevaluating current policy, making changes to ensure the most effective care for offenders with mental illness, optimizing public resources, and maximizing public safety. Such changes could give offenders with mental illness greater opportunities to avoid substance abuse relapse, mental decompensation, and criminal recidivism (Hyde, 2012).

Background

Jails and prisons have become the new mental health clinics (Morgan et al., 2012). Many custodial environments have incorporated mental health and substance use treatment with special programs and special units to serve the growing population of inmates with mental illness (Travis, Western, & Redburn, 2014). Interventions specifically designed to treat offenders with mental illness have been shown to improve behavioral functioning and reduce both psychiatric and criminal recidivism (Morgan et al., 2012). However, mental and substance use disorder treatment in jails and prisons remains inadequate (Galanek, 2013). Specifically, administrators of jails and prisons have had difficulty in transforming custodial environments into facilities that make the treatment of mental and substance use disorders (MSUD) as high a priority as the security concerns for which those environments were initially designed (Brandt, 2012; Galanek, 2013).

John F. Kennedy's 1963 Community Mental Health Act was passed to address the huge volume of persons with mental illness who had been released en masse from state mental hospitals across the United States; however, the program's community mental health centers failed to provide sustained mental health treatment for this population (Jaffe, 2014). As a result, persons with mental illness continue to end up in jails and prisons, alongside the masses of persons involved with drugs (Lynch, 2011). Persons with mental illness most often become involved with the criminal justice system mainly for committing misdemeanors, or so-called "homeless crimes," such as public urination, vagrancy, and shoplifting (Treatment Advocacy Center, 2009) Custodial environments have not been able to provide mentally ill offenders with adequate, consistent care (Bewley & Morgan, 2011; Hean et al., 2015). My exhaustive search of the literature indicated that no published comparisons of the effectiveness of custodial and noncustodial mental and substance abuse disorder treatment programs exist.

Problem Statement

Discrepancies exist between the criminal justice model and the medical model of managing offenders with mental illness (Dafoe & Stermac, 2013). The criminal justice model, or the trend of incarcerating offenders with mental illness, has raised practical and moral concerns. This is so because of (a) its contribution to the phenomenon of mass incarceration (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014); (b) the ethical issues surrounding offenders' fair and humane treatment as patients (Barrenger & Canada, 2014); (c) the high cost of incarcerating mentally ill offenders

compared to treating them in noncustodial environments (Heilbrun et al., 2012; Treatment Advocacy Center, 2009); and (d) the effectiveness of treatment provided in custodial settings (Jaffe, 2014; Lynch, 2011; Murphy, 2014; Page, Petrovich, & Kang, 2012).

The medical model provides wrap-around services in noncustodial settings with community supports and can include intensive mental health treatment in hospitals, clinics, or private practitioners' offices; access to housing; job readiness training; and vocational support services (Epperson, et al., 2014). Some studies have found that the medical model does not necessarily address mentally ill offenders' criminogenic needs and does not address findings that show that offenders' criminal behavior is only weakly related to their mental illnesses (Peterson, Skeem, Kennealy, Bray, & Zvonkovic, 2014). Further, offenders with serious mental illness (SMI) have been found to have the same criminogenic needs as offenders without SMI (Epperson et al., 2014). However, adopting the medical model across the board could still be less costly and more consistent with the framework of self-determination theory (SDT) and could lift the heavy responsibility of adjudicating offenses by persons with mental illnesses from the criminal justice system.

The specific problem I took up in this study was that the most effective approach for addressing the needs of offenders with mental health issues—mental health treatment delivered in custodial environments or mental health treatment delivered in noncustodial environments—remains unknown. My use of a quantitative approach to investigate this problem can greatly benefit a variety of stakeholders because the study results may help

inform decisions regarding maintaining the use of jails and prisons as the new mental health clinics or establishing noncustodial treatment delivery for this population.

Purpose of the Study

The purpose of the study was to compare several years of treatment outcomes from two mental health treatment programs operated by Montgomery County in Maryland: a custodial mental health treatment program called Jail Addiction Services (JAS) and a noncustodial mental health treatment program called Outpatient Addiction Services (OAS). Both programs provide treatment to patients with substance use disorders; however, most patients also have co-occurring disorders such as schizophrenia, major depressive disorder, bipolar disorder, schizoaffective disorder, anxiety disorder, etc. I applied a statistical method that accurately calculated the program with the greatest success rate. I defined program success as high numbers of completed individual treatment plans and low numbers of incomplete treatment plans. I defined program failure as high numbers of incomplete individual treatment plans and low numbers of completed individual treatment plans. The two programs formed the independent variable, and the dependent variable was defined as the effectiveness of the two programs, as measured by success or failure.

Through this study, I helped to fill the gap in the literature regarding comparisons between custodial and noncustodial mental health treatment programs. Further, the study results provided empirical evidence regarding whether custodial environments are adequate for rehabilitating offenders with mental illness. While in the study I found that custodial environments have positive treatment outcomes, changes to these environments might still

be required. For example, greater resources could be allocated to constructing more custodial treatment programs and to rectifying the lack of effective training and collaboration between criminal justice and mental health professionals (Hean et al., 2015). The findings of the study may also help to justify the United States' annual $15 billion expenditure on housing inmates diagnosed with a mental disorder.

Research Question and Hypotheses

The following research question and hypotheses guided the study:

RQ: Is there a significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs?

H_0: There is no significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs.

H_A: There is a significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs.

I measured the dependent variable through a chi-square test of independence to compare the statistical outcomes between the independent variables, which were the two, dichotomous programs under study, measured at the nominal level. The dependent variable was also dichotomous because it had only the two possible outcomes—success or failure—which was measured at the nominal level. Conducting this test helped me determine

successful and unsuccessful program completion over a 3-year period for patients in the custodial and noncustodial programs. I regarded the successful completion of individual treatment plan objectives as the common criterion for successful program completion for both programs.

Theoretical Foundation for the Study

Self-determination theory, as defined by Deci and Ryan (1987; 2000), Ryan and Deci (2000), and Vallerand (2000), formed the theoretical framework for this study in conjunction with the conceptual framework of recovery-oriented practices (Gilburt, Slade, Bird, Oduola, & Craig, 2013; Mancini, 2008). I used self-determination theory as a basis for explaining how society's most restrictive environments have contributed to reducing the quality of treatment provided to persons with mental health disorders. Self-determination theory (Deci & Ryan, 1987) posits that human beings must have their basic needs fulfilled to thrive and achieve growth. These needs include autonomy, feelings of competence, and relatedness to others (Deci & Ryan, 1987).

Mental health recovery largely depends on whether the treatment setting supports or obstructs the fulfillment of these fundamental needs (Deci & Ryan, 1987). Recovery-oriented practices are predicated on the basic needs outlined in self-determination theory (Mancini, 2008). Instilling a sense of autonomy is the most important among these needs, preserving the ability of persons with mental illness to select desired behaviors and choices and to offset systematic, commonly accepted assaults on their autonomy (Mancini, 2008).

Instilling a sense of autonomy, feelings of competence, and relatedness to others among mentally ill offenders will likely require a significant paradigm shift in mental health treatment programs in custodial settings. These programs will have to be designed to support a recovery-based system of care, rather than their typical primary emphasis on punishment, rigid control, and containment of inmates (Brandt, 2012; Galanek, 2013).. A recovery-based system of care would instead foster mindsets, attitudes, and behaviors that are more easily transferrable to the larger, noncustodial society.

Nature of the Study

I chose to use the chi-square test of independence because it can easily measure both the independent variable (custodial and noncustodial treatment programs) and the dependent variable (completion rates of the two programs). It does so at the nominal level because both variables are categorical and dichotomous. The chi-square test of independence allowed for this dichotomous dependent variable because it has only two possible outcomes—program success or failure—measured at the nominal level.

I selected the programs based on the similarity of their target populations, their similar use of state-of-the-art treatment strategies such as trauma-informed or cognitive behavior therapy, their collaboration with the Montgomery County Maryland Department of Health and Human Services, and their use of graduate-level therapists and support staff. I attempted to obtain secondary data from the StateStat analyst at the Maryland Office of the Governor and from information provided by the Montgomery County, Maryland Executive Office (CountyStat, 2016); however, those efforts failed (as I will discuss in Chapter 5).

Statistical data on both programs included the number of discharges in a 3-year period for a sample population composed of nearly 1,500 patients at least 18 years of age. I regarded successful completion of individual treatment plan objectives as the common criterion for successful program completion for both programs. I regarded leaving before program completion, noncompliance with program rules, incarceration, death, and health problems as common criteria for unsuccessful program completion. I did not examine program participation for children and adolescents.

Definitions

Co-occurring disorders: The coexistence of a mental health and a substance use disorder (SAMHSA, 2016).

Custodial treatment: Initially custodial treatment meant involuntary commitment to mental health institutions, community mental health centers, and work-release prison programs**.** However, when policymakers replaced involuntary confinement in mental health institutions with imprisonment, custodial treatment came to mean a jail- or prison-based mental health protocol or program (Parsons, 2014).

The Health Insurance Portability and Accountability Act of 1996 (HIPAA): The law that requires protection and confidential handling of protected health information for entities, including government programs, that pay for health care, such as Medicare, Medicaid, and the military and veterans' health care programs (U.S. Department of Health and Human Services, 2016).

Mental and substance use disorders: Disorders including, but not limited to, generalized anxiety disorder, major depressive disorder, schizophrenia spectrum disorders, psychotic disorders, attention deficit or hyperactivity disorder, bipolar disorder, other mood disorders, alcohol use disorder, cannabis use disorder, phencyclidine use disorder, opioid use disorder, stimulant use disorder, tobacco use disorder, and other co-occurring substance use disorders (SAMHSA, 2016).

Mental illness: A diagnosable mental, behavioral, or emotional disorder that causes serious functional impairment that substantially interferes with or limits one or more major life activities (SAMHSA, 2016).

Recovery: A self-defined, nonlinear effort of persons with mental or substance use disorders to reclaim social roles and human rights beyond the mere amelioration of symptoms (Mancini, 2008).

Self-determination: "An inherent tendency [of individuals] to fulfill basic human needs that are fundamental to motivation and well-being" (Mancini, 2008, p. 359).

Study Assumptions

Some key assumptions underlay this study that I could not demonstrate were critical to the meaningfulness of the study. I assumed that the theoretical framework of self-determination theory and the conceptual framework of recovery-oriented practices would support an overall understanding of the research study (even though a comprehensive theory of recovery had not yet been formalized). This assumption was critical for defining essential differences between custodial and noncustodial treatment settings. In Chapter 3, I will

delineate those differences in the discussion of self-determination theory and recovery-oriented practices.

Another assumption I held but could not demonstrate to be true was that the custodial and noncustodial organizations from which I collected data would have an expectation for successful patient recovery from mental and substance use disorders. I held this assumption even though the traditional role of custodial environments is containment, control, and punishment of inmates. That paradigm runs contrary to the elements identified in self-determination theory that I will discuss in more detail in Chapter 3.

I also assumed that the raw data obtained would be accurate and that years of program admission would be consistent with years of discharge for each program category. This could not be demonstrated, however; because of HIPAA regulations, the data did not provide any patient-identifying information. Thus, I had no sure way to prove when individuals admitted in a given year were actually discharged. A final assumption was that any potential generalizability would be toward similar adult custodial and noncustodial populations at the local or county level across the developed world in which trends in mental health and criminal justice policies are similar.

Scope and Delimitations

In the research problem, I broadly identified mental illness to include substance use disorders and co-occurring mental and substance use disorders. Up to 82% of incarcerated persons in the United States meet the criteria for mental health or substance use disorders, and a significant percentage of these meet the criteria for having both (Hyde, 2011). The

same can be said for patients being treated in noncustodial mental health treatment programs; in these programs, an estimated 20% of adult Americans aged 18 years and older experienced some form of mental illness, almost 10% had a substance use disorder, and most of these individuals had co-occurring mental disorder and substance use disorder (SAMHSA, 2014). Further, anxiety disorders and depressive disorders are the most common types of mental illness and frequently occur among persons with substance use disorders (SAMHSA, 2014).

The study encompassed only adults aged 18 years and older and excluded juveniles due to their vastly different developmental stages and needs. The prevalence rates and types of mental disorders differ according to demographic status, including gender, race, and ethnicity, and age (American Psychiatric Association [APA], 2013). Further, the frameworks of self-determination theory and recovery oriented-systems of care most related to the area of study were neither developed nor investigated with juveniles in mind.

Limitations

The two limitations of this study I identified were (a) the use of only secondary data and (b) the presumably small sample size for a quantitative study consisting of 3 years of admissions for two small- to medium-sized programs. These might have been design weaknesses related to construct validity, but I addressed these through reasonable measures. I addressed the issue of using only secondary data by examining the method(s) used for compiling the census data (complete and incomplete patient treatment plans). I determined what kind of reporting systems were used and what, if any, errors in the reporting were

encountered. To my knowledge, direct service staff was responsible for reporting patient information through the Statewide Maryland Automated Tracking System (SMART) based on patient interviews upon program admission. Additionally, no errors in reporting were encountered.

Addressing the relatively small sample size would have involved constructing a statistical analysis that projected backward, multiplying the sample by the number of years that each program had been in existence. However, it became unnecessary to do so because total discharges in the 3-year period for each program ultimately allowed me to determine which program had the highest success rate and possible study generalizability to similar populations. I addressed other biases through the analysis of nominal data and success based only on treatment plan completion.

Significance

The statistical comparison of treatment rates between custodial and noncustodial mental health treatment programs suggested that prisoners could be effectively treated for mental and substance use disorders in the most restrictive environments; in addition, I could not confirm that noncustodial treatment venues are the most effective for treating persons with these disorders or that both settings are equally effective in promoting patient recovery. However, it will be important to conduct further studies in multiple jurisdictions to determine the generalizability or exceptionality of this study. Findings from this type of inquiry performed across multiple settings could help inform criminal justice and mental health policy and practice. For example, legislators may be better able to support ongoing

efforts to create mental health courts and custodial clinics if success rates for treatment in most custodial settings are known to be higher than those in noncustodial settings. Conversely, had evidence consistently demonstrated that noncustodial treatment programs have greater success rates; these findings could have supported the amendment of policies to eliminate the involvement of the criminal justice system in mental and substance use disorder treatment, treating those disorders as a public health issue only.

Significance for Theory

The results of this study also add to knowledge in the area of self-determination theory and, by extension, provide support (albeit, ambiguous) for emerging recovery frameworks by both refuting and corroborating the essential tenet of self-determination theory that human beings must fulfill their basic needs of a sense of autonomy, feelings of competence, and relatedness to others to thrive and grow. A sense of autonomy forms the foundation for self-motivating actions; thus, instilling a sense of autonomy is regarded as the most essential aspect for recovery-oriented practice (Vallerand, 2000). Mental health recovery largely depends on whether the environment of the treatment setting supports or obstructs fulfilling these fundamental needs unless evidence refutes this tenet. In this study, custodial treatment providers appeared to have accommodated the autonomy, feelings of competence, and relatedness to others among incarcerated patients to promote desired outcomes; the evidence demonstrates that the custodial treatment program studied is more successful than the noncustodial treatment program.

Significance for Practice

Evidence from this study suggests that noncustodial treatment program outcomes are significantly more successful in terms of completion rates. However, policymakers may still have to drive different kinds of advances in practice once the study has been replicated in other jurisdictions. These advances would promote greater cost effectiveness by decreasing mass incarceration rates, lightening court dockets by adjudicating fewer cases of offenders who are mentally ill, and eliminating any requirement for corrections personnel to be retrained as mental health professionals. Possible practice advances would promote sufficient levels of patient recovery from mental decompensation, drug relapse, and criminal behavior and broaden treatment opportunities in less restrictive environments. These could include placements for all patients into outpatient clinics and inpatient hospitals especially ones that include long-term, high-security treatment for individuals deemed chronically dangerous to themselves or others; incorporate and standardize cutting-edge treatment modalities such as cognitive behavioral therapy; fulfill the aims of best practices in mental health treatment and recovery-oriented approaches; and greatly increase public safety.

Significance for Social Change

The findings of this study could drive changes in mental health care policies, leading to vast improvements in the welfare of individuals, families, and communities. Study findings indicated that treatment in the custodial setting was more successful than noncustodial treatment, suggesting that incarcerated persons with mental and substance use disorders might be able to receive effective treatment in other such restrictive environments.

New policies to dictate standards that deemphasize or eliminate punishment in favor of a focus on recovery could be adopted. Updated policies could protect mentally ill individuals as patients using a medical model rather than a model that emphasizes the kind of rigid control and uniformity that has typified incarceration.

On the other hand, these individuals might be able to live with their families, work full- or part-time, and be contributing members of society if evidence from multiple studies demonstrates that noncustodial treatment programs have significantly higher completion rates than custodial treatment programs. A treatment paradigm that removes criminogenic factors and addresses common barriers to wellness such as homelessness, insufficient medical insurance, difficulty accessing essential psychotropic and addiction medication, and limited educational and vocational opportunities would have far-reaching implications for positive social change. This paradigm could be more easily advocated once further studies across multiple jurisdictions have revealed which type of mental health program, custodial or noncustodial, shows higher completion rates.

Summary

The growing number of persons with mental illness entering jails and prisons has had a range of negative impacts, including (a) costly massive incarceration rates that have decimated families and communities; (b) confounded corrections systems meant for rigid control of criminals, not medical treatment of mental patients; and (c) clogged-up courts and supervision systems that have little to no biopsychosocial grounding (Bewley & Morgan, 2011). Custodial environments generally have not been equipped to properly handle mental

illness, which may be more of a public health problem than a criminal justice problem (Hunt, 2015). Too often, individuals with mental illness face mistreatment during arrest and detention because police and corrections personnel have not been trained to deal with them as patients (Murphy, 2014). Specialized treatment is needed for individuals with mental illness who wind up in custodial environments.

The self-determination theory suggests that these environments may not instill autonomy, feelings of competence, and relatedness to others, which make up the basic needs required for individuals to thrive and achieve growth (Deci & Ryan, 2000). However, to date, no studies exist regarding whether there are significant differences between mental health treatment in custodial and noncustodial environments. Evidence regarding which programs are effective could have far-reaching significance for mental health treatment theory and practice and positive social change. This evidence could play an important role in improving societal conditions, including optimization of public resources; in emphasizing a focus on the inherent worth and dignity of individuals, families, and cultures; and in furthering the development of communities, agencies, and institutions.

In Chapter 2, I will review the literature on mental health treatment success and failure in custodial and noncustodial settings. I will also present specifics on the theoretical framework. In Chapter 3, I will explain the research design and methodology and the threats to validity. I will provide the study results in Chapter 4 and analysis and recommendations for future research in Chapter 5.

Chapter 2: Literature Review

Introduction

In this chapter, I will provide a synopsis of nascent literature on the differences between mental health treatment programs in custodial and noncustodial settings. Numerous human services researchers have documented discrepancies between the criminal justice and the medical models of managing offenders with mental and substance use disorders. They have reported that the cost of treatment in custodial environments is prohibitive, that a criminal justice response to persons with mental illness is ethically unsound, and that the detention of mentally ill individuals in jails and prisons contributes significantly to the phenomenon of mass incarceration (SAMHSA, 2014; Lynch, 2011). In this study, I calculated numerical outcomes of one custodial and one noncustodial mental health treatment program to determine which was most effective based on the success or failure of their combined patients over a 3-year period. I found that the body of literature suggesting that mental health treatment in custodial environments is feasible has caught up with the original body of literature initiated by Teplin (1990), which suggested that treatment outcomes for incarcerated offenders with mental and substance use disorders would be insufficient.

Literature Search Strategy

I conducted an Internet search for this study on the following topics: advocacy, behavioral health and criminal justice, co-occurring disorders, criminal justice, criminogenic needs, health care reform, homelessness, incarceration, mass incarceration, mental and

substance use disorders, mental health history, mental health legislation, mental health treatment, public policy, recovery-oriented systems of care, self-determination theory, state mental hospitals, and substance abuse and mental health. I used the following research databases: EBSCOhost, ERIC (Educational Resource Information Center, Psychology), ProQuest Dissertations, SAGE Full Text, Criminal Justice Periodicals, PsycINFO, SocINDEX, Google Scholar, Theses Full Text Database, and PsychARTICLES peer-reviewed journals publication. I also used the fifth edition of the *Diagnostic and Statistical Manual of the American Psychiatric Association* (*DSM-5)* (APA, 2013); information from the U.S. Department of Health and Human Services; and conducted a thorough search of SAMHSA, Mental Health America, National Alliance on Mental Illness, and Treatment Advocacy Center reports and publications for this literature review. I used the following keywords to obtain peer-reviewed articles related to this study: *incarceration, mental illness, mental health, substance use disorder, recovery, prison, jail, criminal justice, addiction, justice, education,* and *homelessness*.

Theoretical Foundation

According to theorists Deci and Ryan (2000), SDT relates to most contemporary theories of motivation, which posit that people consistently express behaviors that lead to desired outcomes. SDT explains the way in which satisfaction of the basic human needs (i.e., autonomy, integrity, and relatedness to others) fosters psychological growth, integrity, and wellbeing (Deci & Ryan, 2000). Further, in their seminal work, Deci and Ryan (1987) discussed the regulation of intentional behavior. The work was based on a review of

literature representing empirically validated theories of human need fulfillment (Mancini, 2008) that distinguished between two types of intentional behavior: intrinsic motivation and extrinsic motivation. Intrinsic motivation by individuals results from autonomy, while extrinsic motivation is based on top-down control of individuals (Deci & Ryan, 1987). Deci and Ryan (1987) stated:

> Regulation of intentional behavior spans a continuum between autonomy support and behavioral control. Autonomy support is more closely associated with more intrinsic motivation, greater interest, less pressure and tension, more creativity, more cognitive flexibility, better conceptual learning, a more positive emotional tone, higher self-esteem, more trust, greater persistence of behavior change, and better physical and psychological health than [is behavioral] control. (p. 1024)

Previously, researchers have applied SDT in ways similar to my application of the theory in this study. For example, Raeburn, Schmied, Hungerford, and Cleary (2015) examined how the philosophical background of SDT informs research associated with psychosocial rehabilitation and recovery-oriented practices, such as the clubhouse model. They argued that SDT has promoted a dynamic social constructionist theoretical framework for global, patient-centered practice. Using multivariable Cox regression and logistic regression analyses using the SDT framework, Wild, Yuan, Rush, and Urbanoski (2016) also demonstrated that patients with court orders to attend substance abuse treatment who were externally motivated had a higher dropout rate than those who were internally motivated. Equally salient was the study conducted by Urbanoski and Wild (2012), who

found SDT to be useful as a lens for examining the Treatment Entry Questionnaire that measures clients' identified, introjected, and external motivation for long-term behavioral change during substance abuse treatment.

I determined that SDT was the most appropriate framework through which to answer the research question for this study because SDT allowed for a detailed exploration into important differences between the custodial and noncustodial mental health care programs under study. For example, the recovery paradigm is based in large part on SDT (Ryan & Deci, 2000). A recovery-oriented system of care is the preferred approach for treatment of mental health and substance use disorders (SAMHSA, 2010). Advocacy groups and government entities in nearly every nation that has a modern mental health system have adopted recovery principles as a goal for treatment (Mancini, 2008). Using a mixed-methods, quasi-experimental study, which included a training package consisting of quality of life modules for linking theory to practice, Gilburt et al. (2013) found that training diverse behavioral health practitioners in recovery practice formed one way in which to promote recovery-oriented mental health care. My primary rationale for choosing SDT was that this framework best underscores the recovery model of care through its analysis of human motivation to act with intention.

The research question that guided this study was: Is there a significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs? This question relates to SDT because persons with mental illness who are involved in the

criminal justice system are frequently coerced into mental health and substance abuse treatment. This kind of coercion suggests that many such people are externally motivated to complete treatment plan goals, and therefore, are in danger of dropping out of treatment or relapsing following discharge (see Goodale, Callahan, and Steadman, 2013; Lurigio, et al., 2012; Murphy, 2014).

Literature Review

Numerous researchers, such as Babchuk, Lurigio, Canada, and Epperson (2012); Barrenger and Canada (2014); Barrenger and Drain (2013); Brandt (2012); and Canada, Angell, and Watson (2012), demonstrated the viability of mental health and substance abuse treatment in both custodial and noncustodial settings. However, none have determined which of those environments offers the best outcomes for completion rates. This may partially be due to a lack of uniformity in policies and procedures and to randomness in implementing interventions across various jurisdictions.

Custodial Interventions

Angell et al. (2014) showed that custodial interventions for offenders with mental and substance use disorders include screening upon admission to jail or prison. They also include referral for further assessment by a mental health specialist; admission to a therapeutic community (TC); and coordinated reentry services. Reentry services include not just mental and substance use treatment but also linkages to social service entitlements, housing, and employment, critical time interventions (CTI), and peer support.

Screening upon admission to jail or prison. Cropsey, Binswanger, Clark, and Taxman (2012) reported that constitutional law mandates health care for incarcerated people. However, persons with mental illness who wind up in jail only sometimes receive a mental evaluation to determine if they need specialized services. According to Barrenger and Canada (2014), this process is hit or miss in most jurisdictions; a person's mental illness is often not discovered until after they are already in court and they, or an advocate, report it to their attorney or the judge.

Ogloff, Davis, Rivers, and Ross (as cited in Barrenger & Canada, 2014) reported that the mental illness of arrestees is frequently not addressed because screening for mental health issues is not a routine practice in the United States. This corroborates Teplin's (1990) seminal research, which found that many U.S. jails do not routinely conduct mental health evaluations despite court mandates to do so. According to Beach et al. (2013), persons with severe mental illness are more frequently jailed than hospitalized. However, Heilbrun et al. (2012) suggested that the sequential intercept model of community-based alternatives to usual prosecution that leads persons with mental illness to incarceration includes forensic evaluations and forensic hospitalization.

For that majority of offenders with mental illness who are sent to jail or prison, screening upon admission remains haphazard. Barrenger and Canada (2014) reported that the primary reason that mental health screening and care is difficult in jails is that sentences are generally short (no more than 2 years), fluid, and unpredictable. It is also possible that persons with mental illness who are to be incarcerated avoid screening and treatment if they

are already aware of the disparate treatment between inmates with and without mental health diagnoses. Barrenger and Canada (2014) reported that inmates with mental illness are subjected to higher levels of victimization than inmates without mental illness. This victimization includes both physical and sexual assault, isolation due to administrative segregation and solitary confinement, and longer periods of incarceration (Barrenger & Canada, 2014). Inmates with mental illness experience greater disruption to their lives than inmates without mental illness, especially when disability benefits are discontinued rather than temporarily suspended (Barrenger & Canada, 2014).

Referral for further assessment by a mental health specialist. According to Policy Research Associates (2012), clinicians at Manhattan's Center for Alternative Sentencing and Employment Services provide a 75-minute standardized court screening to misdemeanor offenders with mental or co-occurring substance use disorders. The screening occurs just before the case is adjudicated to determine the individual's eligibility for the Transitional Case Management Program. The program provides immediate orientation for the majority of individuals referred and flexible, same-day services for short- or long-term needs in the community setting of the participant's choice (Wolff et al., 2012).

Admission to a therapeutic community (TC). Sacks, Chaple, Sacks, McKendrick, and Cleland (2012) described the TC as a highly structured, holistic, self-help model of residential substance abuse treatment created in the 1960s. The TC emerged in the United States as a peer-driven community that stressed work, personal responsibility, and self-reliance, with members of the peer community acting as role models and guides (Sacks et al.

2012). Barrenger and Canada (2014) described the modified therapeutic community (MTC) as an intervention designed for those persons with mental illness already serving time in prison. Sacks et al. (2012) found that both the traditional, community-based TC and MTC models have a proven high rate of success for reducing drug use and criminal behavior. These models encompass a gradual process for helping peers to develop independent living skills and prosocial values that greatly minimize recidivism into high-risk behavior (Sacks et al. 2012).

Coordinated reentry services. Barrenger and Canada (2012) found that leaving jail or prison could be a dangerous event for anyone, regardless of mental health condition. Binswanger et al. (as cited in Angell et al. 2014) reported that in the weeks following release, a person is at high risk of dying from heart failure, drug abuse, murder, or suicide. Further, incarceration can fracture family ties and create hardships in finding employment; housing; healthcare; educational opportunities; and government entitlements, such as Social Security and Medicaid (Angell et al. 2014). These hardships in turn make it difficult or impossible to exercise prosocial behavior, and newly released prisoners often find themselves with continuing criminal justice entanglements (Angell et al. 2014). Inmates with mental illness are at much higher risk for involvement with the criminal justice system following release from jails and prisons (Angell et al. 2014). Research has started to focus on interventions to prevent these mishaps. For example, in a study of two model programs, CTI and Forensic Assertive Community Treatment (FACT), Angell et al. (2014) found that the best way to

prevent prisoners' pattern of reincarceration is to intervene just before their reentry into the community.

Connecting mentally ill inmates with interdisciplinary teams that can assist them with long-term wrap-around services through FACT and short-term services through CTI can help prevent recidivism following release (Angell et al. 2014). However, the findings of Osher, Steadman, and Barr (as cited by Sacks et al., 2012), indicated that these types of case management discharge planning initiatives are "…infrequently available in criminal justice settings" (p. 248). The results of more recent research have indicated that availability has not improved.

Noncustodial Interventions

Barrenger and Canada (2014) examined the most common interventions along the criminal justice continuum and reported that noncustodial, community-based interventions for offenders with mental and substance use disorders who have misdemeanors and non-violent and substance use charges include jail and prison diversion programs. Barrenger and Canada reported that noncustodial, community-based interventions include crisis intervention teams (CITs), specialized probation and parole, mental health courts (MHCs), specialized FACT, case management services, supportive housing programs, intensive outpatient programs (IOPs), and pre- or post-booking diversion practices.

Crisis intervention teams. Barrenger and Canada (2014) described CITs as police-based, prebooking interventions designed to help eligible persons with mental illness avoid arrest. In their recent study on the results of CIT interventions, Canada et al. (2012)

reported that CIT intervention has gained wide acceptance because it is a safer, more respectful method of police interaction with persons with mental illness. The model came into prominence as a way of minimizing the violence that often occurred between police and persons with mental illness (Morabito, Kerr, Watson, Drain, & Angell, 2012). CIT officers are regular police officers who have specialized mental health training to identify and intervene in situations involving persons with mental illness who are in crisis. Use of a CIT provides an effective, respectful, and safe prebooking intervention process that diverts some persons with mental illness to appropriate mental health treatment; however, the program is not yet a routine practice in the United States (Barrenger & Canada, 2014).

Specialized probation and parole. Manchak, Skeem, Kenneally, and Louden (2014) explained that specialized probation and parole include small, special caseloads made up of only persons with mental illness, officers trained in elements of mental illness and case management, collaborative relationships with various service providers for effective access to resources, and management of clients in a way that ensures compliance with mandates for engagement in treatment. Lurigio et al. (2012) reported that specialized probation usually requires mental health treatment compliance as a condition of probation. It also requires successful treatment completion as a requirement for satisfactory completion of probation.

Mental health courts (MHCs). According to Goodale, Callahan, and Steadman (2013), there are now 400 mental health courts in the nation. The creation of MHCs was based on the criminalization hypothesis to provide another prebooking diversion program;

this program allows judges, social workers, probation officers, and mental health treatment professionals join together to set treatment goals and monitor the progress of offenders with mental illness to divert them from incarceration. MHCs also act as postbooking diversion programs. However, Barrenger and Canada (2014) noted that there is significant agreement that MHC does not in fact divert persons with mental illness from the criminal justice system because they are still under court supervision; in addition, only about 10%-12% of persons with mental illness are diverted to MHCs.

Specialized forensic assertive community treatment (FACT). According to Barrenger and Canada (2014), FACT provides an array of wrap-around services to offenders with mental illness who are on parole or probation. Under the FACT treatment, a group of mental health professionals, composed of a social worker, psychiatric nurse, and a caseworker, intervene with intensive, coordinated, integrated, and comprehensive care. This care helps to prevent the involvement of the criminal justice system in a situation involving a person with mental illness who is under supervision by parole or probation departments and who is experiencing a mental health crisis.

Case management services. Case management services can be noncustodial alternatives for persons with serious mental illness (DeMatteo et al., 2013). One of the most well-known case management services is assertive community treatment. Since the 1970s, this design has provided comprehensive services to persons with severe mental illness demonstrating functional impairments, as evidenced by a high propensity for revolving-door

hospitalizations, homelessness, substance use disorders, and comorbid medical conditions (Beach et al., 2013).

Supportive housing programs. Watson and Rollins (2015) described the Housing First model designed for persons with co-occurring disorders as a non-linear, abstinence-resistant, personal recovery-oriented paradigm that was compatible with patients and program staff because of its departure from the traditional conceptions of recovery generally found in the substance abuse field. Many housing, employment, and mental health programs have not been willing to serve individuals with co-occurring disorders unless they first have a specified period of sobriety. Programs like Housing First are changing this programmatic dissonance, allowing providers to use a more holistic approach to treatment and recovery; this is an approach that is used for the treatment of both disorders simultaneously and for the recognition that eliminating social disadvantages like unemployment and homelessness are just as important as addressing mental and substance use disorders. The Housing First model has resulted in such positive outcomes as fewer hospitalizations, greater patient engagement with mental health providers, decreased substance use, and reduced criminal activity (Watson & Rollins, 2015).

Intensive outpatient programs (IOPs). IOPs have been a successful method for facilitating recovery for co-occurring patients under community corrections monitoring. Clark et al. (2014) studied several hundred participants with anxiety and non-opioid substance use disorders in an outpatient clinic. The authors found that while punishment is

ineffective for reducing substance abuse for this population, treatment for substance use disorders have better outcomes.

Prebooking diversion practices. Common prebooking diversion practices include most of the aforementioned noncustodial interventions, such as CITs, specialized MHCs, FACT, case management services, supportive housing programs, and mandated intensive outpatient programs. All of the custodial and noncustodial interventions discussed (except for coordinated reentry services) are first-generation initiatives designed to engage and retain mentally ill offenders in treatment programs. Angell et al. (2015) determined that despite the recent proliferation of these first-generation interventions, outcomes have suggested only moderate levels of success.

Likewise, Wolff et al. (2013) found that these interventions have not significantly reduced the involvement of mentally ill offenders with the criminal justice system because this population's problems are multifaceted. In a study of specialized mental health caseloads, Wolff et al. (2014) also recommended that additional research be conducted to explore the relationships between psychiatric symptoms, treatment compliance and probation supervision, and recidivism. DeMatteo et al. (2013) agreed, finding that research on community-based interventions for offenders with mental illness has lacked uniformity, even though many interventions have received considerable empirical support. Further, there exists no uniform policy to assure that the majority of persons with mental illness who come to the attention of criminal justice systems are able to avoid incarceration and re-incarceration. However, evidence suggests that persons with mental illness receiving

assessment, treatment, and coordinated reentry services in custodial environments appear more successful in completing treatment programs than those who only receive mental and substance use treatment in noncustodial settings (Angell et al., 2015).

Studies Related to the Key Independent and Dependent Variables

Researchers have consistently agreed that mental health and substance use disorders must be treated concurrently to maximize significant reductions in substance abuse relapse and psychiatric and criminal recidivism, especially for populations already involved in the criminal justice system (Barrenger & Canada, 2014). Much debate in recent years has culminated in efforts to minimize the incarceration of and to maximize the treatment opportunities for persons with mental and substance use disorders (Hyde, 2012). In their study of data from the Arrestee Drug Abuse Monitoring II program from 2007 through 2010, Hunt, Peters, and Kremling (2015) found that the behavioral health treatment histories of offenders with mental and co-occurring disorders pointed to very poor utilization of treatment services and a need for greater expansion of these services into all correctional settings, including jails, prisons, and the noncustodial community.

Seeking to identify predictors of successful outpatient substance abuse treatment for persons involved in the criminal justice system, Clark et al. (2014) conducted a study of 615 persons under community corrections supervision. Persons in the sample were undergoing mandatory substance abuse treatment in an outpatient program. Using multivariate logistic regression analysis, the authors found that treatment success was associated with age (older), race (White), education level (beyond high school), existence of an anxiety disorder

that included a history of suicidal ideation, and alcohol use but no opiate or cocaine use. Treatment was individualized, separated by gender, and based on a 12-Step Group format; average length of time in treatment was 91 days. Individuals paid for treatment on a sliding scale, and half of treated individuals were unemployed. While the program had an overall focus on alcohol and drug recovery, patients could also be referred for additional critical services such as medical or psychiatric treatment, GED or parenting classes, and job training. A screening instrument commonly administered for mood and anxiety disorders, the Mini International Neuropsychiatric Interview (MINI), was used to determine mental health needs and who was currently experiencing suicidal ideations.

Clark et al.'s (2014) study design was similar to the design of this study because the dependent variable was dichotomous, based on success or failure in treatment at program completion. Despite limitations to the study, including the small sample size and likelihood that offenders under study committed crimes of lesser severity then those who are incarcerated, 19% (117 individuals) successfully completed treatment. Results of the study were as expected: that is, a lower level of care, absence of cocaine or heroin use, greater economic stability, and absence of serious mental illness are the best predictors of success in treatment. Willingness to admit diagnoses of anxiety and suicidal ideation were better predictors of success in substance abuse treatment for a noncustodial forensic population than were more severe drug use, specifically cocaine or heroin, and history of mental illness more serious than anxiety; this latter factor was a predictor of early drop-out from treatment. The authors did not sufficiently delve into other reasons for the study's low success rate.

Scott, Dennis, and Lurigio (2015) investigated 253 women incarcerated at the Cook County (Chicago) Department of Corrections who had internalizing disorders, externalizing disorders, both internalizing and externalizing disorders, or none. The authors performed a Needs Inventory using multiple measures including the Global Appraisal of Individual Needs, Lifetime Stressor Checklist-Revised, National Women's Survey, Needs Inventory Incorporated, and Psychological Inventory of Criminal Thinking Styles. Initial data were subjected to a series of analyses of variances and later stepwise discriminant function analyses. By documenting the women's demographic and psychological status, authors found that most (three-quarters) of them had very low self-esteem, very severe substance use disorders, accelerated criminal cognition, and extensive traumatic experiences. The researchers concluded that drug treatment for incarcerated females necessitates an integrative approach with person-centered, gender-sensitive interventions focused on preventing both criminal and psychiatric recidivism because of this population's multifaceted cluster of needs.

Summary and Conclusions

Legislation and policies at every level of government have attempted to reverse previous policies and practices that resulted in the "criminalization" (Epperson et al., 2014, p. 428) and mass incarceration of individuals with SMI and substance use disorders (SUD by switching from a criminal justice response to a medical model (Wolff et al., 2012). Scholarly research continues to inform policy and practice, while searching for ways to promote higher levels of engagement in treatment for this population. Many researchers

have developed, implemented, and analyzed the two main types of treatment available to this population—mental health treatment and substance abuse treatment—and have hypothesized that optimal engagement in treatment will lead to successful behavioral change along multiple dimensions, including criminal offenses. However, recent research has begun to reveal that first-generation interventions for offenders with SMI or SUD reap only moderately successful outcomes (Angell et al., 2014; Wolff et al., 2014).

Epperson et al. (2014) reviewed multiple studies, developed frameworks for analyzing outcomes, discussed limitations of first-generation interventions for offenders with SMI or SUD, and conceptualized broader, second-generation interventions. The authors created a framework of place-level and person-level factors as predictors of criminal offenses, identifying social and environmental disadvantages as place-level factors and stressors from mental illness, addictions, trauma, and criminogenic risk as person-level factors. They asserted that many factors, which constitute the "big four" (Epperson, et al., 2014, p. 431) predictors of recidivism, have been largely ignored by first-generation interventions. Those predictors are history of antisocial behaviors, antisocial personality patterns, antisocial cognitions, and antisocial associates. These factors place offenders with mental and substance use disorders at higher risk for ongoing criminality and form part of a larger set of criminogenic risk factors known as the "Central Eight" (Epperson, et al., 2014. p. 431); the Central Eight constitute factors that include the big four plus family and/or relationship circumstances, school and/or work functioning, leisure and/or recreational activities, and substance abuse. Separately, each factor can usually predict an individual's

likelihood of committing a criminal offense. Epperson et al. (2014) discovered that criminal thinking and antisocial attitudes among offenders with SMI are virtually the same as for offenders without SMI.

Evidence-based community reentry programs that provide wrap-around services with tangible resources, maximize continuity of care, and reinforce natural support systems more successfully mitigate transition from custodial environments for persons with SMI or SUD (Angell et al., 2014). The correlation between these kinds of benefits and longer, more effective consumer engagement is becoming increasingly evident because the results of more recent research suggest that criminal offenses are caused more by poverty and learned criminal behavior than by untreated psychiatric symptoms.

In Chapter 3 I provide the details of the methodology of the study. I explain the research design and rationale, discuss the population and sample, data analysis plan, and threats to validity. I also discuss the ethical procedures I followed in conducting this study.

Chapter 3: Research Method

Introduction

Jails and prisons have become the new mental health clinics due to a failure of the community mental health system, the War on Drugs legislation, and a lack of understanding of addiction as a disease. Police also frequently arrest and jail persons with SMI or COD because of a lack of an adequate number of beds in mental health hospitals (CITE). The criminal justice response to persons with SMI or COD has been universally cost-prohibitive, and its contribution to mass incarceration has been a national embarrassment with its questionable ethical soundness (Bewley & Morgan, 2011; Hean et al., 2015; Jaffe, 2014). Persons with SMI or COD contribute to homelessness, rampant misdemeanor crime, and elevated rates of suicide (CITE).

The purpose of the study was to compare several years of treatment outcomes from two mental health treatment programs operated by Montgomery County in Maryland. One was a custodial mental health treatment program called Jail Addiction Services (JAS); the other was a noncustodial mental health treatment program called Outpatient Addiction Services (OAS). Both programs provide treatment to patients with substance use disorders; however, most patients also have co-occurring disorders such as schizophrenia, major depressive disorder, bipolar disorder, schizoaffective disorder, anxiety disorder, etc. I applied a statistical method that accurately calculated the program with the greatest success rate. I defined program success as high numbers of completed individual treatment plans and low numbers of incomplete treatment plans. I defined program failure as high numbers

of incomplete individual treatment plans and low numbers of completed individual treatment plans. These two programs constituted the independent variable, and I defined the dependent variable as the effectiveness of the two programs, as measured by success or failure.

The study findings have helped fill the gap in the literature regarding comparison between custodial and noncustodial mental health treatment programs. Further, these findings provide empirical evidence with which to determine whether or not custodial environments are adequate for rehabilitating offenders with mental illness. While I found that custodial environments have positive treatment outcomes in this study, changes to these environments might still be required. For example, greater resources could be allocated to constructing more custodial treatment programs and to rectifying the lack of effective training and collaboration between criminal justice and mental health professionals (Hean et al., 2015). The findings of this study may also help to justify the United States' annual $15 billion expenditure on housing inmates diagnosed with a mental disorder.

Research Design and Rationale

In this study, I employed a quantitative design to analyze two existing data sets and answer the research question: Is there a significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs? I chose to use a quantitative approach because it aligned with the focus of the study and facilitated an inquiry about the relationships between variables. The type of treatment program— custodial or

noncustodial—made up the independent variable of this study. The dependent variable was program status based on success or failure. The results of extensive previous research have described myriad custodial and noncustodial treatment for offenders with SMI, SUD, or COD, but none have calculated outcomes for the various stakeholders to determine which type of treatment program has the greater benefit to clients or patients, their families, communities, and society as a whole.

Methodology

In this study, I used the chi-square test of independence. This test measured the success and failure of both treatment programs because the variables are categorical and dichotomous. The chi-square test of independence allowed for two variables that were both dichotomous, with the dependent variable having only two possible outcomes--program success or failure--measured at the nominal level.

Population

The target population for the study included participants from one custodial and one noncustodial MSUD program. Both programs are located in Montgomery County Maryland. Each program consists of persons with SMI, SUD, or COD. Participants were individuals aged 18 years and older.

The JAS Program is implemented at the Montgomery County Correctional Facility in rural Boyds, Maryland, and the OAS Program is implemented in a mixed business-residential neighborhood in Rockville, Maryland. The JAS program offers education, therapy; peer counseling groups, cognitive behavioral skill building, self-help meetings, and

discharge planning. Treatment takes place in housing units separate from the general prison population, using a TC model administered by specially trained correctional officers and graduate-level therapists. OAS provides care to adults with mental health and substance abuse symptoms that are serious enough to require extensive support, monitoring, and accommodation for participation in treatment but who show no evidence of posing a significant danger to themselves or others or of requiring detoxification or around-the-clock supervision. The target population size for JAS is precisely 940 individuals; the target size is 534 individuals for OAS.

Sampling Procedures Using Archival Data

I initially requested data from the StateStat analyst at the State of Maryland Office of the Governor and the Montgomery County Maryland Executive Office, both of which have historically maintained statistical information on all criminal justice and mental health treatment entities in their respective jurisdictions. However, the data actually used were collected by the state of Maryland Outcomes Measurement System Datamart, which tracked the state's Public Behavioral Health System. This system documents the life domains for adults aged 18-64, including housing, employment/school, psychiatric symptoms, level of functioning, substance use, legal system involvement, and general health. In this study, I used a quasi-experimental design, relying on a convenience sample of 3 years of discharges of individuals who took part in the two treatment programs.

Instrumentation and Operationalization of Constructs

I used Pearson's chi-square test of independence for determining whether the custodial treatment program has the same rate of success as the noncustodial treatment program. I chose this test because both dependent and independent variables were categorical and dichotomous. The chi-square test of independence allowed for two variables that were both dichotomous, with the dependent variable having only two possible outcomes—success or failure—measured at the nominal level. Developing confidence in the research hypothesis (H_1: $\mu_1 > \mu_{2)}$ required the rejection of the null hypothesis (H_0: $\mu_1 = \mu_{2)}$. Under the null hypothesis, it was assumed that the custodial treatment program had the same rate of success as the noncustodial treatment program. If the custodial treatment program were not found to have the same rate of success as the noncustodial treatment program, then the null hypothesis would be rejected. However, I also had to examine whether the differences in treatment program status were statistically significant.

Data Analysis Plan

I conducted the test using The Statistical Package for the Social Sciences (SPSS) for Windows and Macintosh published by Green and Salkind for operationalizing the null and research hypotheses:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 > \mu_2$

The SPSS allowed me to enter my data into the Data Editor as dependent and independent variables, make appropriate transformations of those variables, select Pearson's chi-square

test of independence (2), and create graphs of distributions of the variables that displayed output and showed the results. No procedures for multiple statistical tests were necessary. I also did not address any covariates, such as demographic identifiers of gender, age, and ethnicity of population members, because these were unlikely to have any significant impact on the relationship between the dependent and independent variables and I anticipated no confounding variables. I interpreted the results using graphs and charts developed through the SPSS outputs, through which the null hypothesis was accepted or rejected and any Type I or Type II errors revealed.

Threats to Validity

External Validity

A notable threat to external validity was that in this study I did not differentiate between various types of mental illnesses or substance use disorders. Although some disorders have greater chronicity or a higher propensity for lethality than others, I aggregated all disorders under the rubric of behavioral health disorders in this study because the scope of the inquiry needed to be limited to the numerical attributes of the dependent variable (i.e., program success or failure). I addressed this threat by providing a description of the similarity among all mental and substance use disorders in medical terms, while clarifying dissimilarity between them as mostly behavioral.

Internal Validity

A notable threat to the internal validity of this study was in regards to experimental mortality and selection-maturation interaction. Even though the study strictly adhered to the

requirement that at least 80% of the literature reviewed be published within the last 5 years, changes to what has been reported are ongoing due to continuing research and improvements in legislated health care policy.

Construct Validity

No threats to construct validity occurred. The definitions were adequate and the measures of variables were simple and straightforward. The measures of variables were also dichotomous and measured at the nominal level.

Ethical Procedures

I completed the Walden University Institutional Review Board (IRB) application following the appointment of the University Research Reviewer and the committee approval of the study proposal. My use of secondary data did not preclude the need for following ethical procedures in this study. Even though access to participants' data did not require an agreement because this information was a matter of public record and obtainable by request, the source of the information, the State of Maryland Department of Health and Mental Hygiene (MD-DHMH) does place the privacy and security of their data as a top priority. None of the data personally identified any participant, and I strictly adhered to both state and federal policies regarding data privacy and security. Therefore, there were no conflicts of interest or power differentials, and incentives were completely unnecessary.

Summary

I structured this study according to a quantitative method of inquiry utilizing Pearson's chi-square test of independence (2) to address the research question of: Is there a

significant difference in patient individual treatment plan outcomes that point to program effectiveness between custodial and noncustodial mental and substance use disorders treatment programs? The program type (custodial or noncustodial) made up the independent variable, while the dependent variable was the success or failure of the program. Both the dependent and independent variables were dichotomous and measured at the nominal level. Only secondary data obtained through the MD-DHMH were analyzed. The data I collected encompassed the number of individuals admitted to and discharged from each program over a span of 3 years and was facilitated using SPSS.

Chapter 4 will include my report on the results of the study. The chapter also includes the data collection timeframe, validity, statistical analysis and assumptions, and hypothesis acceptance or rejection. Tables and figures will be presented based on SPSS calculations and the graphs and charts generated therefrom.

Chapter 4: Results

Introduction

In this study, SDT (Deci & Ryan, 1987) provided the theoretical foundation for determining whether a significant difference existed in individual patient treatment plan outcomes that points to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs. I chose to use a quantitative approach to address this because it aligned with the focus of the study and it facilitated an inquiry about the relationships between variables. The purpose of this study was to determine which of two programs types—custodial or noncustodial—produced the greater number of successful treatment outcomes. The findings will help to fill in the gap in the literature regarding the comparison of custodial and noncustodial mental health treatment programs.

The following research question and hypotheses guided this study:

RQ: Is there a significant difference exists in individual patient treatment plan outcomes that points to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs?

H_0: There is no significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs.

H_A: There is a significant difference in individual patient treatment plan outcomes that point to differences in effectiveness between custodial and noncustodial mental and substance use disorder treatment programs.

Chapter 4 begins with information on how data were collected. Then I present the results section with a corresponding table featuring cross tabulations of the treatment plan programs. Following that I present the actual test of significance with the associated tables and figure detailing the numerical outcome of the test. Finally, I conclude with a summary of the findings.

Data Collection

The participants from the archival data included 1,474 men and women 18 years old and above who were treated for SMIs, SUDs, or CODs at the Jail Addiction Services (JAS) program or the Outpatient Addiction Services (OAS) program. I made e-mail inquiries in April 2017 to the StateStat analyst at the State of Maryland Office of the Governor and the Montgomery County Maryland Executive Office requesting instructions for obtaining archived data sets that are in the public domain. However, responses from both entities were disappointing because the individuals responsible for disseminating information for research purposes were not easily identified. Inquiries that were made to the Director of Montgomery County Department of Health and Human Services, who directed those inquiries to someone at one of the county's offices for media information, provided no useful instructions. In May 2017, I contacted the congressional representative for Maryland's eighth district, requesting assistance. The congressman enlisted his constituency services staff and contacted the

Maryland Governor's office. Working together, both entities were able to expediently identify those responsible for data dissemination. Governor Hogan's staff was able to attest that no human subjects would be used in this study, verify that it would be permissible to use the information for research, and provide the raw data. Data collection began following the Walden University IRB's approval of the proposal on August 10, 2017. The IRB approval number is 08-10-17-0119559. I received the data sets on August 15, 2017.

The data sets consisted of the total number of complete and incomplete treatment plans from 2012 through 2014 for the entire population of patients who were discharged from each program. There were no discrepancies in data collection from the plan I presented in Chapter 3 because staff from the Maryland governor's office and MD-DHMH procured the data through the Montgomery County Maryland Executive Office.

Results

The total number of treatment plans from the archival data remained intact with no missing data. I tested the success or failure of the custodial and noncustodial programs based on the number of treatment plans completed and not completed by participants. To do so, I analyzed the relationship between program type (custodial or noncustodial) and treatment plan status (completed or incomplete) using Pearson's chi-square test of independence. The programs were regarded as the independent variable and the completion status as the dependent variable. These variables were controlled for in Phi and Cramer's V analyses, in which each resulted in symmetric measures of .285 (see Table 3), a moderate

strength of association between the variables (program type and treatment plan completion status).

The participants' archival data included 611 completed treatment plans and 863 incomplete treatment plans aggregated from years 2012, 2013, and 2014 from both custodial and noncustodial treatment programs (see Table 1) with 41.5% of participants successfully discharged from treatment while 58.5% were not (see Table 1). Fifty-two percent were discharged successfully and 48% were discharged unsuccessfully from custodial treatment, while 22.8% were discharged successfully and 77.2% were discharged unsuccessfully from noncustodial treatment (see Table 1). Based on these percentages, the custodial program appeared to have a greater and more significant success rate than the noncustodial program.

Table 1

Treatment Plan Program Cross-Tabulation

			Programs		
			Custodial	Noncustodial	Total
Treatment plans	Completed	Count	489_a	122_b	611
		Expected count	389.6	221.4	611.0
		% Within treatment plans	80.0%	20.0%	100.0%
		% Within programs	52.0%	22.8%	41.5%
		% Of total	33.2%	8.3%	41.5%
	Incomplete	Count	451_a	412_b	863
		Expected count	550.4	312.6	863.0
		% Within treatment plans	52.3%	47.7%	100.0%
		% Within programs	48.0%	77.2%	58.5%
		% Of total	30.6%	28.0%	58.5%
Total		Count	940	534	1474
		Expected count	940.0	534.0	1474.0
		% Within treatment plans	63.8%	36.2%	100.0%
		% Within programs	100.0%	100.0%	100.0%
		% Of total	63.8%	36.2%	100.0%

Note. Each subscript letter denotes a subset of program categories whose column proportions do not differ significantly from each other at the .05 levels.

Pearson's Chi-Square Test of Independence

I performed a Pearson chi-square test of independence to determine whether there was a significant difference in effectiveness between the custodial and the noncustodial mental and substance abuse disorder treatment programs. The alpha was set at .05 for two reasons: (a) because the study does not have any practical applications; therefore, the selection of α is arbitrary (see Frankfort-Nachmias & Nachmias, 2008) and (b) the choice of .05 as a significance level is commonly used in the social sciences (see Clark et al., 2014; Franke et al, 2012). On the chi-square test table (Table 2), the *p* value is .000, which is less than the alpha level. Therefore, the test was significant, as the null hypothesis was rejected and the alternative hypothesis was accepted. This showed that there was a significant difference in treatment outcomes between custodial and noncustodial mental health treatment programs.

Table 2 indicates $\chi(1) = 119.435^{a}$, $p = .000$, which signifies that there was a statistically significant association between program type and treatment plan completion status. Of 940 discharges from the custodial treatment program, there were 489 successfully completed treatment plans and 451 unsuccessful, incomplete treatment plans (see Table 1). Of 534 discharges from the noncustodial treatment program, there were 122 successfully completed treatment plans and 412 unsuccessful, incomplete treatment plans. This means that 52.0% of participants in the custodial program were discharged due to successful treatment plan completion, while only 22.8% of participants in the noncustodial program had successfully completed treatment plans upon discharge from the program.

Table 2

Chi-Square Tests

	Value	*df*	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson chi-square	119.435[a]	1	.000		
Continuity correction[b]	118.236	1	.000		
Likelihood ratio	124.564	1	.000		
Fisher's exact test				.000	.000
N of valid cases	1,474				

[a]Zero cells (.0%) have an expected count less than five. The minimum expected count is 221.35. [b]Computed only for a 2x2 table.

Phi and Cramer's V are both tests of the strength of association (Laerd, 2013). According to the Cramer's V contingency table (with $df = 1$), .10 is considered a small effect size, .30 a medium effect size, and .50 a large effect size (Zaiontz, 2013). In this study, the strength of association between the variables (program type and treatment plan completion status) was moderate at .285.

Table 3

Symmetric Measures

		Value	Approximate significance
Nominal by nominal	Phi	.285	.000
	Cramer's V	.285	.000
N of Valid Cases		1474	

Figure 1 depicts a two-tone bar chart. It illustrates both the greater number of completed and incomplete treatment plans of the custodial program. It also illustrates the much lower number of completed treatment plans and the slightly lower number of incomplete treatment plans of the noncustodial program.

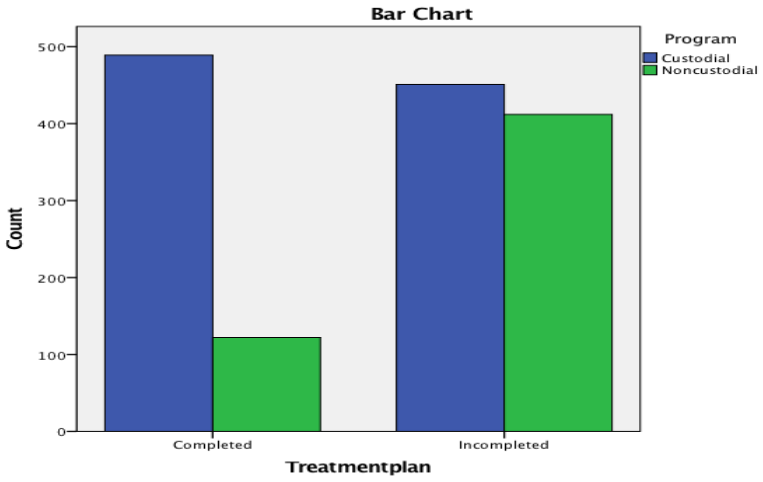

Figure 1. Program treatment plan status.

Summary

Results of this study revealed that the custodial program treating people with SMI, SUDs, or CODs had a greater success rate than the noncustodial program treating the same

populations. However, the large number of unsuccessful treatment plans from both programs remains concerning. Nearly half of the custodial program treatment plans were deemed unsuccessful, as were more than three-quarters of treatment plans in the noncustodial program. The reasons for this high failure rate were not made evident and were not within the scope of this analysis.

Acceptance of the alternative hypothesis in itself was not surprising; however, the finding that a custodial program could have a greater success rate than a noncustodial program was unexpected, particularly in view of extensive research that has been critical of expanding custodial mental health treatment and in light of noncustodial practice founded in recovery orientations based on SDT. However, the results of the analysis are still enlightening and provide an opportunity for further exploration.

In Chapter 5, I will provide a synopsis of the results and my conclusions and an analysis of what the findings imply. I will present my recommendations for further research. Finally, I will discuss the emerging potential for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of the study was to determine whether any significant difference in outcomes existed between one custodial mental health treatment program and one noncustodial mental health treatment program located in Montgomery County, Maryland. Program success was based on the number of completed treatment plans of noncustodial patients and custodial offenders with SMIs, SUDs, or CODs. I used a quantitative approach to analyze archived data sets from 2012 through 2014. The data were reported to the MD-DHMH through the SMART by the treatment programs and disseminated for this research with assistance from the Office of the Governor (rather than the Executive Office or Department of Health and Human Services of Montgomery County). This study represents the first time that comparison between custodial and noncustodial mental health treatment programs has been conducted in the literature. I analyzed the study data using Pearson's chi-square test of independence. Key findings from this study revealed that the custodial program had a greater success rate than the noncustodial program, as evidenced by a higher number of completed participant treatment plans; however, both programs had a very high number of incomplete treatment plans. In this chapter, I will provide a discussion and interpretation of the study findings and my recommendations for further research based on the strengths and limitations of this study.

Interpretation of Findings

The key findings of this study disconfirmed much of the extant research literature, which overwhelmingly suggested that treatment in custodial environments is insufficient, inappropriate, and likely to continue to be unsuccessful (Bewley & Morgan, 2011; Dafoe & Stermac, 2013; Hean et al., 2015; Teplin, 1990). One major reason for this common stance against custodial treatment, according to standards of multiple human services fields, is best practice, which warrants that "institution-based treatments should be provided in the least restrictive environments" (Hean et al., 2015; WHO, 1996) to be most humane and effective; jails and prisons, on the other hand, represent the most restrictive settings (MHA, 2014). The literature also suggested that custodial staff are not trained to manage prisoners as mental health patients and might not even have the aptitude for such a task (Bewley & Morgan, 2011).

Numerous researchers have documented the concerns surrounding the criminal justice model of managing offenders with mental and substance use disorders; these include the prohibitive cost of treatment in restrictive environments (Heilbrun et al., 2012), the questionable ethicalness of the criminal justice response to persons with mental illness (Barrenger & Canada, 2014; Dafoe & Stermac, 2013; Galanek, 2013; Hean et al., 2015), and the model's contribution to mass incarceration (Lynch, 2011; SAMHSA, 2014). The numerical outcome of this study did not address these concerns. However, the findings of this study might extend knowledge in the mental health treatment discipline in a few ways. First, even though the study only involved two programs in one county of one state, whether

or not the results are generalizable to the entire custodial and noncustodial mental health treatment population cannot be known until the test is replicated in other jurisdictions. Second, the findings' contradiction of the bulk of the literature might be alarming enough to generate strong interest from others in the discipline, particularly with regard to SDT (Deci & Ryan, 1987, 2000; Ryan & Deci, 2000; Vallerand, 2000) and frameworks of recovery-oriented practice/systems of care (Gilburt et al., 2013; Mancini, 2008).

The findings likely confirm a notion oriented in the SDT that implies that custodial patients' motivation to succeed is extrinsically driven, likely due to the secondary gains inherent in membership in a subcategory of a special population (Deci & Ryan, 1987, 2000; Ryan & Deci, 2000; Vallerand, 2000). These secondary gains include protection from the stress of enduring the general population, group cohesion as part of a MTC, and cutting-edge psychosocial learning (Vallerand, 2000). Thus, while this population may not be driven intrinsically, they would nevertheless reap positive results during the experience of treatment. However, those positive results might not necessarily continue after the term of incarceration ends because of the lack of intrinsic motivation. The study findings might also extend knowledge in the discipline by stimulating continuing research, especially regarding the rate of recidivism into mental decompensation or substance abuse relapse by both custodial and noncustodial patients who successfully completed their respective treatment programs.

In the context of SDT (Deci & Ryan, 1987, 2000; Ryan & Deci, 2000; Vallerand, 2000) and recovery-oriented practice, it might have been expected that the findings of this

study would favor the noncustodial program. Although the null hypothesis, which stated that the custodial program is equally as successful as the noncustodial program, was rejected, this result did not indicate that the difference means that the noncustodial program was more successful than the custodial program (although the alternative hypothesis clearly iterated that the custodial program is more successful than the noncustodial program). Either the assumption that the basic tenets of SDT (i.e., autonomy, feelings of competence, and relatedness to others) cannot be met in the most restrictive (custodial) environment was faulty or other reasons account for the success of the custodial program over the noncustodial program. This assumption suggests that there was some way patients in the custodial program expressed autonomy, competence, and belonging despite confinement in such a restrictive environment. Questions for future research could include: Why did so many patients in the noncustodial program who had greater opportunity for autonomy, competence, and belonging fail? Why did the noncustodial program have so few people successfully completing treatment plans?

Although answers to those questions were outside the scope of this inquiry, consideration should be given to any known similarities between the programs that could partly account for the difference. For example, despite the fact that the programs are facilitated by different departments of the county government, the Department of Correction and Rehabilitation for the Jail Addiction Services program (JAS) and the Department of Health and Human Services for Outpatient Addiction Services program (OAS), according to their website descriptions, both provide COD treatment using self-help meetings;

community meetings; and graduate-level therapists who provide therapeutic activities such as biopsychosocial education, therapy groups, and cognitive behavioral skill building. Both entities also provide discharge planning that includes linkages to appropriate services in the wider community, providing for housing, vocational, and continuing treatment needs (Montgomery County, MD, 2017). Additionally, the JAS program actually trains some of their corrections officers to provide the structure of a therapeutic community model of treatment and provides patients with housing separate from the general incarcerated population. The therapeutic community model of treatment has been successful for forensic patients and conducive to building the aptitude and existing skills of custodial professionals since the 1970s (Sacks et al., 2012).

Limitations of the Study

Limitations to the generalizability of the study arose when it became evident that the custodial program had a greater success rate than the noncustodial program. This study finding was contrary to the notion, gathered from the majority of the literature (Barrenger & Canada, 2014; Bewley & Morgan, 2011; Dafoe & Stermac, 2013; Galanek, 2013; Hean et al., 2015; SAMHSA, 2014; Teplin, 1990; Treatment Advocacy Center, 2009), that mental and substance use disorder treatment in custodial environments is not adequate. Generalizability would tend to support the opinions of the majority of researchers who have found treatment in custodial environments to be inferior to that in noncustodial settings. It is possible that generalizing to similar programs, such as a custodial and noncustodial program being operated by collaborating departments of the same county across a given state or

territory, could provide similar results in which the custodial program is more successful. However, it is just as likely that different results would arise when comparing two programs from separate jurisdictions that use dissimilar modes of treatment. For example, a custodial treatment program that only provides medication management and self-help meetings to inmates with mental and substance use disorders and either retains them in the general population or separates them in solitary quarters might very well have lower success rates than a noncustodial program within or outside of the same jurisdiction.

Construct validity for this study, which assumed that programs under investigation would provide only a small sample, changed after I gathered the data, which revealed that the aggregation of 3 years of discharges for the two programs changed the sample size from small to large. Additionally, the trustworthiness of the data came into question because during the data-collecting phase of the project, the former state employee who had been responsible for compiling and disseminating data stated that she could not guarantee the data's accuracy. However, this employee graciously signed a Data Use Agreement to verify that the information could be used for this project (because it was nonproprietary and in the public domain).

Finally, in addition to what I reported in Chapter 1 regarding the source of the data, I discovered that the data generated from all Maryland mental and substance abuse treatment programs prior to October 2015 were reported to the state through the SMART, developed and operated by the University of Maryland Institute for Governmental Service and Research. The SMART system was used to compile statistical data for all social services

programs in the state of Maryland between 2008 and 2015, after which point the system was shut down due to fiscal constraints.

Recommendations

The rates of sustained recovery for populations with MSUD are generally low even under the best circumstances (Hyde, 2012). This may partially be because too many providers have not yet been able to more effectively implement their program structures in conformity with recovery-oriented systems of care (ROSC). The State of Maryland currently does not require mental health treatment programs to make use of evidence-based research adhering to ROSC; the use of such research remains merely a suggestion promulgated by public and private mental health research and advocacy entities such as SAMHSA, MHA, and NAMI (SAMHSA, 2010). This lack of official regulation may be because there is no formalized theory of recovery that can be taught in colleges and universities. This study represented a very small step toward the development of a formalized theory of recovery, but it is important for that development to progress.

In addition, as of 2015, according to MHA staff, progress reporting by treatment providers to the State of Maryland has been relegated to a voluntary rather than a mandatory activity. This severely limits the oversight by government authorities of planned annual or semiannual inspection of facilities and patient records. Even the occasional random site visit does not compare with routinized, frequent, electronic reporting systems like SMART, which could generate the results of patient and (by proxy) program progress and would enable further inquiry.

The SAMHSA ROSC Resource Guide was developed to match principles of health reform with the "benefits, framework, and history of ROSC" (SAMHSA, 2010, p. 1), and this includes how to put ROSC initiatives in place. It is admittedly a new concept, born in 2010, and the number of direct service providers who have gotten on board with it remains unknown. Also unknown is whether ROSC translates well into treatment for co-occurring and other serious or chronic mental health disorders. The guide also indicates that it will take months and even years to address all the difficulties and opportunities involved in wading through the complexities of ever-changing benefits packages and financial strategies, changing technology, adherence to evidence-based practices, and linkages with primary care.

I revealed in the present inquiry that failure rates for both the custodial and the noncustodial programs were very high; therefore, I recommend further research designed to help raise rates of recovery for both treatment types. This improvement would require the inclusion of co-occurring and other serious or chronic mental health disorders under the rubric of ROSC, the widespread and legally enforced practice of ROSC, and the development of a formal theoretical framework, based in part on replicating this study across a more meaningful swath of jurisdictions. I also recommend that more in-depth analyses be conducted at the local, state, and federal levels to further examine the differences between custodial and noncustodial treatment.

Another recommendation would be to pilot a fully funded study across a more meaningful swath of jurisdictions; this study should redesign and include new and original

elements of the Community Mental Health System that was based on the Community Mental Health Act of 1963. Federal funding of that system through block grants initially enabled state hospitals across the nation to relinquish most of their patient care to clinics in communities where patients and their families resided. Services included low- or no-cost medication management through psychiatry, group and individual psychotherapy, and short-term hospitalization when warranted, all in close proximity to patients' homes. Findings of a pilot study could result in a paradigm shift in mental health care that would use a greatly modified version of this medical model, include the most recent and effective evidence-based practices, and reduce the cost of mass incarceration by providing care before patients "fall through the cracks" and commit crimes for which they are commonly incarcerated in jails and prisons.

A further way to use modified community mental health system initiatives to offset costs to taxpayers would be to fully fund high security acute-care environments. Currently, behavioral health emergency treatment often takes place on short-term bases in understaffed and under resourced hospitals that are hard put to retain patients who are barely stable. Social workers in these environments are frequently forced to discharge many patients to unsafe and inappropriate living conditions, where they often relapse and recidivate; this raises costs for insurance companies (due to "revolving-door" hospitalization) and for taxpayers, who end up paying for emergency medical and police services, overburdened court dockets, and incarceration of offenders with MSUD (DeMatteo et al., 2013; Gilburt et al., 2013; Heilbrun et al., 2012; Wilson et al., 2013; Wolff et al., 2013). Should studies

replicating the present inquiry overwhelmingly come to the same results, indicating that custodial treatment programs are more successful than noncustodial programs, a high-security chronic care behavioral health hospital embedded within the existing custodial facility could address earlier researchers' criticisms of custodial treatment.

Implications

The findings from this study may have implications for positive social change by allowing for a better understanding of the difference in success rates between custodial and noncustodial mental health treatment programs in all jurisdictions. Although the present investigation could not account for why the custodial program had better outcomes, implications at the societal and policy level might nevertheless encompass a need to reevaluate the criminal justice and medical models in managing offenders with mental illness. Such an evaluation would be based on results of further analyses using this study's research method. A much larger sample of total custodial and noncustodial treatment environments should be examined. The impact of further analyses would produce greater possibility for generalizing findings to the larger population. Policy decisions could then be formulated regarding which model is in society's best interest. For example, if future research and analysis suggests that criminalizing people with mental illness through incarceration is unacceptable, this would mean a lower burden for taxpayers and would minimize stress on multiple systems under the rubric of criminal justice including policing, prosecuting, incarcerating, and supervising through parole or probation those people with

mental illness who break laws due to activated symptoms of their abnormal mental conditions.

Policies should include training law enforcement first responders in mental health specializations on a larger scale. This would have a positive societal impact regardless of whether the custodial or noncustodial model is determined to be generally more successful. People with mental illness experiencing severe symptoms that include committing criminal offenses would be delivered either to secure behavioral health hospitals or to jails. Neither approach would necessarily require burdensome conventional legal hearings for nonviolent criminal offenses or for minor assaults committed by persons with mental illness while in states of psychosis. Development of this kind of cost-effective, ethically sound, recovery-oriented, and nonpunitive mental health treatment paradigm could free up revenue for treatment versus punishment and could ensure a more humane and ethically sound approach to mental health treatment. An approach that does not punish but rather meets the basic criteria of self-determination theory can provide offending patients with the opportunity to develop intrinsic motivation to change by internalizing the concept of recovery-for-life. Thus, while incarceration might still be required for those people committing more serious offenses, jurisdictions that have poor outcomes managing offenders with mental illness could model their programs after more successful custodial programs like JAS.

Implications for positive social change at the organizational level are contained in the current study. Results suggest the possibility for eliminating duplication of some types of mental health treatment and recovery services and for addressing a paucity of other types

of services in any given jurisdiction. Whether research points to more successful custodial or noncustodial treatment in any jurisdiction, one helpful change would be to establish continuity so that all public and private programs work in ongoing coalition. In this way, substantive opportunities for treatment and sustained recovery could be implemented. These opportunities would control for the circumstances that promote recidivism, as noted by Hyde (2012) and by Morgan et al. (2012). Initiatives could provide services such as those discussed in Angell et al. (2014) that encompass not just MSUD treatment but also linkages to social service entitlements, housing, employment, and peer supports in preparation for community reentry from either incarceration or inpatient treatment status.

The potential to bring positive social change at the family level are also contained in the current study. Implementing the study in a variety of jurisdictions and initiating policy changes as previously suggested could lead to better maintenance of family ties for offenders with mental illness, especially through preventing long-term separation of parents and children. Scott et al. (2015) found that parenting and family reunification issues are especially salient concerns for incarcerated women with co-occurring disorders. Heilbrun et al. (2012) suggested that using community-based alternatives by offenders with SMI can be implemented without increased risk to public safety and can be justified on humanitarian grounds. Diversion programs (DeMatteo et al., 2013) using specialty and community courts such as problem-solving, drug, and mental health courts, that impose more alternative sanctions and less incarceration (Heilbrun et al., 2012), combined with outpatient treatment or short-term forensic hospitalization, can be instrumental in keeping more families intact.

Offenders with mental illness who have meaningful family connections are at less risk for demoralization, fear, anxiety, mental decompensation, suicide, relapse, and reincarceration. Their well-being, promoted through changes at the organization, societal, and policy level following the generalization of multiple studies like the present investigation to the larger population, could minimize continuing or generational family dysfunction and maximize greater access to financial and social supports.

Potential for positive social change at the individual level found in this study, provides an opportunity for future researchers to examine how the custodial program reflects the basic tenets SDT. That 489 of 940 individuals successfully completed the custodial program means that more than 50% of the patients had a chance to use that success to continue recovery from MSUD or to at least derive a more temporary, if extrinsically motivated, benefit. Whether individuals were internally or externally motivated to complete their respective treatment plans remains to be determined. Nevertheless, it appears that some part of treatment was more appealing to these patients dwelling in a most restrictive environment, which was not the case for others undergoing similar treatment in the freedom of a noncustodial outpatient setting.

Conclusions

The results of this study made it obvious that there is a need for further inquiry. Findings in the study did not confirm reports from extant literature that described custodial treatment as ineffective, cost-prohibitive, or unethical. I merely calculated program success based on the number of completed treatment plans for two programs in one county

administered by similar practitioners. If the same method of inquiry were used across multiple jurisdictions, it is quite likely that results would be different in some and the same in others. There is no way to speculate on results of a cumulative average across a much larger sample until other researchers pick up where this study leaves off. However, one of my aims with this study was to begin to fill the gap in the literature regarding the comparison of the effectiveness of custodial and noncustodial mental health care treatment programs. As a quantitative analysis, the facts uncovered by this present study are beyond dispute: There is a difference between the Jail Addiction Service program and the Outpatient Addiction Services, which are both located in Montgomery County, Maryland. A different research approach or perhaps a mixed-methods approach could very well produce a different result; however, the door has now been opened for others to question more extensively whether there is an overall significant difference between mental health care treatment in custodial and noncustodial environments.

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