Substance Abuse Treatment Motivation and the Stages of Change Model:

A Comparison of Probation and Parole Clients

Greg Bohall

A Dissertation Submitted to the Faculty of
The Chicago School of Professional Psychology
In Partial Fulfillment of the Requirements
For the Degree of Doctor of Psychology

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Abstract

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Historically, legislation in the United States has been primarily punitive in regards to addressing crime that is linked to addiction. Due to the incredible cost to society that punishing individuals with an addiction entails, the criminal justice system has evolved to coexist with the mental health field in order to treat the underlying addiction associated with crime. Such efforts, including probation and parole, are commonly offered to individuals with an addiction in an effort to allow these individuals the opportunity to succeed within their community while being supervised. The role of motivation in substance abuse treatment has long been studied with ambiguous results. The literature is also lacking in regards to examining motivational factors with specific offender populations. This research attempts to examine the differences in motivation and change among individuals monitored by county probation and state parole.

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Chapter 1: Nature of the Study

Background of the Problem

Drug related crime deterrence has been a problem the criminal justice system has faced for many years. There have been many attempts at reducing the amount of illicit substances being administered and dispersed in communities throughout the United States; such attempts include multiple federal and state legislations along with presidential "war on drugs" implementations. Such enforced policies and procedures have primarily been levied as a punishment in an attempt to decrease the anomaly of addiction. Although it has taken many years, the criminal justice system has come to the realization that using punitive measures to control the disease of addiction is not alleviating the problem. These punishments have led the primary consequence to the public as they are financially supporting the incarceration of people with an addiction as opposed to treating the problem and helping the person become a positive member of society. With this being said, it is imperative to continue research in an attempt to understand and improve current drug diversion techniques.

The collaboration of the criminal justice system and the human services field is bound to have some friction simply due to the different roles and perceptions present in each respected field. The goal of the criminal justice system is to determine guilt or innocence in the processing of cases, whereas the goal of the human services field is to treat the problem by examining such circumstances surrounding a particular diagnosis, action, behavior, etc., and treat the circumstance accordingly. This difference causes some friction between the two fields; however, the continued collaboration allows the

two entities to identify ways to coexist in treating the problem of substance abuse as opposed to resorting to measures that are more punitive.

Traditional and common forms of interdisciplinary collaboration among mental health professionals and criminal justice professionals exist in the relationship between mental health professionals and probation or parole officers. An individual receives probation typically in lieu of incarceration, whereas an individual receives parole typically after serving some period of time incarcerated. In both cases, the individual is supervised in their community. In 2011, the highest number of arrests was for violations related to drug abuse; in fact, it was estimated that there were 1,531,251 arrests related to drug abuse (Federal Bureau of Investigation (FBI), 2012). In addition, approximately 40–50% of referrals to community-based treatment programs originate from the criminal justice system (Klag, O'Callaghan, & Creed, 2005). Given the association between crime and substance use, it can be inferred that a number of individuals monitored by these two entities have an issue with substance use.

Although probation and parole departments serve the role of referring and/or mandating an individual to substance abuse treatment, this coercive tactic can be problematic in regards to treatment motivation. Although the coercion introduces the individual to treatment, they may feel the decision was not theirs; therefore, the individual may not be motivated in their treatment. Motivation, specifically internal motivation, has been linked to better treatment outcomes, whereas individuals who are motivated by external factors are associated with worse treatment outcomes (Wild, Cunningham, & Ryan, 2006). When an individual is motivated to change a maladaptive behavior (in this instance substance use), they are able to identify that substances have

caused problems and make changes in their life—for example, they may enter treatment. If the individual is not internally motivated, they may enter treatment; however, they may not fully engage because they are not internally motivated to change.

Problem Statement

What is the relationship between internal motivation and relative stage of change among individuals monitored by county probation and state parole?

Research Questions

Question 1. Is there a significant difference in internal motivation between individuals monitored by county probation and state parole that are in substance abuse treatment?

Question 2. In the precontemplation, contemplation, preparation, and action stages of the Stages of Change Model, is there a significant difference in the desire to change substance abuse patterns among individuals monitored by county probation and state parole?

Application of the Results

The role that motivation plays is paramount in substance abuse treatment, particularly with offender populations (Simourd & Olver, 2011). The role that motivation plays in treatment is well supported; however, the results are ambiguous and the term "offender" is often used even though this nonspecific term does not delineate between specific offender populations. By conducting research using two commonly used models,

the Stages of Change Model and Self-Determination Theory, the results can be dispersed and used in therapeutic settings due to the familiarity of both models. The goal of conducting research in this area is to determine if there are significant differences in internal motivation and significant differences within specific stages of the Stages of Change Model when comparing probationers and parolees in substance abuse treatment. Regardless of the significance of the hypotheses, the results can be applied to the field of psychology as motivational interventions can be tailored to two different offender populations: probationers and parolees.

Theoretical Framework

The research questions in this study involve identifying the motivation to change in substance abuse treatment among probationers and parolees. Motivation is a complex, multifaceted term that is commonly considered when evaluating the efficacy of positive treatment outcomes. Self-Determination Theory (SDT) is perhaps the most prominent theory of motivation, as it explores the link between the individual's motivation and their perceived autonomy (Ryan & Deci, 2002). It is from this theory that the concepts of internal and external motivation are derived. This theory proposes that there is a continuum on which one end there is the non-self-determined and amotivated, and on the opposite end there is the self-determined and intrinsically motivated, with varying levels of extrinsic motivation between the two extremes (Ryan & Deci, 2000). This study focused primarily on intrinsic motivation levels. The first hypothesis was derived from principles from SDT.

The Stages of Change Model is often confused as a theory of motivation; however, this model is used to identify the readiness to change a behavior. The stages in this model provide a framework to link an individual to a particular stage where treatment interventions can then be implemented based on the stage. The primary difference is that the goal is to identify a specific stage as opposed to identify the client's specific motivation. The process of this model is cyclical so the individual can move various times through the cycle, as well as progress forward or regress to a previous stage (Groshkova, 2010). The Stages of Change Model provides the foundation for the second hypothesis.

Outline of Remaining Chapters

This original work has five chapters in total. This chapter serves as an introduction and overview of the topic. Chapter 2 is a review of the relevant literature related to the topic and provides a foundation for the entire study. The third chapter is a detailed explanation of how the study was conducted and includes a description of the design, sampling method, instruments used, assumptions and limitations, and the statistical method used. Chapter 4 consists of the results of the study without interpretation. Lastly, Chapter 5 involves the summary of the research study, conclusions based on the stated research questions, and recommendations based on the findings.

Chapter 2: Review of the Literature

Chapter Overview

The primary purpose of this literature review is to provide a foundation of information to support the rationale for exploring this area of psychology. In this chapter, the overall scope of the problem among substance-use disorders and the multiple theories of addiction will be reviewed. The role that coercion plays in treatment entrance along with the history of drug diversion attempts will also be examined. The current link between substance abuse and crime will be addressed and parole and probation departments as forms of community corrections will be highlighted. Substance abuse treatment retention and treatment motivation will be reviewed through the lens of the Stages of Change Model and the Self-Determination Theory. This chapter concludes with the review of problem severity in relation to motivation, followed by the rationale for exploring this area in psychology.

Scope of the Problem

In 2010, it was estimated that 3.4–6.6% of the world's population between the ages of 15–64 had used an illicit substance within the past year and that drug-related deaths accounted for between 0.5% and 1.3% of deaths worldwide (United Nations Office on Drugs and Crime (UNODC), 2012). Cannabis is the most commonly used substance worldwide followed by amphetamines and then opioids (UNODC, 2012). Males represent a majority of illicit drug use worldwide; however, females represent the majority of the non-medical use of tranquilizers and sedatives (UNODC, 2012). An

estimated 20% of drug users in 2010 had received treatment for their substance dependence. In Asia and Europe, opioids, particularly heroin, continued to be the dominant drug (UNODC, 2012). Cannabis is the dominant drug that accounts for treatment demand in North America and Africa (UNODC, 2012).

Substance abuse is a societal concern. When considering lowered work productivity, criminal involvement, and healthcare costs, the use of tobacco, alcohol, and illicit substances costs our nation over $600 billion annually (National Institute of Drug Abuse, 2012). In 2008, the Substance Abuse and Mental Health Services Administration (SAMHSA) collected data on the characteristics, location, and use of treatment services throughout the United States and its territories in an effort to provide a snapshot of the delivery system of substance abuse providers (SAMHSA, 2009). In the study, there were 13,688 facilities that were eligible and in a one-day census, the facilities reported nearly 1.2 million clients in substance abuse treatment (SAMHSA, 2009). The achievement of positive substance abuse treatment outcomes such as lower relapse rates and decreased rates of criminal recidivism is paramount in order to reduce substance abuse related costs and to rehabilitate persons with an addiction.

In order for treatment efforts to be successful, a number of factors must be considered. Such factors include treatment retention, treatment motivation, client's relative stage of change, and treatment coercion. The focus of research on client treatment retention has primarily targeted client's treatment motivation. Among adults in substance abuse treatment, treatment retention is associated with a reduction in arrests, decreased unemployment, reduced drug usage, and a decrease in health risk behaviors (Messina, Wish, & Nemes, 2000). However, little is known about the role that motivation

has on treatment retention for legally coerced individuals monitored by county probation or state parole. Understanding the role of motivation on treatment retention among probationers and parolees is an important area of study given the financial costs and number of clients in substance abuse treatment.

Substance-Related Disorders

Disorders related to the use of substances include those that are related to medication side effects, the taking of a drug of abuse, and toxin exposure (American Psychiatric Association, 2000). The disorders related to the voluntary taking of a drug of abuse are of specific concern. Such substances are grouped into the following 11 classes: alcohol, amphetamines, caffeine, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioids, phencyclidine, and finally, sedatives, hypnotics, or anxiolytics (American Psychiatric Association, 2000). The past principal difficulty in diagnosing substance use was due to the inadequate definitions that were commonly used. The *DSM-IV-TR* provides more specific, comprehensive, and symptom-related criteria when diagnosing substance abuse disorders (Stevens & Smith, 2009). In terms of diagnosing the abuse of substances, there are two primary diagnoses: substance abuse and substance dependence. The latter is more severe and can be otherwise defined as addiction and the former is seen within the context of other problems such as family conflict or unemployment (Stevens & Smith, 2009).

Dependence on a substance is complex and results from an interaction between psychological, physical, environmental, and social factors (Gowing, Proudfoot, Henry-Edwards, & Teesson, 2001); therefore, substance users are a heterogeneous population

that differs in a variety of dimensions (Klag et al., 2005). Such dimensions include, but are not limited to, socioeconomic status, type and extent of criminal involvement, diagnosis of comorbid conditions, rationale for using substances, and previous treatment episodes. Becoming dependent on a substance is a process and the time varies to when the person becomes addicted. The heterogeneity of the substance user population is demonstrated by German and Sterck (2002), who have identified four different subgroups of cocaine users. Another demonstration of heterogeneity in this population was when Bau et al. (2001) identified three different types of alcohol abusers. Given the complex nature of substance use, it can be assumed that different responses are necessary as treatment providers grapple with such diversity in this population.

Theories of Addiction

Addiction theories vary greatly and are highly controversial. Such controversy surrounds the theories stating that the person is of weak moral character, has a disease, that the addiction has a hereditary component, or that the addiction has an environmental component. Although there are many theories of addiction, the information provided covers some of the more common theories.

The moral theory states that substance use is a personal choice and those that cannot control their use are considered to have a lack of willpower and are amoral. In this instance, the person's motivation, choice, and intention are emphasized; however, this theory ignores environmental or genetic factors (Stevens & Smith, 2009). In a major theoretical shift, Dr. E. M. Jellinek provided an understanding of the progression of alcoholism as a disease; addiction is comparable to other diseases that have a biochemical

component as well as environmental factors (Margolis & Zweben, 2011). This drastic shift was important, as the person with an addiction was not blamed for their addiction; however, it did not explain how persons who use substances socially or recreationally do not become addicted. The genetic theories of addiction attempt to answer this question by identifying that genetic predisposition is one of degree—while environment has a role, it is also more likely that children of parents who are addicted to alcohol will develop alcoholism than children who do not have parents addicted to alcohol (Faulkner, 2009). This finding suggests that these children have a genetic predisposition to alcohol. This predisposition may explain why some people become addicted while others may not. Behavioral models suggest that behavior is a product of learning and substance abuse is the result of learning patterns (Stevens & Smith, 2009). Although behavioral factors are considered, this model does not address other factors such as biological or family; however, a benefit is that behaviors can be viewed and measured. Sociocultural theories of addiction are most concerned with the social and cultural factors that lead to substance use (Faulkner, 2009); this theory posits that society, family, and environment all play a role in an addiction (Allamani, 2008). Since these theories vary in some aspects, addiction should be conceptualized through an integrative lens as opposed to adhering to one theory.

Substance Abuse and Treatment Coercion

The use of coercion appears to be an effective method to motivate a client to enter treatment. In many instances, decisions are made due to some sort of coercion or to avoid a punishment. Coercion is where the client has the perception that there is a lack of

control in their decision to enter treatment (Urbanoski, 2010). The amount of control a person feels he or she has over events in his or her life is called locus of control—people who feel they are in control of these events have an internal locus of control, whereas those who feel they have no control of these events have an external locus of control (Lamberton & Minor, 2010). Lack of control in the decision-making process can make the person believe that the decision was not made by him or her, thus they do not have ownership of their decision. In regards to treatment, the client perceives that the treatment imposition is an infringement regardless of the source of coercion (Urbanoski, 2010). This is particularly evident in substance abuse populations where the individual enters treatment due to external pressure. Although this external pressure may be necessary, the client may feel that the ultimate decision is not theirs.

Seeking treatment for addictive behaviors often relies on social pressures as being a part of the process for treating the behavior. There are three types of social control strategies that can be used to facilitate treatment: informal, formal, and legal (Wild, 2006). Informal social control is a persuasive attempt by friends, family, and others to help engage substance abusers in treatment (Wild, 2006). This form of social control can often be delivered as a threat or ultimatum by the friend or family member in an attempt to stop substance use. The formal social control strategy includes institutionalized efforts to facilitate the delivery of treatment through referrals by school systems, social assistance programs, employers, or child protective services (Wild, 2006). This form of social control can also take on the appearance of being an ultimatum or threat. An example of formal social control would be an employee assistance program mandating an employee to attend substance abuse treatment due to a positive drug test on the job.

Lastly, legal social controls include diversion to treatment programs, court ordered treatment, and civil commitment as alternatives to criminal case processing for substance abusing offenders (Wild, 2006). Examples of legal social controls could be through treatment courts, county probation, state parole or court ordered treatment.

In order for treatment to be effective, understanding the type of motivation in regards to the type of coercion is necessary to improve the efficacy of substance abuse treatment. Coercion can facilitate the entrance to treatment; however, it cannot force the client to participate or actively engage in their treatment (Klag et al., 2005). The criminal justice system serves as a catalyst to introduce treatment; however, it places a burden on treatment providers simply to change the type of motivation in the client so they can benefit from the type of service. Opponents of the criminal justice approach argue that motivation is paramount in order to improve the efficacy of treatment and that individuals who are forced to attend treatment are more resistant than those that enter voluntarily (Klag et al., 2005).

Unfortunately, the current research base focuses primarily on mandated versus voluntary treatment for substance users that is also non-empirical in nature (Klag et al., 2005). Wild (1999) reviewed 850 articles on this topic and concluded that 688 (81%) of the articles were non-empirical and included legal interpretations, pieces of opinion, and ethical treaties. Furthermore, the delineation of mandated versus voluntary treatment for clients ignores the complexity of the coercion construct (Young, 2002). Even clients who are viewed as voluntary may be coerced by family, friends, employer, etc. By labeling clients as voluntary, the construct of coercion is ignored. Also, when viewing clients as mandated, the specific populations within are not being identified; therefore, all offender

populations are seen as homogenous. This research will attempt to identify motivational differences between two legally coerced populations.

History of Drug Diversion

In the early twentieth century the United States had few laws controlling drugs, and medications were not regulated (Gahlinger, 2001). Since medications were unregulated, drugs were sold without prescriptions and there was little or no information on their contents (Gahlinger, 2001). Due to the lack of regulation on medications, the Federal Pure Food and Drug Act of 1906 forced the industry to label bottles that contained alcohol, cocaine, cannabis, and opiates. In 1915, the Harrison Narcotic Act was passed with the intention to curb excessive prescriptions by creating a record-keeping system. Congress passed the Volstead Act in 1917, which prohibited the production and sale of alcohol and ultimately became the Eighteenth Amendment in 1920. This amendment became notorious and was later called Prohibition. In approximately one year, it became clear that the prohibition of alcohol was not effective and people were drinking as much as before (Gahlinger, 2001). In 1972, President Richard Nixon's war on drugs resulted from a national survey in 1971 identifying that 40% of Americans aged 18 to 21 had used marijuana, 25% of American soldiers had used both marijuana and heroin, and 10–15% of those soldiers were addicted to heroin (Gahlinger, 2001). President Nixon created the Drug Enforcement Administration under the Department of Justice. In the early 1980s, crack cocaine infiltrated inner-city neighborhoods and in 1982 President Ronald Reagan initiated his war on drugs (Gahlinger, 2001). In his administration, which was followed by President George Bush, Sr., penalties for possession and distribution of

drugs were increased and jails were expanded to accommodate this spike in incarceration (Gahlinger, 2001). Overall, the presidential war on drugs has continuously failed and other countries are considering alternatives to control drugs as opposed to incarceration. The United States, however, has largely opposed this alternative (Gahlinger, 2001).

Substance Abuse and Legal Involvement

There is a well-documented association between substance abuse and crime; however, the causal links are not established, nor is the determination of substance use predicting crime or crime predicting substance use (Klag et al., 2005). At the time of arrest, approximately 80% of arrestees test positive for at least one illegal substance (Klag et al., 2005). Although the individual may test positive, it cannot be definitively concluded that the arrest was substance related; however, involvement in the legal system and substance use are reaffirmed. Approximately 40–50% of referrals to community based treatment programs are from the criminal justice system and there are typically two pathways of which an offender is referred: (1) the offense was drug or alcohol related or (2) the crime was induced by or involved drug- or alcohol-related behaviors (Klag et al., 2005).

In 2011, the highest numbers of arrests were for violations related to drug abuse and were estimated at 1,531,251 arrests (FBI, 2012). Larceny/theft was the second highest, followed by driving under the influence (FBI, 2012). Two of the top three categories for arrests were specifically substance use related. When considering that approximately 80% of all arrestees test positive for an illegal substance (Klag et al.,

2005), a reasonable conclusion can be made that a significant number of arrests for larceny/theft were substance use related.

Substance Abusing Offenders and Community Corrections

Historically, drug diversion attempts have primarily been punitive in an effort to curb drug use and crime. Punishing those with addiction by incarceration has simply halted the behaviors associated for the time being; however, no treatment is provided. The sole use of incarceration has not been seen as effective in halting substance use and crime; therefore, by mandating substance abusing offenders to treatment serves as an operable alternative to reduce substance use and crime (Gottfredson & Exum, 2002). Given the significant history of these efforts with minimal positive results, individuals involved in the criminal justice system who are identified as having an addiction may receive a legally coerced substance abuse treatment program in lieu of incarceration or as a condition of their release from incarceration.

Legal coercion serves as a vehicle to avoid further legal consequences and to facilitate treatment entry; when in treatment, positive reinforcement can be used to enhance the individual's experience as well as improve retention (Marlowe, Merikle, Kirby, Festinger, & McClellan, 2001). Therefore, the use of such coercive tactics is a plausible method to engage substance-abusing offenders in addiction treatment. Using coercion as a bridge to enter substance abuse treatment is salient as individuals typically do not enter on their own (Janssens, Van Rooij, ten Have, Kortmann, & Van Wijmen, 2004) and court-coerced individuals may be open to change as much as, or even more than, a person that is self-referred (Kelly, Finney, & Moos, 2005). The supervision of

criminal offenders in the residential community as opposed to correctional confinement is known as community corrections; the two most common forms are probation and parole (Bureau of Justice Statistics, 2013). Legally coerced efforts such as probation and parole allow the individual's addiction to be treated while being supervised by an officer.

Parole is defined as the time criminal offenders are released from prison to serve the remainder of their sentence in the community with conditions; the release to parole could be at the discretion of the parole board, a provision of mandatory release to parole, or because of a sentence to supervised release (Bureau of Justice Statistics (BJS), 2013). Probation is when the courts place adult offenders in community supervision through the probation department and is generally in lieu of incarceration (BJS, 2013). At yearend in 2011, there were approximately 4,814,200 adults in community supervision and included probationers, parolees, or any other post-prison supervision (Maruschak & Parks, 2012b). That is, approximately one in every 50 adults were involved in community corrections and one in every 107 adults were incarcerated (Maruschak & Parks, 2012a). Probation and parole admissions in large part were male, had never been married, were between the ages of 18 and 44 and were non-Hispanic White (SAMHSA, 2011a). Approximately one-third of these admissions had less than a high school education, were unemployed, or were not in the workforce (SAMHSA, 2011a). The majority of admissions were enrolled in treatment at least once; the most common substances of abuse were alcohol, marijuana, and methamphetamines (SAMHSA, 2011a).

The term parole stems from the French word *parol*, which when directly translated means "word," as in giving your word of promise (Petersilia, 2000). In 1876, Zebulon Brockway created the first parole system in the United States; he believed that

offenders could be reformed and their treatment should be individualized (Petersilia, 2000). The foundation for parole was primarily to promote offender reformation as opposed to serving a surveillance function or to be punitive (Petersilia, 2000). In 2010, adults who were on parole or on supervised release had higher rates of alcohol or illicit drug abuse or dependence than those not being monitored by parole (SAMHSA, 2011b). In the same year, of the estimated 1.5 million adults supervised by parole, approximately 27% were illicit drug users (SAMHSA, 2011b).

Probation comes from the Latin word *probatio,* which translates to "a period of proving or trial" (Abadinsky, 2008). In the United States, probation began in 1841 when John Augustus hypothesized that diverting nonviolent individuals away from incarceration could be an asset to the public as well as the offender (Travis, 2005). In 2010, adults being monitored by probation were estimated at 5.4 million and approximately 30% of those were illicit drug users (SAMHSA, 2011b). Among adults on probation in 2010, approximately 37% met diagnostic criteria for substance abuse or dependence that was significantly higher than adults not on probation and/or not being monitored by probation (SAMHSA, 2011b).

The key difference between probation and parole is that probation occurs at the front end of the legal system's spectrum whereas parole is at the back end. Although the two serve a very similar function, the two populations' primary difference is that the monitoring through parole is after a period of incarceration whereas probation serves as monitoring generally in lieu of incarceration. Given the significant and continued use of these two forms of supervision, continued research on their effectiveness is needed—primarily in relation to treating individuals that are monitored by these entities.

Substance Abuse Treatment Retention

In the past 20 years, outcome studies have affirmed that treatment retention is associated with decreased unemployment, reduced drug usage, fewer arrests, and a reduction in health risk behaviors with adults in substance abuse treatment (Simpson, 2003). Despite legal involvement and pressure, approximately half of clients in treatment programs for substance abuse as an alternative to incarceration drop out within the first 90 days (Nielsen & Scarpitti, 2002). Of clients involved in substance abuse treatment as an alternative to incarceration, approximately one of every two clients does not complete the recommended course of treatment (Simpson, Joe, & Brown, 1997). Early termination of treatment is positively associated with higher rates of recidivism (Hiller, Knight, & Simpson, 2006); more specifically, those who terminate early have worse outcomes in treatment that includes arrests, drug-related deaths, shorter periods of abstinence, and higher relapse rates (Wallace & Weeks, 2004).

The importance of client retention in substance abuse treatment cannot be understated. It is necessary to determine if factors that predict increased client retention among samples of the general population also predict increased retention in alternative to incarceration substance abuse programs (Brocato & Wagner, 2008). Findings focusing on substance abuse treatment retention are somewhat ambiguous—age, ethnicity, race, drug-using history, drug of choice, and the presence of a co-occurring disorder have had equivocal results (Brocato & Wagner, 2008). Social support (Dobkin, DeCivita, Paraherakis, & Gill, 2002), employment (Cosden et al., 2006), and the motivation to change (Brocato & Wagner, 2008) have been found to be positively associated to increased treatment retention. Presently, little is known about predictors of substance

abuse treatment retention for individuals in treatment as an alternative to incarceration (Brocato & Wagner, 2008). A bulk of the studies published in the past ten years are based on data that is over ten years old and may not accurately represent the predictive factors for treatment retention with this population (Brocato & Wagner, 2008). As this field progresses, more research is needed in identifying predictors for treatment retention for individuals involved in the criminal justice system.

Substance Abuse and Treatment Motivation

The relationship between client factors, attrition rates, and outcomes in substance abuse treatment has an established presence in the literature; however, the outcomes are ambiguous (Rapp, Li, Siegal, & DeLiberty, 2003). A positive relationship between higher motivation, improved treatment retention, and better treatment outcomes has been shown by Simpson and his colleagues (Simpson, Joe, Rowan-Szal, & Greener, 1997). The lack of motivation is one of the most commonly reported reasons for relapse, negative treatment outcomes, noncompliance with treatment, and treatment dropout (Ryan, Plant, & O'Malley, 1995). In the offender rehabilitation literature, treatment attrition is linked to a variety of influences (Olver, Stockdale, & Wormith, 2011); however, the motivation of the offender serves as the central role (Simourd & Olver, 2011). Early models used to conceptualize motivation focus on two forms of motivation: internal and external. A person who has the drive to change that arises from within himself or herself is said to be internally motivated, whereas the person that is experiencing outside pressures or is coerced to change is externally motivated (DeLeon, Melnick, & Tims, 2001).

After a thorough review of the literature, the paramount role that motivation plays in offender substance abuse rehabilitation appears to be supported. A sustained belief in the substance abuse treatment field is that the person that is receiving treatment must want the help. In a study by Conner, Longshore, and Anglin (2009), external pressure, internal motivation, and dramatic relief were measured by certain items on the Treatment Motivation Questionnaire and the Dramatic Relief Scale. There were 465 participants recruited from multiple drug treatment centers and results indicated that the coupling of external pressure and internal motivation could be effective when motivating change (Conner et al., 2009). Similarly, Longshore and Teruya (2006) measured client readiness for treatment and treatment resistance in relation to treatment retention and substance relapse in 1,295 drug offenders who were referred to treatment through the legal system. Their attempt to measure predictive utility of treatment motivation was supported as motivation was seen to predict outcomes in treatment (Longshore & Teruya, 2006).

A majority of research in regards to treatment motivation focuses on the comparison of mandated, or legally coerced, individuals to those that are voluntary. However, little is known about populations under the umbrella of legal coercion and their motivation for treatment. Self-Determination Theory and the Stages of Change Model are most often used to communicate motivation in regards to changing a behavior. The Stages of Change Model is often seen and interpreted as motivation; however, its primary goal is to assign a stage to identify the client's readiness to change, but does not identify their motivation to change. Self-Determination Theory attempts to delineate types of motivation in order to change some behavior.

The Stages of Change Model

The Stages of Change Model is a model that mental health and addiction professionals have used for many years to identify client's readiness to change a particular maladaptive behavior. This model was developed by Prochaska and DiClemente in the early 1980s and is perhaps the most prominent and most commonly used model to monitor behavior change. When applying this model to substance users, the stages are (a) precontemplation: the individual does not identify as having a problem with substances and is not considering change; (b) contemplation: the individual recognizes problems associated with substance use and is considering change; however, they remain ambivalent; (c) preparation: the individual plans to change in the near future; (d) action: the individual is making the change, such as entering treatment for substance use; and (e) maintenance: the individual is working towards preventing a relapse (Conner, Longshore, & Anglin, 2009). The process of change in this model is cyclical as opposed to linear so an individual can move various times through the cycle as well as progress forward or regress to a previous stage (Groshkova, 2010). This model can be used across the spectrum of addictive and health behaviors; it has been regarded by addiction scholars as the standard to conceptualize how behaviors related to addiction change over time (Fraser & Solovey, 2007). The identification of a stage in relation to change is important for clinicians as they tailor their treatment interventions to that stage of change in order to help the client proceed through the stages. Principles from this model have been incorporated into motivational interviewing when working with substance abuse clients.

The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) and the University of Rhode Island Change Assessment (URICA) are inventories that were both conceptualized using the Stages of Change Model. Both inventories are public domain and can be used without permission. The difference in these two inventories is that the SOCRATES asks questions specifically about substance use whereas the URICA addresses the problem in a more general manner. The SOCRATES will be reviewed in greater depth in the next chapter.

Self-Determination Theory

Self-Determination Theory (SDT) explores the link between motivation and an individual's perceived autonomy (Ryan & Deci, 2002). The theory's assumption is that people are naturally curious about their surroundings and innately motivated to explore their surroundings, improve themselves, and correct themselves when they are wrong (Britton, Williams, & Conner, 2008). Due to people having differences in their behavior coupled with a variety of levels of motivation, this theory attempts to identify different levels of motivation that contribute to different levels of self-determination. In this theory, the perceived locus of causality represents a continuum of motivation for the individual that ranges from non-self-determined amotivation at one end, to self-determined intrinsic motivation and autonomy on the other end, with various levels of extrinsic motivation falling between the two extremes (Ryan & Deci, 2000). Individuals with an internal perceived locus of causality perceive themselves as more responsible for their actions, whereas individuals with an external perceived locus of causality perceive something external as coercing or forcing them into an action.

SDT identifies six types of motivation: amotivation, external, introjected, identified, integrated, and intrinsic (Klag, Creed, & O'Callaghan, 2010). The least self-determined behavior is amotivation—the individual is not able to regulate their own behavior and believes tasks to be too difficult (Deci & Ryan, 1985). Externally motivated individuals behave or act in a way that avoids a negative consequence or gains a reward (Klag et al., 2010). Introjected motivation is less external than the previous forms of motivation; however, individuals are only partially internalized and behaviors are reinforced by internal pressure from which the individual behaves in a certain way to avoid guilt, shame, or anxiety and to maintain acceptance of themselves and others (Klag et al., 2010). Identification is the process where individuals identify and accept the importance of behavior; however, even though the behavior is becoming more autonomous, it is still externally motivated (Deci & Ryan, 2000). The next motivational stage on the continuum, integration, involves the identification and acceptance of how important behavior is as well as the ability to integrate this understanding with other aspects of their identity (Deci & Ryan, 2000). Intrinsically motivated individuals are autonomous and engage in activities naturally due to the pleasure inherent in them (Klag et al., 2010).

The importance of intrinsic motivation has been established in the literature. In a study by Wild, Cunningham, and Ryan (2006), motivation was assessed by the Treatment Entry Questionnaire (TEQ) completed by 300 clients entering substance abuse treatment. The primary finding in this study was that motivation that was more internalized was linked to positive treatment outcomes, whereas motivation that was more externally driven was associated with worse treatment outcomes. It was concluded that a client's

rationale for entering treatment is paramount in understanding their motivation to be treated (Wild et al., 2006). In a separate study, Klag et al. (2010) assessed client's autonomous motivation while in treatment. In this study, participants included 350 substance users from therapeutic communities in New South Wales and Australia. They found that individuals who were less externally motivated and possessed a more self-determined standpoint in regards to treatment were more engaged in the process of therapy (Klag et al., 2010). The role of intrinsic motivation in substance abuse treatment is important, as individuals who are intrinsically motivated are associated to more positive treatment outcomes. The development and use of inventories can help assess motivation in an effort to tailor treatment interventions.

The Treatment Motivation Questionnaire (TMQ) was designed to identify an individual's perceived locus of causality and initial motivation to enter treatment. The TMQ contains the following four factors based on SDT: external reasons, internalized reasons, help seeking, and confidence. For the purposes of this research, internalized reasons are the sole focus. This inventory will be reviewed in greater depth in the following chapter.

Criminal Justice System Problem Severity and Motivation

Problem severity is the individual's perception as to how severe they perceive their situation as being. The problem severity level, often referred to as "hitting bottom" (Bell, Montoya, Richard, & Dayton, 1998), as well as the view of "maturing out," is an important origin of treatment motivation (Winick, 1963). In essence, "hitting bottom" is where motivation is increased due to the psychological distress experienced due to having

a variety of issues related to substance using behaviors. Such behaviors ultimately influence the individual to reduce these problems to alleviate the psychological distress (Hiller et al., 2009). The "maturing out" concept may be a motivational cue primarily due to clients aging and getting "wiser" or "tired" of the dangerous lifestyle linked to addictive behaviors (Hiller et al., 2009). In 2009, Hiller et al. explored the relationship between motivation, problem severity, and age by studying 661 male inmates from four different Kentucky prisons from two groups: inmates enrolled in substance abuse treatment programs and inmates who were not in treatment. The authors found that overall motivation was low in both groups, a finding that suggests that the program did not have an impact on treatment motivation (Hiller et al., 2009). However, higher problem severity was associated with higher levels of motivation in the substance abuse treatment program group of inmates as well as the inmates who were not in treatment. This finding is consistent with "hitting bottom," as elevated levels of mental health, family issues, physical health problems, and employment problems were related to increased treatment motivation (Hiller et al., 2009). Age was also a predictor of increased motivation, so "maturing out" is a plausible explanation for motivation among prisoners (Hiller et al., 2009). Overall, it appears that the higher the problem severity coupled with the "maturing out" of addictive behaviors is associated with increased motivation among prisoners.

Rationale for Research

As offender motivation serves as a central role (Simourd & Olver, 2011) in treatment retention and improved treatment outcomes, continued research in predicting

motivation with specific offender populations is needed. In this research, two populations in community corrections are explored: individuals monitored by probation as an alternative to incarceration and individuals monitored by parole that are released from prison to serve the remainder of their time with specific conditions. Typically, if an individual is granted probation it is in lieu of incarceration, or they serve minimal time and are released to the supervision of the probation department. In the determination of which individuals receive probation as opposed to incarceration, the presentence investigation report (PSI) is reviewed in order to make a decision. In general, the more serious the offense, the more likely the offender is to receive incarceration. In a dated study, Petersilia and Turner (1986) attempted to clarify what "serious" meant in regards to the sentencing of incarceration by reviewing criminal records from 16,500 males who committed felony crimes. They found that the individual was more likely to be sentenced to incarceration if they were addicted to drugs, had at least two prior criminal convictions, were on community supervision at the time of arrest, had at least two conviction counts, used a weapon during the offense, or seriously injured someone (Petersilia & Turner, 1986).

Facilitating a successful transition from prison to the community has long been an issue for corrections and treatment professionals alike. It has been confirmed that released prisoners need more help than in the past because today's prisoners have served longer sentences, are more disconnected from their families and social contacts, are less educated, and have higher levels of untreated mental health and substance abuse conditions (Petersilia, 2004). These issues, when coupled with legal barriers that impact employment, housing, and eligibility for welfare services, pose significant problems in

the individual's rehabilitation. However, given the association of higher problem severity to life problems such as employment and mental health issues, as well as "maturing out" of addictive behaviors in relation to motivation, it can be assumed that individuals monitored by parole are more linked to higher problem severity and "maturing out" of addictive behaviors. The association with higher problem severity and "maturing out" of addictive behaviors is linked to increased motivation. Although it is likely that individuals monitored by probation experience some of the same issues, it is more likely that those monitored by parole experience a higher problem severity and "maturing out" of addictive behaviors. Therefore, given the consideration of motivation in relation to problem severity and "maturing out," the parole population is more likely to be motivated in their treatment, therefore achieving better treatment outcomes. This increased motivation is associated with benefitting from treatment and parolees are therefore more likely to exhibit change behaviors.

Evaluation of Research Literature

The use of legal coercion, such as probation and parole, provides a pathway for the individual to be treated; however, the client may not be motivated because they may not feel that the decision was theirs. Motivation has long been seen as the common denominator for treatment success in offender populations. This research study attempted to answer the problem statement by determining the relationship between internal motivation and the relative stage of change among individuals monitored by probation and parole. To do this, inventories were used that stem from the Self-Determination

Theory and the Stages of Change Model. The inventories are explained in detail in the following chapter.

The information presented in this chapter was meant to provide a foundation and a baseline for understanding the current study. While this information is comprehensive, it is not exhaustive; however, the most relevant literature to facilitate understanding of the research study was presented. For example, there are other substance related disorders in the *DSM-IV-TR* that are not mentioned, as well as other legal attempts at drug diversion that are not included. Unfortunately, due to the heavy presence of motivation, Self-Determination Theory, and the Stages of Change Model in the literature, not all information could be included. Although there is much information that is not included, the information that is included is relevant for a thorough understanding and thus provides a platform for the study conducted.

Chapter Summary

The abuse of substances is a societal problem that spans across all populations. Historically, attempts at diverting the use of substances has primarily been punitive and has never truly addressed the problem of addiction. Individuals who are referred to substance abuse treatment are more often coerced by the legal system, family or friends, or through their employer; therefore, the decision to enter may be primarily due to external influences. Although entrance to treatment is typically coerced, this may be necessary for an individual to be treated, as he or she may not make the decision on his or her own. Motivation has been seen as having a central role in the retention of clients in treatment and for the individuals to have better treatment outcomes. The use of probation

and parole services has been a common option for the criminal justice system to address addiction. Probation serves as an opportunity for the individual to avoid jail time or serve minimal time and be treated while being supervised. Parole provides the opportunity for an inmate who has to serve the remainder of their prison sentence in the community. In regards to problem severity, it can be hypothesized that parolees have a higher problem severity and a tendency for "maturing out" of addictive behaviors; therefore, they have an increased motivation in treatment to alleviate psychological distress. This research is intended to address intrinsic motivation and relative stage of change differences between two populations: individuals monitored by probation and individuals monitored by parole.

Chapter 3: Research Design and Method

Chapter Overview

This chapter serves as an overview of how the study was conducted. The problem statement is reviewed along with the hypotheses and their rationale, which aim to answer the problem statement. The subjects who participated in the study follow this information. Following the participant involvement, the items used in this study, as well as the procedure and how they were coded, are documented. Lastly, a list of the appendices is provided.

Problem Statement

What is the relationship between internal motivation and relative stage of change among individuals monitored by county probation and state parole?

Hypotheses and Their Rationale

Hypothesis 1. State parole clients will have higher levels of internal motivation than county probation clients.

Rationale. In testing the first hypothesis, the literature on internal motivation and problem severity was reviewed. Motivation served as the central role in offender treatment success (Simourd & Olver, 2011); more specifically, the combination of internal motivation and external pressure serve as a vehicle when promoting motivational change (Conner et al., 2009). Problem severity is often referred to as "hitting bottom," which could be described as the point at which the experienced psychological distress from instances related to substance using behaviors increases the person's motivation to

alleviate the stress (Hiller et al., 2009). “Maturing out” is a concept where the client is “tired” of or “wiser” to the lifestyle once lived, so motivation is increased to avoid that lifestyle (Hiller et al., 2009). Considering “hitting bottom” and “maturing out” in relation to motivation, it is more likely that those monitored by parole are internally motivated in treatment. This hypothesis helps answer the first research question by providing a level of internal motivation for comparison among county probationers and state parolees that are in substance abuse treatment.

Hypothesis 2. Within the areas of recognition, ambivalence, and taking steps, state parole clients will score higher than county probation clients.

Rationale. The areas mentioned in the second hypothesis correlate to the Stages of Change Model. The process of change in this model is cyclical as opposed to being linear so the individual can move through the cycle various times, as well as progress forward or regress backward through the stages (Groshkova, 2010). The identification of the stage of change is important for the clinician to gauge the individual’s readiness to change in order to tailor their treatment interventions. Assuming the clients monitored by parole are more intrinsically motivated, it is more likely that they identify that they have a problem, are considering change, are planning to change in the near future, or are presently making the necessary change. The areas in the second hypothesis reflect this model so it is more likely that parolees will score higher than probationers will in each area. This hypothesis helps answer the second research question by providing a score in each of the mentioned stages to determine if there is a significant difference in the desire to change among probationers and parolees.

Significance Level

For both hypotheses, alpha was set at the .05 significance level, which means that there is a 5% chance of making a Type I error. This would mean that in this study—for both hypotheses—there is a 5% chance that the null hypothesis is rejected and the research hypothesis is supported when it is actually false. A Type II error occurs when the null hypothesis is false and it is not rejected. In essence, the study is seen as inconclusive when in reality the research hypothesis is supported. These two conflicting concerns are problematic in research; however, this is usually resolved by assigning a .05 (5%) or .01 (1%) significance level (Aron et al., 2009).

Research Design

Kind of research method. The method of research employed in this study is a quasi-experimental counterbalanced design. This design is quasi-experimental because the random assignment of groups is not used; rather, the groups were determined by the type of community supervision the participant was under.

Operational definitions of all research variables. The dependent or outcome variable is the variable that is trying to be predicted, whereas the independent or predictor variable is the variable that determines or causes the dependent variable (Hagan, 2010).

Hypothesis 1. In this hypothesis, the internal motivation of state parole clients and county probation clients are being explored. Therefore, the independent variables are county probation clients and state parole clients. The dependent variable is the level of the internalized reasons scale on the Treatment Motivation Questionnaire.

Hypothesis 2. In the second hypothesis, the independent variables remain the same, county probation clients and state parole clients. The dependent variables in this hypothesis are the levels in the areas of recognition, ambivalence, and taking steps on both the SOCRATES-8A and the SOCRATES-8D.

Demographic variables. The information for the demographic variables was obtained by the answers on the Demographic Questionnaire (see Appendix C.) The following information was collected: gender, age, ethnicity, education level, and type of community supervision.

Levels of Measurement.

Hypothesis 1. In this hypothesis, the participants monitored by county probation and state parole are both nominal variables. The levels of internal motivation obtained on the Treatment Motivation Questionnaire are an equal-interval numeric variable.

Hypothesis 2. In the second hypothesis, the probationers and parolees are both nominal variables. The scores obtained from the recognition, ambivalence, and taking steps levels on the SOCRATES-8A and SOCRATES-8D are rank-order variables.

Demographic variables. On the Demographic Questionnaire, the gender, age, ethnicity, education level, and type of community supervision are all nominal variables.

Kinds of measurements for all variables. In any research, it is important to review the measures and procedures to determine which may cause reactivity in participants. In this study, the following measures were given in the order listed: Demographic Questionnaire, Treatment Motivation Questionnaire, SOCRATES-8A, and SOCRATES-8D. The Demographic Questionnaire contains questions that are mostly unobtrusive, therefore not very reactive. The most obtrusive question appears to be the

participants' age; however, it is presented as categories as opposed to a specific age. The Treatment Motivation Questionnaire (TMQ) asks questions surrounding motivation to be in treatment, which is not very obtrusive. The SOCRATES-8A and SOCRATES-8D are essentially the same—other than the substance asked about (alcohol or drug), the questions are identical. These may be the most obtrusive of the measures as they request information about alcohol or drug use. Overall, the procedure and measure have very low reactivity, as the study is unobtrusive.

Diagram of design. Individuals monitored by county probation and individuals monitored by state parole that were involved in substance abuse treatment were included in this study. The relationship between these two groups is that they are both a form of community corrections as they are both being supervised in the community as an alternative to incarceration. The primary difference is that probationers are typically monitored in the community in lieu of incarceration, whereas parolees are typically incarcerated and then released to serve the remainder of their time in the community. The TMQ is a measure of motivation, whereas the SOCRATES-8A and SOCRATES-8D provides information on their willingness to change behavior involving drug or alcohol use.

Materials

There was no unusual equipment or materials needed to perform this research study. The participants were provided with a pen to complete the Informed Consent and all of the inventories requested.

Procedures

The research conducted was approved by the Institutional Review Board (IRB) at The Chicago School of Professional Psychology. The following information provides the IRB-approved procedure for collecting data with human subjects. Participants were recruited from two agencies in a large metropolitan city. Data from the subjects were only collected once. Times and dates were coordinated with and approved of by staff from both agencies to allow the researcher on the premises. The researcher randomly selected participants and followed the Recruitment Script (see Appendix A) to determine subject eligibility for the study. Subjects that were eligible for the study reviewed the Informed Consent (see Appendix B) and were asked to sign and date it in order to consent to the study. The researcher then co-signed the document. After completion of the Informed Consent, each subject was asked to complete a 5-question Demographic Questionnaire (see Appendix C). Permission was obtained to use all of the surveys (see Appendix D). Following this, each participant was asked to complete the 19-question Stages of Change Readiness and Treatment Eagerness Scale-8A (see Appendix E), followed by the 19-question Stages of Change Readiness and Treatment Eagerness Scale-8D (see Appendix F). Debriefing occurred immediately after completion of the above tasks and the researcher was available to answer any questions that participants had.

Participants

Involved agencies. Individuals were recruited to participate in this study from two agencies in a large metropolitan city. The first agency provides a variety of treatment services counseling addiction and mental health. Research was conducted from their

outpatient addiction clinics. The second agency provides residential substance abuse treatment and though this location is residential, the treatment services offered by each agency are similar.

Criteria for participation. Participants were requested by the researcher from the agencies mentioned above. Involvement in this study was voluntary and participation was requested by individuals enrolled in one of the two agencies who were also being monitored by the probation department or the parole department. Participants that were not monitored by one of the two entities were excluded from the study. In order to participate, individuals had to be between the ages of 18 and 65. Individuals that were under 18 and over 65 were excluded. Since materials for the study were only available in English, individuals who did not consider English to be their primary language were also excluded.

Method of sampling. Participants were selected from two agencies in a large metropolitan city. The primary population characteristic was that the participant must be enrolled in one of the two programs and be monitored by the probation department or the parole department. Since the sampling field was narrow, the sampling method is a stratified random sample. The demographic of the population limited the locations for sample participants; therefore, this form of sampling was used.

Instrumentation

Demographic questionnaire. This questionnaire provided some general information on the individuals who participated in this research. There were five questions that were asked and the participant was instructed to circle the response that

best described them. Gender was asked first. To determine gender, the participants were given the choice between male and female. The second question requested the age and participants were given the following categories: 18–25, 26–35, 36–45, 46–55, and 56–65. The next question asked about ethnic background. Participants were given the options of White, Black, Hispanic, Asian, and American Indian, followed by another category labeled Other. If the participant did not identify as being one of the specifically mentioned ethnicities, they could write their ethnicity on a provided line. The fourth question requested information regarding the participant's highest level of education. The following choices were given: GED, high school diploma, associate's degree, bachelor's degree, master's degree, and doctorate degree. If they had not achieved any of these, then they could fill in their highest level of education on the provided line. Lastly, each participant was to choose which legal entity they were being monitored by, probation or parole. The Demographic Questionnaire can be found in the appendix section as Appendix C.

Treatment Motivation Questionnaire (TMQ). The TMQ is a 26-item inventory that is based on Deci and Ryan's Self-Determination Theory. The Likert Scale used on the TMQ ranges from 1 (*being not at all true*) to 7 (*being very true*). The TMQ contains the following subscales: External Reasons (4 items), Internalized Reasons (11 items), Help Seeking (6 items), and Confidence (5 items). Scores in these four subscales were determined by computing averages of the responses; the higher the average in the subscales indicates a higher level of that factor.

Unfortunately, the inventory does not contain reliability and validity data. However, Cahill et al. (2003) used the TMQ to assess motivation for treatment and found

that the subscales' predictive validity is supported. The TMQ's convergent validity is supported by assessing TMQ scores, clinicians' ratings of client motivation, and problem severity (Ryan, Plant, & O'Malley, 1995).

Stages of Change Readiness and Treatment Eagerness Scale-8A/8D (SOCRATES). The SOCRATES is an experimental inventory used to assess readiness to change in the use of substances and consists of three factorially derived scales: recognition, ambivalence, and taking steps (Miller & Tonigan, 1996). Version 8A and 8D are almost identical. The questions asked are the same; however, on the 8A version they are alcohol related and on the 8D version they are drug related. For example, on 8A, Question 1 reads, "I really want to make changes in my drinking," whereas on 8D, Question 1 reads, "I really want to make changes in my use of drugs." Each inventory has 19 questions based on a Likert Scale ranging from 1 (*No!/Strongly Disagree*) to 5 (*Yes!/Strongly Agree*). Unfortunately, there is limited reliability and validity data given by the publisher. The following Cronbach's alpha levels were presented by the publishers: ambivalence (.60–.88), recognition (.85–.95), and taking steps (.83–.96) (Miller & Tonigan, 1996). Based on these levels, it appears that internal consistency reliability is supported. Also, the inventory possesses good test-retest reliability (Miller & Tonigan, 1996).

Data Processing

Demographic questionnaire. The purpose in collecting this data is to provide the reader with general demographic information on the individuals that participated in this research. These descriptive statistics obtained from this questionnaire help describe the

characteristics of the sample in this study. There were no inferences drawn from the Demographic Questionnaire, as its purpose was to provide a description of the participants' demographic information. Although no inferences were drawn, this questionnaire served an important function in separating participants on probation and parole.

Treatment Motivation Questionnaire. The TMQ is a self-report inventory that was dispersed to the participants. The only subscale used on this inventory was the Internalized Reasons subscale. Upon completion, the corresponding selections to each of the items that measured Internalized Reasons were transferred to the corresponding location on the TMQ scoring sheet. The Internalized Reasons scores were added and then divided by 11 to determine the average score for Internalized Reasons. This was completed for all participants. The inferential statistic used with this inventory was a *t* test for independent means. This statistic focuses on the differences between the means of two different groups.

Stages of Change Readiness and Treatment Eagerness Scale-8A/8D. The SOCRATES-8A and SOCRATES-8D are self-report inventories that were dispersed to the participants. Each inventory consisted of 19 questions that were identical in regards to the content of the question; however, the substance in question (alcohol or drugs) was different. Upon participant's completion of these inventories, their selections were transferred onto the SOCRATES Scoring Form under their appropriate stage: Recognition, Ambivalence, or Taking Steps. These three stages directly correlate to the Stages of Change Model discussed earlier. The Recognition stage is associated with the precontemplation stage in the Stages of Change Model. In this category, high scorers tend

to acknowledge they are having problems in relation to their substance use, whereas low scorers deny their substance use is causing problems and do not desire to change (Miller & Tonigan, 1996). The Ambivalence stage is correlated to the contemplation stage in the Stages of Change Model. High scorers in the Ambivalence stage wonder if they are in control of their substance use. This reflects ambivalence or uncertainty, whereas low scorers do not wonder if they are in control of their substance use. A low score can be seen as the person knowing their use is causing problems or that they do not know they have a problem (Miller & Tonigan, 1996). Lastly, the Taking Steps stage is closely associated to the Action stage in the Stages of Change Model. Individuals who score high on this scale indicate that they are doing things to make positive change in relation to their substance use, whereas low scorers report that they are not doing things to change their substance use (Miller & Tonigan, 1996). The three columns were then added for each stage for a stage total. After the totals were determined, the SOCRATES Profile Sheet was used to determine a level of each stage based on the stage total score. The numeric stage totals were then converted into a "low," "medium," or "high" nominal variable in that particular stage where "low" was categorized by the number 1, "medium" was categorized by the number 2, and "high" was categorized by the number 3. Numeric totals of 10–30 were "low," 40–60 were "medium," and 70–90 were "high." This was completed for all participants. A chi-square test for independence was the inferential statistic used as this design involves two nominal variables: the population type (probation or parole) and the corresponding coded nominal variable (1, 2, or 3) based on their numeric score.

Assumptions and Limitations in Method

Study assumptions. It was assumed that the data from the Treatment Motivation Questionnaire would follow a normal curve. The data from the SOCRATES-8A and SOCRATES-8D was assumed to follow a chi-square distribution. It was assumed that the two populations were legally coerced due to their legal involvement as opposed to being formally or informally coerced. It was assumed that the participants were sober at the time of administration and that they were honest when completing all of the self-report tasks. It was also assumed that there would be more males as participants. Lastly, it was assumed that there were no comorbid conditions or intellectual disabilities present in the participants.

Study limitations. A significant limitation in this study was that the collected data was all self-reported. Although honesty was assumed, it was vulnerable due to the self-report nature of the inventories. Another limitation in this study was that the type of coercion was assumed to be legal as opposed to assessing for the other types of coercion. Substance use diagnoses were not considered for comparison; therefore, the degree and type of substance use was not distinguished in this sample. Another limitation was that there was no evaluation of comorbid conditions or intellectual disability, which could affect the study. Lastly, the Treatment Motivation Questionnaire (TMQ) was not used to its fullest capacity as only the Internalized Reasons were considered in this study.

Data analysis. After the participants completed all measures and all steps in each of the measures were completed, the data was analyzed. Data analysis was completed by using SPSS Version 20 to determine statistical significance.

Ethical Assurances

The ethical guidelines for research with human subjects put forth by the American Psychological Association (APA) were stringently followed. The research conducted was approved by the Institutional Review Board (IRB) at The Chicago School of Professional Psychology. All IRB-approved procedures were followed for screening and recruitment, completion of the Informed Consent, administration of the measures, and debriefing. All data was collected within the IRB-approved timeframe. Individuals had the right to decline to be in the study and those that began the study had the opportunity to withdraw their involvement from the study at any time with no repercussions.

To secure anonymity of responses, the Informed Consents were held separately from the Demographic Questionnaire, TMQ, SOCRATES-8A, and the SOCRATES-8D for both populations. Although names were associated with the study, responses could not be linked to a specific participant due to the study being anonymous.

Chapter Summary

This study aimed to identify the relationship that internal motivation and a relative stage of change has on treatment motivation and readiness to change among clients monitored by probation and clients monitored by parole in substance abuse treatment. The use of the Treatment Motivation Questionnaire (TMQ) helped identify the levels of internal motivation of both populations for comparison. The SOCRATES-8A and SOCRATES-8D helped identify a relative stage of change of both populations for comparison. A demographic questionnaire was also given to identify key demographic information of the participants. The research design was a quasi-experimental

counterbalanced design, as the random assignment of the groups was not used; rather, they were identified by the type of community supervision they were receiving. Participants were selected from two agencies in a large metropolitan city. Therefore, since the sampling field was narrowed, the method of sampling was a stratified random sample. A *t* test for independent means was used to analyze the data from the TMQ and a chi-square test for independence was used to analyze the data from the SOCRATES-8A and SOCRATES-8D.

Chapter 4: Findings

Chapter Overview

The function of this chapter is to report the findings based on the proposed study and methodology. The validity and reliability of the study and instruments will be reviewed along with the hypotheses of the study. The demographic data of the participants will be reported, followed by the results of the inferential statistical analyses. The additional findings in the study, as well as an analysis of the research design and discussion, will follow. Please refer to the appendix section to review the inventories used for further clarification.

Findings

Validity. Although face validity and content validity are judgmental and typically non-empirical in nature, they are important to include in the explanation of the findings of this study. Both instruments, the Treatment Motivation Questionnaire (TMQ) and the Stages of Change Readiness and Treatment Eagerness Scale-8A/8D (SOCRATES-8A/8D), appear at face value to measure what is attempted to measure: internal motivation and a relative stage of change. After a review of the questions on both instruments, the content asked provides information that pertains to the research questions that were posed; therefore, content validity appears to be preserved. Construct validity is preserved as the measures do in fact measure what it was designed to measure.

Reliability. Reliability is exhibited when there is a consistent replication of findings when repeatedly measured. Unfortunately, due to the nature of this study, the population was only measured once; therefore, test-retest reliability could not be

identified. Multiple forms of reliability could not be preserved, as there were no alternative forms of the instruments available.

Hypotheses.

Hypothesis 1. State parole clients will have higher levels of internal motivation than county probation clients.

Hypothesis 2. Within the areas of recognition, ambivalence, and taking steps, state parole clients will score higher than county probation clients.

Descriptive statistics. The demographic questionnaire was used to provide the descriptive statistics of the sample population. In the study, there were a total of 57 participants: 28 probationers and 29 parolees. There were 46 male participants, which constituted approximately 80.7% of the overall participants. The primary age group represented was individuals aged 36–45, as there were 19 participants (33.3%) within this group. The Hispanic population had 21 participants (36.8%), the Black population had 20 participants (35.1%), and the combination of the two constituted a majority (71.9%) of the participants. In regards to education, 22 participants (38.5%) had a high school diploma, a finding that represented a majority of the participants. Table 1 provides the descriptive statistics of the above dimensions within each population: probationers and parolees.

Table 1

Descriptive Statistics for the Sample Population

Demographic	Probation	Parole
Gender		
Male	23	23
Female	5	6
Age		
18–25	1	5
26–35	11	6
36–45	9	10
46–55	5	7
56–65	2	1
Ethnicity		
White	6	4
Black	9	11
Hispanic	12	9
Asian	0	0
American Indian	1	3
Other:		
Black/Hispanic	0	1
Samoan	0	1
Education		
GED	9	6
High School Diploma	11	11
Associate's Degree	1	0
Bachelor's Degree	0	0
Master's Degree	0	0
Doctorate Degree	0	0
Highest Completed		
7th	1	0
8th	1	1
10th	1	2
11th	4	9

Inferential Statistics

Hypothesis 1. By accepting the research hypothesis, it can be said that parolees have higher levels of internalized motivation in substance abuse treatment when compared to probationers in substance abuse treatment. An independent-samples *t* test was run to determine if there were differences in internalized motivation between probationers and parolees in substance abuse treatment. When using the TMQ to measure internalized motivation, parolees ($M = 5.79$, SD = 1.38) were more internally motivated than probationers ($M = 5.65$, SD = 1.58). There was homogeneity of variance for internalized motivation scores for probationers and parolees, as assessed by Levene's Test for Equality of Variances ($p = .760$). Parolee mean internalized motivation score was -.14, 95% CI [-0.93 to 0.65] higher than probationer mean internalized motivation score. There was a statistically significant difference in internalized motivation scores with parolees scoring higher ($t(55) = 1.67$, $p = .36$). Due to the statistically significant difference between the means ($p < .05$), the null hypothesis is rejected and the research hypothesis is accepted. There were no outliers in the data assessed by the review of a boxplot. Internalized motivation scores for each level of community supervision (probation and parole) were normally distributed as assessed by Shapiro-Wilks test ($p>.05$), and there was homogeneity of variances as assessed by Levene's Test for Equality of Variances ($p = .760$). Internalized motivation, as assessed by the TMQ, was higher in the parolee population ($M = 5.79$, $SD = 1.38$) than in the probation population ($M = 5.65$, $SD = 1.58$), which was a statistically significant difference, $M = -.14$, CI [-0.93 to 0.65], $t(55) = 1.67$, $p = .36$.

Effect size. The effect size helps identify how much something changes after some intervention. By identifying the effect size, it will help identify how much separation there is between the two populations made up of probationers and parolees. The standard deviation of internalized motivation from clients on probation was 1.58. The standard deviation of internalized motivation from clients on parole was 1.38. The mean scores of internalized reasons for probationers were 5.65 and for parolees were 5.79. Typically, population parameters are unknown; therefore, the population standard deviation was figured by finding the pooled estimate of the population variance. The effect size was computed to be .07, which is considered to be a small effect size; therefore, there is significant overlap in the populations.

Hypothesis 2. The inferential statistic used to assess the second hypothesis was the chi-square test for independence. This statistic was used to determine if there were differences in each of the stages (Recognition, Ambivalence, and Taking Steps) of the SOCRATES-8A and the SOCRATES-8D between probationers and parolees. The stages for both of these instruments are identical and they correlate to the Stages of Change Model. The chi-square test for independence was computed six times, as the three stages within both instruments were assessed for differences within each stage between probationers and parolees. The following shows the results of each of the six chi-square tests for independence. For each of the tests, the Pearson chi-square row was used as opposed to the Fisher's Exact Test row due to the stages (Recognition, Ambivalence, and Taking Steps) having more than two categories (1 = *low,* 2 = *medium*, 3 = *high*). Because of this, the Fisher's Exact Test could not be used.

Test 1. A chi-square test for independence was conducted between the SOCRATES-8A Recognition nominal level and the type of community supervision (probation and parole). There was a statistically significant association between this level and the type of community supervision, X2(2) = 1.383, *p* = .501. Four cells had an expected count of less than five. There was a small effect size between this level and the type of community supervision, Cramer's V = .156, *p* = .501. Due to this finding, state parole clients scored significantly higher than probation clients in the Recognition nominal level of the SOCRATES-8A, a finding that partially supports the second hypothesis. Therefore, parolees are more likely to acknowledge they are having problems related to their drinking and express a desire for change.

Test 2. A chi-square test for independence was conducted between the SOCRATES-8A Ambivalence nominal level and the type of community supervision (probation and parole). There was a statistically significant association between this level and the type of community supervision, X2(2) = 3.206, *p* = .201. Two cells had an expected count of less than five. There was a small effect size between this level and the type of community supervision, Cramer's V = .237, *p* = .201. As a result, parolees scored significantly higher than probationers in the Ambivalence nominal level of the SOCRATES-8A, a finding that also partially supports the second hypothesis. Therefore, parolees tend to be more open to reflection and wonder if they are in control of their alcohol use.

Test 3. A chi-square test for independence was conducted between the SOCRATES-8A Taking Steps nominal level and the type of community supervision (probation and parole). There was a statistically significant association between this level

and the type of community supervision, X2(2) = .369, p = .832. All expected cell frequencies were greater than five. There was a small effect size between this level and the type of community supervision, Cramer's V = .080, p = .832. Due to this finding, parolees scored significantly higher than probationers in the Taking Steps nominal level of the SOCRATES-8A. This partially supports the second hypothesis. Therefore, parolees are more likely to already be doing things to make a positive change.

Test 4. A chi-square test for independence was conducted between the SOCRATES-8D Recognition nominal level and the type of community supervision (probation and parole). There was a statistically significant association between this level and the type of community supervision, X2(2) = .241, p = .886. All expected cell frequencies were greater than five. There was a small effect size between this level and the type of community supervision, Cramer's V = .065, p = .886. Due to this finding, parolees scored significantly higher than probationers in the Recognition nominal level of the SOCRATES-8D, which partially supports the second hypothesis. As a result, parolees are more likely to acknowledge they are having problems related to their drug use and express a desire for change.

Test 5. A chi-square test for independence was conducted between the SOCRATES-8D Ambivalence nominal level and the type of community supervision (probation and parole). There was a statistically significant association between this level and the type of community supervision, X2(2) = 3.596, p = .166. All expected cell frequencies were greater than five. There was a small effect size between this level and the type of community supervision, Cramer's V = .251, p = .166. Due to this finding, parolees scored significantly higher than probationers in the Ambivalence nominal level

of the SOCRATES-8D, which partially supports the second hypothesis. Therefore, parolees tend to be more open to reflection and wonder if they are in control of their alcohol use.

Test 6. A chi-square test for independence was conducted between the SOCRATES-8D Taking Steps nominal level and the type of community supervision (probation and parole). There was a statistically significant association between this level and the type of community supervision, X2(2) = .671, p = .715. Two cells had an expected count of less than five. There was a small effect size between this level and the type of community supervision, Cramer's V = .108, p = .715. Due to this finding, parolees scored significantly higher than probationers in the Taking Steps nominal level of the SOCRATES-8D, which partially supports the second hypothesis. Therefore, parolees are more likely to already be doing things to make a positive change.

In review, all six chi-square tests for independence yielded significant results; therefore, the null hypothesis is rejected and the research hypothesis is accepted. By accepting the research hypothesis, it can be said that in each of the stages of Recognition, Ambivalence, and Taking Steps, parolees in substance abuse treatment scored higher than probationers in substance abuse treatment.

Additional Findings

In 2008, the Substance Abuse and Mental Health Services Administration (SAMHSA) obtained national data on the characteristics of probationers and parolees aged 18 and older. This data, called the Treatment Episode Data Set (TEDS), provided a snapshot of the characteristics of these populations. When comparing their national

results to the sample in this study, there is some additional information that can be identified for consideration. Approximately 76% of admitted probation or parolees were male (Substance Abuse and Mental Health Services Administration, 2011a) and in the study sample, the males were composed of approximately 81%. This finding seems consistent with the national data. In regards to national results of education, approximately 44% had either a GED or a high school diploma (SAMHSA, 2011a); however, in the study sample, approximately 65% had a GED or high school diploma. The findings were somewhat similar; however, the data in the study sample generally supports a higher education level of the participants, as a majority had obtained a GED or high school diploma. Probationers and parolees aged 18–34 were the highest represented of the national data at 57% of admissions aged 18 or older (SAMHSA, 2011a).

In the study sample, 63% of the participants were between the ages of 26 and 45, which represented a majority of the participants. The national data and the study sample overlap; however, it appears that the national data's highest populated age range is younger than that of the study sample. Perhaps the most interesting additional finding was in comparing race in both studies. In 2008, White/non-Hispanic probationers and parolees accounted for approximately 52% of the national population (SAMHSA, 2011a), whereas in the study sample, approximately 18% identified as being White and the primary population was Hispanic (37%) and Black (35%). When comparing the national data to the study sample, gender, age, and education were somewhat comparable. Race was significantly different as White/Non-Hispanic probationers and parolees accounted for the highest proportion in the national data; however, in the study sample, Hispanic and Black probationers and parolees represented a majority of the participants.

Analysis of Design

Hypothesis 1. The first hypothesis explored the role that internal motivation played in substance abuse treatment in probation and parole populations. By focusing on the Internalized Reasons scales on the Treatment Motivation Questionnaire (TMQ) for both populations, an independent samples *t* test was conducted to compare both means to determine if there was a significant difference. It was hypothesized that parole clients in substance abuse treatment will have higher levels of internal motivation than probation clients in substance abuse treatment. The null hypothesis was rejected and the research hypothesis was supported; therefore, based on the study sample, parolees had higher levels of internal motivation for substance abuse treatment.

Hypothesis 2. The second hypothesis compared probationer and parolee willingness to change when compared to the Stages of Change Model. The SOCRATES-8A and SOCRATES-8D were used to identify scores on each of the following levels: Recognition, Ambivalence, and Taking Steps. Recognition is linked to the Precontemplation stage, Ambivalence is associated with the Contemplation stage, and Taking Steps is correlated to the Action stage. Six chi-square tests for independence were conducted due to the three levels within both inventories to be compared. It was hypothesized that in each of the three levels, parolees would score higher probationers. The null hypothesis was rejected and the research hypothesis was supported; therefore, based on the study sample, parolees in substance abuse treatment had higher levels of Recognition, Ambivalence, and Taking Steps than probationers in substance abuse treatment.

Data Collection and Design Weaknesses

In every study, unforeseen events can happen that affect the results or the ability to generalize to the overall population from the sample obtained. In this study, at the time of data collection, some of the participants were unsure of which community supervision population (probation or parole) to select. Participants stated that although they were released from prison, they were being monitored by a probation officer. Also, both forms of community supervision were circled on some of the demographic questionnaires. Due to this issue, community supervision selections were clarified if they were both circled on the demographic questionnaire or if the participant was unsure how to respond. Although this was an unforeseen circumstance, the issue was corrected in an effort to preserve the validity of the study results. In this study, there were 57 participants. Of them, 28 were probationers and 29 were parolees. Although this number is satisfactory for the study, more participants would provide a larger sample that could then be better generalized to both populations. Unfortunately, given time constraints and participant availability, only 57 participants met inclusion criteria and were willing to engage in the study.

Standard deviation. Although the means of scores are an important component when describing the central tendency, the standard deviation is also important to include as it describes the spread of the scores. In this study, the standard deviation was computed only for the first hypothesis as the second hypothesis only included nominal variables as opposed to numeric variables. The first hypothesis assessed the internalized motivation scores on the TMQ of probationers and parolees. After review of the central tendency data for probationers ($M = 5.65$, $SD = 1.58$), 68% of the scores fall within one standard deviation (4.07-7.23) of the mean.

Discussion

In most cases, the individual seeking substance abuse treatment services is referred through formal, informal, or legal coercion. Although coercion may be necessary, the client may feel that the decision was not theirs and they may not be internally motivated to change their substance use. Internal motivation is a concept that stems from Self-Determination Theory and has been repeatedly supported as being a critical component in treatment retention, treatment success, and reduced relapse rates. Therefore, when coerced clients are referred to substance abuse treatment, internal motivation may be lacking. The use of the TMQ helps provide information on the degree of their internal motivation so the therapist has a current snapshot of their motivation for being in treatment.

The Stages of Change Model is a model that addiction professionals have relied on to identify a client's readiness to change their substance use patterns. The stages help provide a framework to tailor treatment interventions to facilitate positive change through the stages. The combination of internal motivation and identifying the client's relative stage of change can help facilitate interventions to improve treatment outcomes. The use of the SOCRATES-8A and SOCRATES-8D helps provide information on the individual's level of precontemplation, contemplation, and action stages from the Stages of Change Model.

Unfortunately, a majority of the research focuses on comparing mandated populations to voluntary populations while ignoring the type of coercion. For example, motivation may be assessed between voluntary clients who may have been formally or informally coerced and mandated clients who have been legally coerced to treatment.

However, both populations have significant differences within that must be explored. The rationale of this study was to compare internal motivation and a relative stage of change between two legally mandated populations, probationers and parolees, who were enrolled in substance abuse treatment. The two populations are very similar; however, the main difference is that typically a parolee is incarcerated and being supervised in the community after their sentence, whereas a probationer is being supervised as an alternative to incarceration. These two populations are perhaps the most commonly represented legally referred clients in substance abuse facilities; therefore, the results of this study can be used for professional practice in the field of psychology.

The first hypothesis was supported based on the internalized motivation scores on the TMQ completed by the participants. The responses from the participants indicated that parolees were more internally motivated than probationers, a finding that supports the idea of "hitting bottom" and "maturing out" where parolees are more motivated due to the psychological stress they have experienced as well as being tired of previous criminal behaviors. Since internal motivation is paramount in treatment settings, this finding suggests that probationers may be more externally motivated and treatment professionals may need to focus on increasing internal motivation early in treatment for better treatment outcomes. This also suggests that problem severity may play a role in regards to internal motivation.

The second hypothesis was also supported. The SOCRATES-8A and SOCRATES-8D was used to provide levels within the precontemplation, contemplation, and action stages from the Stages of Change Model between probationers and parolees in substance abuse treatment. Within each of the stages, the responses from the participants

indicated that parolees scored higher in each of the stages. When considering alcohol and drugs, parolees scored higher in each stage, which indicates that they acknowledge problems related to substance use, are more open to reflection, and are more likely to be already making changes in their substance use.

There is a potential link between internal motivation and the Stages of Change Model. Although internal motivation stems from Self-Determination Theory, the higher levels of internal motivation on the TMQ, as well as higher levels in the SOCRATES inventories, seem to be correlated. For example, if someone is more internally motivated for treatment, they are more likely to acknowledge that they are having problems due to their use and are taking the necessary steps to change. Although one is a theory and the other is a model, conceptualizing motivation through the Self-Determination Theory may have a causal link to the Stages of Change Model in regards to changing some maladaptive behavior.

Chapter Summary

In this study, when comparing probationers and parolees in substance abuse treatment, the results obtained from the TMQ, SOCRATES-8A, and the SOCRATES-8D support both hypotheses. Therefore, based on the sample in this study, parolees in substance abuse treatment had higher levels of internal motivation as well as higher levels in the stages of precontemplation, contemplation, and action stages of the Stages of Change Model. These findings could potentially be due to the idea of "maturing out" or "hitting bottom" as parolees' consequences may have been greater, and they may be becoming tired of living a maladaptive lifestyle. This study analyzed the key differences

in internal motivation and levels of change within two legal populations: probationers and parolees. Since willingness to change and internal motivation are important in substance abuse treatment and both hypotheses were supported, the differences found can help inform future research.

Chapter 5: Summary, Conclusions, and Recommendations

Summary

Drug-related crime has long been a problem in American history and is evidenced by the abundant legislation and presidential war on drugs initiatives. These actions have primarily been punitive in order to "treat" the problem of drug use. Even though punitive measures may temporarily halt the use of substances in some cases, they do not address and treat the problem of addiction. Therefore, an individual may be incarcerated for a drug-related offense, serve their time, and then re-engage in maladaptive substance-abusing behaviors.

The use of community corrections has served as a vehicle for collaboration between treatment providers and the legal system. Although this has been an uneasy alliance, it has been improving, as the ultimate goal is to treat the individual with an addiction, which can in turn reduce the amount of drug-related offenses. The community corrections populations explored in this study were probationers and parolees that were involved in substance abuse treatment.

Internal motivation and willingness to change a maladaptive behavior have long been seen as paramount in treatment retention, treatment success, and the prevention of relapse. Motivation and the willingness to change are components of Self-Determination Theory and the Stages of Change Model. This study attempted to identify the relationship and to determine if there was a significant difference between internal motivation and relative stage of change among individuals monitored by county probation and state parole in substance abuse treatment. These two populations have a significant presence in substance abuse treatment centers; therefore, studies examining their motivations and

willingness to change help further understand these populations so treatment interventions can be individually tailored.

Fortunately and unfortunately, individuals are often coerced to attend substance abuse treatment. This coercion is positive due to its ability to treat individuals with substance abuse problems; however, coercive tactics sometimes make the person feel that the decision to enter treatment was not their own. Examples of such coercion takes the form of family members "forcing" a loved one into treatment, an employee assistance program (EAP) referring an employee to treatment, or the legal system mandating treatment as a condition of the offender's release. The individual may be more externally motivated to attend and complete treatment to satisfy someone else as opposed to being internally motivated to change his or her substance-abusing behaviors.

Problem severity, in terms of motivation and willingness to change, is the individual's perception of how severe they view their situation as being. Problem severity is often correlated to "hitting bottom," as the individual's motivation is increased due to the psychological distress they are in. Similar to this idea, "maturing out" is seen as the increased motivation due to being "tired" of past indiscretions and being "wiser" by making better decisions in order to not return to past indiscretions. In this study, "maturing out" and "hitting bottom" were assumed to be motivational characteristics to parolees. It was assumed that the problem severity and "maturing out" would be greater in parole populations than probation populations since their community supervision is after incarceration as opposed to being in lieu of incarceration.

Eligible participants for the study were being monitored by probation or parole departments, were between the ages of 18 and 65, and were in substance abuse treatment

at one of two participating agencies. After eligible participants were identified and expressed willingness to partake in this study, they reviewed and completed the Informed Consent, the Demographic Questionnaire, Treatment Motivation Questionnaire (TMQ), and the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES 8A & 8D). The Demographic Questionnaire provided descriptive statistics on the participants. The TMQ was used to test the first hypothesis and the two SOCRATES (8A & 8D) inventories were used to test the second hypothesis.

It was hypothesized that parolees would have higher levels of internal motivation. To test this hypothesis, the TMQ was used and the means obtained from both populations were compared by running a *t* test for independent means. When using the TMQ to measure internal motivation, there was a statistically significant difference with parolees scoring higher; therefore, the null hypothesis was rejected and the research hypothesis was supported. It was also hypothesized that within the precontemplation, contemplation, and action stages in the Stages of Change Model, parolees would have higher levels in each stage. To test this hypothesis, the SOCRATES-8A and SOCRATES-8D were used and the comparisons were analyzed using a chi-square test for independence. When using these inventories to measure the stages, there was a statistically significant difference in each stage on both inventories; therefore, the null hypothesis was rejected and the research hypothesis was supported.

Conclusions

This study explored the role of internal motivation and relative stage of change among probationers and parolees in substance abuse treatment. There were two specific

research questions—the first dealt with identifying whether or not there were significant differences in internal motivation between parolees and probationers in substance abuse treatment and the second queried whether or not there was a significant difference in the stages of precontemplation, contemplation, and action stages of the Stages of Change Model between probationers and parolees in substance abuse treatment.

The intent of the first question was to identify levels of internal motivation between the two populations. The TMQ provided a numeric variable for comparison between the two populations so that significance could be tested. The findings answered this research question in its entirety by providing a numeric variable to be compared. These findings can be generalized to the two specific populations, probationers and parolees in substance abuse treatment.

The second question aimed to identify levels of precontemplation, contemplation, and action within the Stages of Change Model between the two populations. The SOCRATES-8A and SOCRATES-8D provided nominal variables for comparison between the two populations to test for significance. The findings from these two inventories fully answered the second research question by providing nominal levels for comparison. The findings obtained can be generalized to the two specific populations.

Recommendations

The findings from this study should be used with caution, as there were limitations and assumptions that can be problematic in generalizing to the entire population of probationers and parolees in substance abuse treatment. Although there were statistically significant findings, the sample size was rather small. In addition, there

appeared to be some confusion in regards to community supervision status among the participants; however, the researcher was able to clarify ambiguous answers on the Demographic Questionnaire.

In the review of past literature, it was found that the research was sparse when looking at motivation and relative stage of change between these two specific populations. Since motivation is paramount in treatment success and these two populations are prevalent, it is recommended that further studies incorporate motivation and the stages of change to these populations. It is also recommended that if this study is duplicated, it should be done with more participants and certain variables such as mental illness, developmental disability, and cognitive deficiency should be assessed to either rule out a participant or to provide another variable in the study. In this study, it was assumed that due to the participants' legal status, they were legally coerced; however, they may identify as being formally or informally coerced. Therefore, in future studies the type of coercion should also be delineated. Lastly, males represented a significant proportion of the participants; therefore, future studies should aim to incorporate comparisons between females in an effort to better generalize these populations.

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Appendix A: Script

Hello, my name is Greg Bohall and I am currently a doctoral student at The Chicago School of Professional Psychology and I am collecting information for my dissertation study. I am seeking people to participate in my study to help with my dissertation. If you are interested in participating in this study, would you have a few moments to answer a couple preliminary questions to see if you are eligible for my study? (Yes)

First, I am looking for persons to fill out a few inventories that should take no more than 25 minutes to complete. I do have a few criteria that need to be met in order for you to partake in this study. First, what is your age? (Obtain response.) Are you currently being monitored by county probation or state parole? (Yes: one of the two.) Do you speak English as your primary language? (Yes.)

"No" to any of the above questions: I am sorry but I am looking for a select population that you don't meet the criteria for. I do thank you for your time and I apologize if this was an inconvenience to you.

"Yes" to all three: Thank you for your responses. It does appear that you meet the criteria that I am seeking for in participants of this study. Would you like to participate?

Appendix B: Informed Consent

Informed Consent

Title: Substance Abuse Treatment Motivation and the Stages of Change Model: A Comparison of Probation and Parole Clients

Investigators: Greg Bohall, MS, CCFC, CRC, MAC, CADC-II, Loren Hill, PhD, Edward Armstrong, PsyD

I am asking you to participate in a research study. Please take your time to read the information below and feel free to ask any questions before signing this document.

Purpose: You have been chosen to take part in a research study due to your involvement in county probation or state parole. The purpose of this study is to measure your motivation to enter treatment and your readiness to change. Your participation in this study can help me compare results between the two groups and identify if there are differences in motivation and readiness to change.

Procedures: If you choose to participate in this study, your inclusion would include you signing and dating this Informed Consent, completing the five-question Demographic Questionnaire, completing the twenty-six question Treatment Motivation Questionnaire (TMQ), and completing the thirty-eight question Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). Completing the above is expected to take no more than 25 minutes of your time and your participation would be greatly appreciated.

Risks to Participation: There is minimal risk to you for your participation in this study. The topics addressed in the questionnaires are in relation to motivation and readiness to change and I will be available to help should this research upset you.

Benefits to Participants: You will not directly benefit from this study. However, I hope the information learned from this study may benefit society in our understanding of how the two populations mentioned differ in their motivation and readiness to change in order to improve current treatment options and to reduce the risk of re-offending.

Alternatives to Participation: Participation in this study is voluntary. You may withdraw from study participation at any time without any penalty.

Confidentiality: Since I am an outside researcher, I do not have access to your records through your treatment provider. The only information I will have is the documents that I mentioned above. To protect your anonymity for participation, this Informed Consent with your name signed will be kept separately from the forms you fill out and I will know your name only, no other information. In other words, I will have the two inventories, the demographic questionnaire, as well as this form; however, no one will be able to know how you answered on the questionnaire or inventories. Your responses on the measures will be used for comparison purposes and there will be no identifying information in any published or unpublished work that identifies you as a participant in this study. All research materials will be kept for a minimum of five years per the guidelines set forth by the American Psychological Association. The materials collected by the researcher will be kept and stored at the Forensic Training Institute at The Chicago School of Professional Psychology - Los Angeles Campus. The address is:

617 W. 7th Street, 9th Floor

Los Angeles, California 90017

Questions/Concerns: Should you have any questions in regards to this study you can contact any of the people below:

Mr. Greg Bohall	Dr. Loren Hill	Dr. Edward Armstrong
Student Investigator	Dissertation Chair	Dissertation Reader
213-219-7233	213-615-7248	626-367-6062

Additionally, if you have questions concerning your rights in this research study you may contact the Institutional Review Board (IRB), which is concerned with the protection of subjects in research project. You may reach the IRB office Monday–Friday by calling 312.467.2343 or writing: Institutional Review Board, The Chicago School of Professional Psychology, 325 N. Wells, Chicago, Illinois, 60654.

Consent

Subject

The research project and the procedures have been explained to me. I agree to participate in this study. My participation is voluntary and I do not have to sign this form if I do not want to be part of this research project. I will receive a copy of this consent form for my records.

Signature of Subject: _____

Date: _____

Signature of the Person Obtaining Consent: _____

Date: _____

Appendix C: Demographic Questionnaire

Please answer the following questions by circling the answer that best describes you.

1. What is your gender? (Please circle.)

Male Female

2. Circle your age group:

18–25 26–35 36–45 46–55 56–65

3. What is your ethnicity? (Please circle.)

White Black Hispanic Asian American Indian

Other - Please Specify _____

4. What is your education level completed? (Please circle.)

GED High School Diploma Associate's Degree

Bachelor's Degree Master's Degree Doctorate Degree

If none of the above, highest grade level completed:_____

5. Circle the legal entity that is responsible for your supervision:

County Probation State Parole

Appendix D: Permission to Utilize Surveys

Permission to utilize surveys

Lily E. Chambers <lily@j-sat.com> Thu, Oct 13, 2011 at 10:11 AM
To: Gregory Bohall <gtb2995@ego.thechicagoschool.edu>

You are welcome to use any of the J-SAT or Brad Bogue created surveys and other materials available on our website. Thank you for the courtesy of inquiring. Do not hesitate to contact me should you have any further questions.

Lily Chambers

Office Administrator

J-SAT, Inc.

303-544-9876

Appendix E: Treatment Motivation Questionnaire

TREATMENT MOTIVATION QUESTIONNAIRE

Name _____ DOB_____

This questionnaire concerns people's reasons for entering treatment and their feelings about treatment. Different people have different reasons for entering treatment, and we want to know how true each of these reasons is for you. Please indicate how true each reason is for you, using the following scale:

A	I came for treatment at the clinic because;	not at all true →				somewhat true →		very true
1.	I really want to make some changes in my life.	1	2	3	4	5	6	7
2.	I won't feel good about myself if I don't get some help.	1	2	3	4	5	6	7
3.	I was referred by the legal system.	1	2	3	4	5	6	7
4.	I feel so guilty about my problem that I have to do something about it.	1	2	3	4	5	6	7
5.	It is important to me personally to solve my problems.	1	2	3	4	5	6	7

B	If I remain in treatment it will probably be because;	not at all true →				somewhat true →		very true
6.	I'll get in trouble if I don't.	1	2	3	4	5	6	7
7.	I'll feel very bad about myself if I don't.	1	2	3	4	5	6	7
8.	I'll feel like a failure if I don't.	1	2	3	4	5	6	7
9.	I feel like it's the best way to help myself.	1	2	3	4	5	6	7
10.	I don't really feel like I have a choice about staying in treatment.	1	2	3	4	5	6	7
11.	I feel it is in my best interests to complete treatment.	1	2	3	4	5	6	7

C	Rate each of the following in terms of how true each statement is for you;	not at all true →				somewhat true →		very true
12.	I came to treatment now because I was under pressure to come.	1	2	3	4	5	6	7
13.	I am not sure this program will work for me.	1	2	3	4	5	6	7
14.	I am confident this program will work for me.	1	2	3	4	5	6	7
15.	I decided to come to treatment because I was interested in getting help.	1	2	3	4	5	6	7
16.	I'm not convinced that this program will help me stop drinking.	1	2	3	4	5	6	7
17.	I want to openly relate with others in the program.	1	2	3	4	5	6	7
18.	I want to share some of my concerns and feelings with others.	1	2	3	4	5	6	7
19.	It will be important for me to work closely with others in solving my problem.	1	2	3	4	5	6	7
20.	I am responsible for this choice of treatment.	1	2	3	4	5	6	7
21.	I doubt that this program will solve my problems.	1	2	3	4	5	6	7
22.	I look forward to relating to others who have similar problems.	1	2	3	4	5	6	7
23.	I chose this treatment because I think it is an opportunity for change.	1	2	3	4	5	6	7
24.	I am not very confident that I will get results from treatment this time.	1	2	3	4	5	6	7
25.	It will be a relief for me to share my concerns with other program participants.	1	2	3	4	5	6	7
26.	I accept the fact that I need some help and support from others to beat my problem.	1	2	3	4	5	6	7

Scoring the TMQ

Calculate the four subscale scores by averaging the responses for item in that subscale. The external reasons and internalized reasons are the subscales that relate most directly to self-determination theory.

Note: An (R) after items in the Confidence subscale means that the item should be reverse scored before averaging it with other items in the subscale. To do that, subtract the person's response from 8. Thus, for example, a 3 becomes a 5. This way, a higher score means more confidence in treatment.

External Reasons	Internalized Reasons	Help Seeking	Confidence
	1 _____		
	2 _____		
3 _____			
	4 _____		
	5 _____		
6 _____			
	7 _____		
	8 _____		
	9 _____		
10 _____			
	11 _____		
12 _____			
			13(R) _____
			14 _____
	15 _____		
			16(R) _____
		17 _____	
		18 _____	
		19 _____	
	20 _____		
			21(R) _____
		22 _____	
	23 _____		
			24(R) _____
		25 _____	
		26 _____	
Total _____ ÷ 4 = _____	Total _____ ÷ 11 = _____	Total _____ ÷ 6 = _____	Total _____ ÷ 5 = _____
External Reasons: _____	Internal Reasons: _____	Help Seeking: _____	Confidence: _____

Appendix F: Socrates Version 8

Version 8

SOCRATES

The Stages of Change Readiness and Treatment Eagerness Scale

SOCRATES is an experimental instrument designed to assess readiness for change in alcohol abusers. The instrument yields three factorially-derived scale scores: Recognition (Re), Ambivalence (Am), and Taking Steps (Ts). It is a public domain instrument and may be used without special permission.

Answers are to be recorded directly on the questionnaire form. Scoring is accomplished by transferring to the SOCRATES Scoring Form the numbers circled by the respondent for each item. The sum of each column yields the three scale scores. Data entry screens and scoring routines are available.

These instruments are provided for research uses only. Version 8 is a reduced 19-item scale based on factor analyses with prior versions. The shorter form was developed using the items that most strongly marked each factor. The 19-item scale scores are highly related to the longer (39 item) scale for Recognition (r = .96), Taking Steps (.94), and Ambivalence (.88). We therefore currently recommend using the 19-item Version 8 instrument.

Psychometric analyses revealed the following psychometric characteristics of the 19-item SOCRATES:

	Cronbach Alpha	Test-retest Reliability Intraclass	Pearson
Ambivalence	.60 - .88	.82	.83
Recognition	.85 - .95	.88	.94
Taking Steps	.83 - .96	.91	.93

Various other forms of the SOCRATES have been developed. These will be migrated into shorter 8.0 versions as psychometric studies are completed. They are:

8D	19-item drug/alcohol questionnaire for clients
7A-SO-M	32-item alcohol questionnaire for significant others of males
7A-SO-F	32-item alcohol questionnaire for SOs of females
7D-SO-F	32-item drug/alcohol questionnaire for SOs of females
7D-SO-M	32-item drug/alcohol questionnaire for SOs of males

The parallel SO forms are designed to assess the motivation for change of significant others (not collateral estimates of clients' motivation). The SO forms lack a Maintenance scale, and therefore are 32 items in length.

Prochaska and DiClemente have developed a more general stages of change measure known as the University of Rhode Island Change Assessment (URICA). The SOCRATES differs from the URICA in that SOCRATES poses questions specifically about alcohol or other drug use, whereas URICA asks about the client's "problem" and change in a more general manner.

Source Citation:

Miller, W. R., & Tonigan, J. S. (1996). Assessing drinkers' motivation for change: The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors* 10, 81-89.

CASAA Research Division*
8/95

Personal Drinking Questionnaire
(SOCRATES 8A)

INSTRUCTIONS: Please read the following statements carefully. Each one describes a way that you might (or might not) feel *about your drinking*. For each statement, circle one number from 1 to 5, to indicate how much you agree or disagree with it *right now*. Please circle one and only one number for every statement.

	NO! Strongly Disagree	No Disagree	? Undecided or Unsure	Yes Agree	YES! Strongly Agree
1. I really want to make changes in my drinking.	1	2	3	4	5
2. Sometimes I wonder if I am an alcoholic.	1	2	3	4	5
3. If I don't change my drinking soon, my problems are going to get worse.	1	2	3	4	5
4. I have already started making some changes in my drinking.	1	2	3	4	5
5. I was drinking too much at one time, but I've managed to change my drinking.	1	2	3	4	5
6. Sometimes I wonder if my drinking is hurting other people.	1	2	3	4	5
7. I am a problem drinker.	1	2	3	4	5
8. I'm not just thinking about changing my drinking, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drinking, and I am looking for ways to keep from slipping back to my old pattern.	1	2	3	4	5
10. I have serious problems with drinking.	1	2	3	4	5

CASAA Research Division*
9/95

Personal Drug Use Questionnaire
(SOCRATES 8D)

INSTRUCTIONS: Please read the following statements carefully. Each one describes a way that you might (or might not) feel *about your drug use*. For each statement, circle one number from 1 to 5, to indicate how much you agree or disagree with it *right now*. Please circle one and only one number for every statement.

	NO! Strongly Disagree	No Disagree	? Undecided or Unsure	Yes Agree	YES! Strongly Agree
1. I really want to make changes in my use of drugs.	1	2	3	4	5
2. Sometimes I wonder if I am an addict.	1	2	3	4	5
3. If I don't change my drug use soon, my problems are going to get worse.	1	2	3	4	5
4. I have already started making some changes in my use of drugs.	1	2	3	4	5
5. I was using drugs too much at one time, but I've managed to change that.	1	2	3	4	5
6. Sometimes I wonder if my drug use is hurting other people.	1	2	3	4	5
7. I have a drug problem.	1	2	3	4	5
8. I'm not just thinking about changing my drug use, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drug use, and I am looking for ways to keep from slipping back to my old pattern.	1	2	3	4	5
10. I have serious problems with drugs.	1	2	3	4	5

	NO! Strongly Disagree	No Disagree	? Undecided or Unsure	Yes Agree	YES! Strongly Agree
11. Sometimes I wonder if I am in control of my drug use.	1	2	3	4	5
12. My drug use is causing a lot of harm.	1	2	3	4	5
13. I am actively doing things now to cut down or stop my use of drugs.	1	2	3	4	5
14. I want help to keep from going back to the drug problems that I had before.	1	2	3	4	5
15. I know that I have a drug problem.	1	2	3	4	5
16. There are times when I wonder if I use drugs too much.	1	2	3	4	5
17. I am a drug addict.	1	2	3	4	5
18. I am working hard to change my drug use.	1	2	3	4	5
19. I have made some changes in my drug use, and I want some help to keep from going back to the way I used before.	1	2	3	4	5

SOCRATES Scoring Form - 19-Item Versions 8.0

Transfer the client's answers from questionnaire (see note below):

	Recognition	Ambivalence	Taking Steps
	1 _____	2 _____	
	3 _____		4 _____
			5 _____
		6 _____	
	7 _____		8 _____
			9 _____
	10 _____	11 _____	
	12 _____		13 _____
			14 _____
	15 _____	16 _____	
	17 _____		18 _____
			19 _____
TOTALS	**Re**_____	**Am**_____	**Ts**_____
Possible Range:	**7-35**	**4-20**	**8-40**

SOCRATES Profile Sheet (19-Item Version 8A)

INSTRUCTIONS: From the SOCRATES Scoring Form (19-Item Version) transfer the total scale scores into the empty boxes at the bottom of the Profile Sheet. Then for each scale, CIRCLE the same value above it to determine the decile range.

DECILE SCORES	Recognition	Ambivalence	Taking Steps
90 Very High		19-20	39-40
80		18	37-38
70 High	35	17	36
60	34	16	34-35
50 Medium	32-33	15	33
40	31	14	31-32
30 Low	29-30	12-13	30
20	27-28	9-11	26-29
10 Very Low	7-26	4-8	8 - 25
RAW SCORES (from Scoring Sheet)	Re=	Am=	Ts=

These interpretive ranges are based on a sample of 1,726 adult men and women presenting for treatment of alcohol problems through Project MATCH. Note that individual scores are therefore being ranked as low, medium, or high ***relative to people already presenting for alcohol treatment***.

Guidelines for Interpretation of SOCRATES-8 Scores

Using the SOCRATES Profile Sheet, circle the client's raw score within each of the three scale columns. This provides information as to whether the client's scores are low, average, or high ***relative to people already seeking treatment for alcohol problems***. The following are provided as general guidelines for interpretation of scores, but it is wise in an individual case also to examine individual item responses for additional information.

RECOGNITION

HIGH scorers directly acknowledge that they are having problems related to their drinking, tending to express a desire for change and to perceive that harm will continue if they do not change.

LOW scorers deny that alcohol is causing them serious problems, reject diagnostic labels such as "problem drinker" and "alcoholic," and do not express a desire for change.

AMBIVALENCE

HIGH scorers say that they sometimes ***wonder*** if they are in control of their drinking, are drinking too much, are hurting other people, and/or are alcoholic. Thus a high score reflects ambivalence or uncertainty. A high score here reflects some openness to reflection, as might be particularly expected in the contemplation stage of change.

LOW scorers say that they ***do not wonder*** whether they drink too much, are in control, are hurting others, or are alcoholic. Note that a person may score low on ambialence ***either*** because they "know" their drinking is causing problems (high Recognition), ***or*** because they "know" that they do not have drinking problems (low Recognition). Thus a low Ambivalence score should be interpreted in relation to the Recognition score.

TAKING STEPS

HIGH scorers report that they are already doing things to make a positive change in their drinking, and may have experienced some success in this regard. Change is underway, and they may want help to persist or to prevent backsliding. A high score on this scale has been found to be predictive of successful change.

LOW scorers report that they are not currently doing things to change their drinking, and have not made such changes recently.