THE RELATIONSHIP BETWEEN MOTIVATION, MASLOW'S HIERARCHY OF NEEDS, TIME, AND CRAVING LEVELS IN THE MANDATED SUBSTANCE ABUSE TREATMENT POPULATION

BY

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A dissertation submitted

in partial fulfillment of the requirements for the degree of

Doctor of Psychology in Clinical Psychology

Alliant International University

California School of Professional Psychology

Fresno Campus

2008

CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY

FRESNO CAMPUS

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DEDICATION

Love, devotion, and the utmost sincere thanks and gratitude go to my parents, Vince Misztowt and Fern Marvin; my supportive and loving boyfriend, Matthew Gonsman; and partner in crime, Emily Ovrebo, for helping me get through these last years of formal education. Without all of your understanding, long consultations on the phone, tears shed, and patience, I could not have persevered. For all four of you, this dissertation is dedicated.

ACKNOWLEDGMENTS

Sincere gratitude is extended to Sue Kuba, PhD, for her patience, time, interest, and help in the making of this dissertation. Additional appreciation is extended to Siobhan O'Toole, PhD, for her extensive statistical consultations. I would also like to thank my dissertation committee of seven for their continued support and detailed revisions over the last year and a half. Traces of these dedicated individuals' skill and expertise can be seen throughout this dissertation.

A very special thanks to Alliant International University-Fresno Campus's library staff for helping me obtain the materials needed in proceeding with my research. I would also like to thank the authors of the questionnaires utilized in this study, as their permission to use their wonderful assessments was critical in obtaining data for this study.

Sincere gratitude is given to all of my participants and solicitors; without whom this study would not have been possible. Their contribution to the field of substance

abuse prevention is vital in allowing for future exploration of this area.

ABSTRACT OF THE DISSERTATION

The Relationship Between Motivation, Maslow's Hierarchy of Needs, Time, and Craving Levels in the Mandated Substance Abuse Treatment Population

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Substance abuse is a serious concern that has been found to raise societal costs (Catford, 2001; Chaiken & Chaiken, 1990; French et al., 1996; Harwood, Fountain, & Livermore, 1998; Hearndon & Harocopos, 1999; MacCoun & Reuter, 2001; Oltmanns & Emery, 1999; U.S. Department of Justice, 2000). In 2001, the Substance Abuse and Crime Prevention Act was passed allowing for nonviolent substance abuse offenders to bypass incarceration and enroll in mandated treatment. There is little research on Proposition 36 clients; however, the goal for treatment is to reduce the

number of nonviolent offenders in prison and to help reduce recidivism (California Proposition, 36, 2000). Research has also suggested that motivation, time in treatment, and the extent to which one's needs are met can help predict craving levels, which have been suggested to help predict treatment dropout (Ball, Carroll, Canning-Ball, & Rousanville, 2005; Brecht, Anglin, & Wang, 1993; Hartz, Frederick-Osborn, & Galloway, 2001; Jones, 2004; Klag, O'Callaghan, & Creed, 2005; Maslow, 1954, 1970; Ryan, Plant, & O'Malley, 1995).

Three measures were employed in this study: a demographic questionnaire, measurements of participant's motivation, caving levels, and current needs met. A total of 70 participants' data were used. A multiple regression attempted to determine which predictor variable (time in treatment, external and internal motivation, and needs met) was the best predictor of craving levels. Results suggested that external motivation and having needs met were the best predictors of increased craving levels. These individuals may benefit from more interpersonal therapy, which may help to increase their internal motivation by building self-esteem and gaining insight to their addictions. Three independent *t* tests were run to determine significance

between length of time in treatment and needs met; however, results were not significant. Additionally, five post hoc analyses were completed using demographic data and craving or motivation levels; however, none yielded significance. Future research is needed in this area, especially comparing Proposition 36 to Drug Court clientele to determine if one treatment program is more effective, potentially adding to the need for more evidence-based programming.

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Chapter 1

INTRODUCTION

The field of psychology demands evidence-based treatment in order to develop appropriate programs. With the growing number of nonviolent substance abusers sent to prison, it is more cost efficient to court order them to substance abuse treatment in lieu of incarceration. Numerous researchers have indicated that substance abuse is a growing epidemic and that substance abuse treatment facilities are in demand. However, there is also an alarmingly high rate of recidivism associated with substance abuse treatment. This study hoped to enable program developers to create evidence-based substance abuse programs based on the findings.

Researchers suggest that there is a strong relationship between illicit drug use and criminal acts (Chaiken & Chaiken, 1990; French, McCollister, Alexandre, Chitwood, & McCoy, 2004). Criminals, who are addicted to drugs, are often arrested for burglary, larceny, or theft in attempt to monetarily support their addictions (Wilson, 2000). Over 50% of inmates report that drug use was their

primary reason for incarceration (Wilson, 2000). Societal costs for housing inmates are high, with each inmate costing approximately $30,000 per year (California Proposition 36, 2000). In addition to the actual cost of incarceration, there are other costs that society absorbs. Home alarm systems, weapons, and therapy are all potential costs that victims and nonvictimized citizens incur when substance abusers recidivate (Harwood, Fountain, & Livermore, 1998).

There are two types of treatment programs for substance abusers: voluntary and court mandated. Court-mandated programs are often required for nonviolent drug offenders in an attempt to rehabilitate them without incarceration. Voluntary treatments, such as Alcoholics Anonymous (AA), are not thoroughly discussed because the literature review focuses on the relationship between court-ordered substance abusers and their levels of motivation for treatment. Additionally, some researchers suggest that those who enter treatment voluntarily (or coerced by friends or family members) may have higher levels of motivation toward treatment outcome (O'Hare, 1996).

Substance abuse treatment programs that have been helpful in the past include the In Prison Therapeutic

Community Programs (ITC; Wexler, 1994), California's Amity Program (CAP; Wexler, Falkin, Lipton, Rosenblum, & Goodloe, 1998), Treatment Alternatives to Street Crimes (TASC), Breaking the Cycle (BTC), and Drug Treatment Alternative to Prison (DTAP; Longshore, Turner, & Anglin, 1998; Sung, 2001). Although these programs have some documented success, there is still a large percentage of program graduates who recidivate and return to jail or prison.

Proposition 36 was passed in California in 2001, allowing first-time nonviolent offenders to bypass incarceration and receive substance abuse treatment. One argument for creating these treatment approaches was the high costs for housing nonviolent inmates, which was problematic because of limited space in the jail and prison settings. Minimal research has been conducted regarding recidivism with Proposition 36 clients, though the research studies available suggest that a majority of clients are recidivating. Substance Abuse Treatment Court (SATC) clients have the same option as do Proposition 36 clients; however, they pay their own fees for completing the substance abuse program. This program also allows first time, nonviolent, convicted substance abusers an alternative

to becoming sober (Superior Court of California, 2006). For purposes of this study, both Proposition 36 and Drug Court clients are referred to as court-ordered clients.

Researchers have recognized several reasons for the high recidivism and dropout rates among court-ordered treatment clients. Demographic variables (Agosti, Nunes, & Ocepeck-Welikson, 1996; Ball, Carroll, Canning-Ball, & Rounsavelle, 2006; DeLeon, Melnick, & Kressel, 1997; Hiller, Knight, Leukenfeld, & Simpson, 2002; Ward, 2005), memory impairments (Aharonovich, 2003; Aharonovich et al., 2006; Becker & Jaffe, 1984; O'Malley, Adamse, Heaton, & Gawin, 1992), cognitive deficits (Aharonovich et al., 2006), and disorders such as attention deficit hyperactivity disorder (ADHD) have been identified as potential factors (Horton, 1997). Motivation (Longshore & Teruya, 2006), craving levels (Weiss et al., 2003), and Maslow's hierarchy of needs (Jones, 2004; Maslow, 1970, 1987) have also been researched and have been correlated with reasons for dropping out and recidivating. Additional theories such as social cognitive theory and self-determination theory may aid in understanding relationships between the above-mentioned variables.

According to one widely accepted theory of motivation there are six motivational stages for those attempting to stop using drugs. These stages are precontemplation, contemplation, preparation, action, maintenance, and relapse. Many authors have suggested that each individual experiences at least five of the six stages in his or her readiness to change his or her abuse cycle (Giovazolias & Davis, 2005; Longshore & Teruya, 2006; Prochaska & DiClemente, 1986).

The theory of motivation and hierarchy of needs helps to explain why some individuals may not be motivated. The hierarchy describes basic needs that must be met for an individual to move to the next level or else motivation may decrease (Maslow, 1970, 1987). Many clients in substance abuse treatment may be faced with housing problems, lack of child care, or a sense of independence; therefore, they may jeopardize sobriety to meet these basic needs. In addition, researchers suggest that clients who are court ordered to enter treatment programs, who are already unmotivated, will most likely never become motivated.

If the environment is free of distractions, and if the peer groups are supportive and accepting of change, social

cognitive theorists suggest that the client will be positively influenced. If, on the other hand, the environment has not been conducive to the client's learning and if the peer group is not accepting, the likelihood of positive growth has been shown to decrease. Forethought regulates most human behavior (Bandura, 1977, 1986, 1989).

Self-determination theorists suggest that if a client is internally motivated he or she will have more success in his or her treatment. When individuals feel as though they are being controlled rather than in control of treatment, they often do not feel motivated to continue treatment. Individuals in treatment benefit when they are able to make their own choices (Deci & Ryan, 1985; Ryan & Deci, 2000; Williams, Deci, & Ryan, 1998).

Because there has not been enough research conducted to determine how frequently court-ordered clients are recidivating, this research may be useful in determining whether treatment has been effective in preventing recidivism and decreasing abuse. With an estimated 50% of incarcerated individuals reporting that they are incarcerated for drug-related charges, the mandated substance abuse treatment programs present a hopeful

alternative to further incarceration and escalating costs of care for prisoners.

In conclusion, the literature clearly demonstrates that recidivism rates are high for substance abusers who have been through substance abuse treatment. Some authors have suggested that the high recidivism rates may be due to demographic variables, such as age, ethnicity, and number of previous substance abuse treatment programs attended. However, the most widely researched reason for dropout and recidivism appears to be client's motivation levels. In addition to clients' reported motivation levels, assessing their craving levels, time in treatment, basic needs, and growth needs may help to determine if there are correlations between the variables.

The present study helps to explain the relationship that length in treatment, craving level, Maslow's (1970, 1987) basic needs and growth needs, and motivation have to court-ordered substance abuse offenders in mandatory treatment, along with which variable is the strongest predictor of increased craving levels.

Chapter 2

LITERATURE REVIEW

Drug Epidemic

The factors relating to crime and substance abuse have been widely documented in many countries. Worldwide, substance abuse has been problematic, resulting in considerable social, health, and economic costs (Catford, 2001; MacCoun & Reuter, 2001; Oltmanns & Emery, 1999). Oltmanns and Emery (1999) suggested that the costs associated with substance abuse may total an excess of $160 billion per year in the United States. Over the past decade, research in this field has focused on relationships among criminal activities, drug use, and recidivism.

Recidivism is defined as a criminal act committed after an offender has already served a sentence (Kelly, Finney, & Moos, 2004). A survey from the 1980s reported that at least 70% of incarcerated offenders have used illegal substances, such as marijuana, methamphetamines, cocaine, and heroin. The same study indicated that more than 50% of incarcerated offenders have reported that drug use was the reason for their incarceration. Substance abuse offenders can be

referred for treatment for two main reasons. First, they may have been under the influence of a substance, and second, they may be referred for treatment for selling illegal substances, burglary, domestic violence, and the other related criminal acts (Hall, 1997; Institute of Medicine, 1990). Individuals with extreme addiction reportedly commit an average of 63 crimes per year (Gebelein, 2000). Most offenders commit crimes to finance their expensive drug habits (Hearnden & Harocopos, 1999).

A 1997 survey from the Bureau of Justice Statistics reported a significant number of the 2 million incarcerated individuals in either state or federal prisons were serving time for drug-related crimes, specifically 41.9% of state inmates and 25% of federal inmates were being held on nonviolent, drug-related offenses such as possession or trafficking (Wilson, 2000). With almost 2 million incarcerated individuals in either state or federal prisons in 1997, close to 50% were serving time for drug-related crimes (Mumola, 1999; National Institute of Justice, 1996; Wilson, 2000). In 1980, research indicated that 7% of felonies were related to substance abuse. The rate of

felony convictions increased greatly to 32% in 1990 and then slightly decreased to 31% in 1994 (Chaiken & Chaiken, 1990). This is a severely inflated percentage as compared to 1980. Many researchers have found a strong relationship between illicit drug use and other criminal acts (Chaiken & Chaiken, 1990; French et al., 2004). Numerous studies and empirical research have found that a large percentage of crime victims believe their assailants were under the influence of drugs or alcohol (Wilson, 2000).

In a 1997 survey of inmates in state and federal corrections facilities, 51% of inmates admitted being under the influence of drugs or alcohol at the time of the criminal act (Wilson, 2000). To confirm victims' testimonies, drug testing is conducted at the time of arrest and has shown that many criminals were under the influence of an illegal substance when committing their crime. The National Institute of Justice (1999) found that 68% of those arrested tested positive for substances when given a urine screening.

Some studies suggest that certain drugs can have an effect on criminal activity (Gossop, Marsden, Stewart, & Kidd, 2003). The U.S. Department of Justice (Wilson, 2000)

reported that 16% of jail inmates admit to committing the crime they were incarcerated for in order to obtain drugs. Additionally, the National Treatment Outcome Research Study (NTORS) found that heroin users are 10 times more likely to commit a crime, suggesting the types of drugs used and crimes committed are interlinked. Aside from drug possession and trafficking, there are other drug offenses that an individual may be incarcerated for, such as burglarizing to obtain money for drugs, with the individual potentially high at the time (Hiller, Knight, & Simpson, 1999).

Substance Abuse Treatment Options

Since many individuals are incarcerated with drug charges every year, community-based treatment programs focusing on sobriety have been implemented, which enable the criminals to forgo incarceration. This reduces the federal government's spending for the imprisonment of nonviolent offenders with illegal substance convictions (Dowden & Brown, 2002; French et al., 2004). Several programs have been offered in the past, including Treatment Alternatives to Street Crime (TASC), Breaking the Cycle (BTC), and Drug Treatment Alternative to Prison (DTAP; Sung, 2001; see also

Longshore et al., 1998). These programs have permitted nonviolent substance abusers to bypass incarceration in lieu of mandated length of treatment in their court-ordered substance abuse treatment program.

When nonviolent substance abuse criminals are sentenced to prison, jail, or community-based treatment programs, it is assumed that the offenders will receive adequate treatment to maintain sobriety. The offender will be released back into society, maintain sobriety, and slowly regain control of his or her life. However, this is not always the case. Recidivism rates are high for substance abusers exiting prison or jail settings, as well as those who have been through a community-based substance abuse program (Jones, 2004). The U.S. Department of Justice (1997) suggested that 50% of drug offenders would reoffend within 2 to 3 years after being released from jail or prison. In-Prison Therapeutic Community (ITC) is one of the United States's most widely used programs for correctional settings. Because security is the primary goal, this program allows for substance abusers to be housed separately from the general prison population (Wexler, 1994; Wexler et al., 1998).

Research findings suggested higher success rates and lower recidivism for individuals when they received ITC when incarcerated (Field, 1985). California's Amity program (Wexler et al., 1998) in San Diego is a form of an ITC. Prisoners close to being released are placed into this 1-year treatment program. After release, parolees are able to choose between being admitted to a community-based TC or no services. One-year outcomes for those who enrolled in ITC and community-based treatment showed 25% reincarceration rate, while 64% of individuals who did not complete the ITC recidivated with a rearrest, 66% of individuals who completed ITC alone and not the follow-up inpatient community-based treatment recidivated (Wexler et al., 1998).

Researchers suggest that ITC alone is not enough for recovering substance abusers; they must complete aftercare, usually in an inpatient, community-based treatment setting, for maximum results. Researchers have also found that the longer a client stays in treatment, the lower the chance of recidivating (Anglin & Hser, 1990). This is due to the individuals being previously incarcerated and needing supervision when they are released (McCarthy & McCarthy, 1997). The high recidivism rate is not only frightening for

the community, but also for the taxpayers. Incarceration costs per year, per individual are high, and if the substance abuser is not treated the first time he or she may recidivate, consequently leaving taxpayers to pick up the tab.

Societal Costs for Inmates and the Public

In terms of societal costs, United States taxpayers pay around $30,000 per year per inmate (California Proposition 36, 2000). The White House Office of National Drug Control Policy (ONDCP, 2003) reported between 1999 and 2000 of the 27,274 who were arrested for drug charges, 91.7% were incarcerated for an average of 75.6 months. With this amount of money spent to ensure nonviolent substance abusers serve their time, it is also essential to make sure they have access to treatment to prevent recidivism (California Proposition 36, 2000).

In addition to monetary reasons, other societal costs are increased when criminals recidivate. As mentioned above, about 50% of substance abusers reportedly commit crimes to support their drug habits. For this reason it is crucial for nonviolent substance abusers to obtain help before, during, or after their incarceration to prevent the

likelihood of reoffending (Wilson, 2000). According to the Bureau of Justice Statistics, 25% of new jail or prison admits reported that they had received substance abuse treatment before their arrest either voluntarily or mandated (Wilson, 2000). This information further stresses why it is important for substance abuse treatment to be effective and easily understood by the client (Cleaveland & Denier, 1998).

Burglary, robbery, fraud, larceny, theft, assault, manslaughter, and murder are among the many crimes that are committed each year by individuals trying to obtain or sell drugs (French et al., 2004; Wilson, 2000). Hospitalization, psychological services, lost wages, property damage, and pain and suffering are a few of the costs in being a victim of crime (French & Martin, 1996; Harwood, Reuter, Kleiman, Kopp, & Cohen; Office of National Drug Control Policy, 2001). However, some victims' costs are intangible, such as the loss of a loved one's life or posttraumatic stress (Bartol & Bartol, 2004). With this many crimes being committed, another cost to society is the increase in law enforcement and crime protection. The cost of crime protection includes expenses such as private legal costs for victims, running the criminal justice system, and

correctional costs. The number of these crimes may be drastically reduced if the proper substance abuse treatment is offered to substance-abusing criminals. Other external costs to society include purchasing locks, home security systems, weapons, and other items designed to ensure safety (Harwood, Fountain, & Livermore, 1998). Although researchers suggest that only 25% of offenders who receive ITC and community-based treatment recidivate after release, it may be more logical to treat these nonviolent substance abusers in outpatient settings in lieu of incarceration (Harwood, Fountain, & Livermore, 1998).

Providing Treatment in Community Setting

Providing treatment to substance abusers may be the most logical step in preventing such high costs to society. Treatment before the individual commits a crime is somewhat effective, though in one study, 25% of new jail admits reported receiving treatment prior to their arrest (Wilson, 2000). Treatment while incarcerated and treatment in aftercare can also be crucial components for reducing recidivism. Such treatment must be shown to be effective or the risks to society are too high to risk alternative

sentencing. Therefore, the focus of this study is the measurement of effectiveness in a court-ordered, mandated treatment program.

Substance abuse treatment can be broken down into two main categories: voluntary and mandated (court ordered). Voluntary treatment implies that a substance abuser has sought services in an effort to obtain or maintain sobriety. Such voluntary treatment facilities include inpatient and outpatient services, Narcotics Anonymous (NA) and Alcoholics Anonymous (AA), and focus on the 12-stepprogram in order for the clients to achieve their long-term sobriety goals (Johnson, 2006). While most AA or NA participants are there voluntarily, participation may be court ordered or be the result of pressure from family, friends, or employers (Young, Fluellen, & Belenko, 2004).

In 2001, California's Proposition 36 was passed, allowing for nonviolent substance-abusing criminals to enter a mandated treatment program, much like the programs previously mentioned, subsequently bypassing mandatory incarceration (Substance Abuse and Crime Prevention Act). Few researchers have examined recidivism or dropout rates for programs implemented to enact Proposition 36 because of

its relative newness (Cosden et al., 2006). The Act proposed to:

> a) divert from incarceration into community-based substance abuse treatment programs non-violent defendants, probationers and parolees charged with simple drug possession or drug use offenses; b) to halt the wasteful expenditure of hundreds of millions of dollars each year on the incarceration--and-re-incarceration--of non-violent drug users who would be better served by community-based treatment; and c) to enhance public safety by reducing drug-related crime and preserving jails and prison cells for serious and violent offenders, and to improve public health by reducing drug abuse and drug dependence through proven and effective drug treatment strategies. (California Proposition 36, 2000, ¶ 3)

An additional form of court-ordered substance abuse treatment is Substance Abuse Treatment Court, which was created in Santa Barbara in March 1995. This enables nonviolent offenders with a misdemeanor or felony, who demonstrate a pattern of alcoholism or drug addiction, the opportunity to enroll in an 18-month supervised treatment program. After 18 months, there is a possibility of dismissing original charges (Superior Court of California, 2006).

Factors Leading to Recidivating

Oftentimes, treatment that the individual receives in prison is not the sole reason a substance abuser might

recidivate. Other factors, such as cognitive deficits (Aharonovich et al., 2006), memory (Aharonovich, 2003; Aharonovich et al., 2006; Becker & Jaffe, 1984; O'Malley et al., 1992), demographic variables (for example, age, marital status, and ethnicity; Hiller, Knight, et al., 2002), motivation for complying (Ball et al., 2006), and basic and growth needs not being met (for example, food, shelter, and independence) can be related to recidivism (Maslow, 1970).

Research focused on the client's cognitive ability found that if the client cannot understand what is being taught in the programs, he or she might not be able to utilize it when he or she is in his or her own environment (Aharonovich, 2003; Aharonovich et al., 2006; Cleaveland & Denier, 1998; Katz et al., 2005; MacNair & Corazzini, 1994; Roberts & Horton, 2001; Rosenzweig & Folman, 1974). The demand for the client to understand the materials presented is quite high, often exceeding his or her level of understanding (Katz et al., 2005). Numerous studies have suggested that with the consumption of illegal substances, such as cocaine, marijuana, and inhalants, substance abusers suffer long-term cognitive impairments (McCaffrey, Krahula, Heimberg, Keller, & Purcell, 1988). Not only are cognitive

impairments attributed to the drug itself, they may be associated with activities such as fights and other traumatic events sometimes related to drug activity (McCaffrey et al., 1988). Additionally, Horton (1997) found that many drug abusers have learning disorders or attention deficit hyperactivity disorder (ADHD), both of which can affect their cognition while attending treatment programs. Tests such as the Trail Making Test A and B can be used in order to assess an individual's level of cognitive functioning, allowing for better placement into community treatment programs (Roberts & Horton, 2001).

Cleaveland and Denier (1998) explained that some substance abusers, entering into treatment programs, often have decreased treatment compliance due to having poor concentration (Becker & Jaffe, 1984) and impaired memory and problem-solving abilities (Miller & Saucedo, 1983). Research has also identified how memory might affect the client's ability to utilize the information he or she has received during treatment. As previously mentioned, recall ability is strongly related to cognitive functioning, and memory specifically can be impaired to a degree that the individual is unable to retain specific skills he or she has

been taught to prevent relapse (Cleaveland & Denier, 1998; Yalom, 2005). It is also important to be aware of noncognitive factors, such as the client's inability to find child care, transportation, or money to enable treatment retention.

Memory alone is not enough to retain information. Vicarious processes or the ability to learn through direct or nondirect observations are important in enabling humans to form behavior patterns quickly (Bandura, 1986). The goal of mandated substance abuse treatment is for the clients to model the behaviors of the facilitator(s) and learn vicariously through them that drugs are bad. Showing the clients photos of drug users and other images should encourage them to maintain sobriety. If clients are recidivating after mandated substance abuse treatment, they are not encoding the images and retrieving them when they are craving their drug of choice.

Research is scarce in determining whether race, gender, education, employment, living situations, and referral source(s) contribute to reasons for dropping out. Of the limited research, Ball et al. (2006) suggested that most demographic variables do not contribute to an individual's

treatment success, while other researchers have shown that there are correlations between motivation and demographic variables (Gossop, Green, Phillips, & Bradley, 1990; Hall, Havassy, & Wasserman, 1990; Hiller et al., 2002; Wexler et al., 1988).

Men, minorities, the highly addicted, those living in poverty, and those who are younger tend to have lower success rates in treatment (Agosti et al., 1996; DeLeon et al., 1997; Ward, 2005). Other factors, such as early onset of substance abuse, polydrug use, psychiatric diagnosis, and some personality disorders, such as antisocial personality disorder and borderline personality disorder, can also contribute to treatment failure (Ball et al., 2006; DeLeon et al., 1997). In addition, primary drug use has yet to be identified as a consistent predictor in treatment retention. DeLeon et al. (1997) emphasized that research examining correlations between individuals' demographic data and retention rates are sparse and somewhat inconsistent.

Substance abusers have reported that they do not complete their treatment regime because of low internal motivation and apathy toward the facility leaders, which is why motivation is one of the most widely researched reasons

for dropping out or recidivating (Ball et al., 2006). Although they have been coerced into treatment, substance abusers cannot be forced into active participation in treatment (Klag, O'Callaghan, & Creed, 2005).

Additionally, according to Jones (2004), substance abusers who have not fulfilled their basic needs, such as sex, food, shelter, safety, and warmth (for example), or growth needs, such as love, belongingness to a group or family, may never achieve self-actualization needs. Maslow's hierarchy of needs (Maslow, 1970, 1987) helps to explain why substance abusers may recidivate or not complete treatment.

Stages of Motivation and Treatment Motivation

Researchers suggest that client motivation is important for effective substance abuse treatment. Those who are forced into treatment tend to be less motivated and are often more resistant to treatment, according to Brecht, Anglin, and Wang (1993). Pitre, Dansereau, Newbern, and Simpson (1998) suggested that the higher the client's motivation at intake, the higher his or her involvement throughout the treatment program, regardless of the type of

treatment program the client attends. However, some researchers suggest that higher motivation levels at intake do not suggest higher treatment motivation (Rapp, Siegal, Li, & Saha, 1998).

Researchers have attempted to identify motivation to change or to engage in treatment. Motivation for treatment may be described by the following stages: precontemplation, contemplation, preparation, action, maintenance, and relapse. Prochaska and DiClemente (1986) explained five of the six above-mentioned stages, precontemplation, contemplation, preparation, action, and maintenance, while others suggest that there are only three motivation stages: problem recognition, desire for help, and treatment readiness (Hiller, Knight, et al., 2002).

Precontemplation is an overall ignorance for the addictive behavior that an individual possesses. The individual is unaware of the stressors his or her addiction has created, and the individual does not feel there are any changes that need to be made surrounding his or her addiction (Prochaska & DiClemente, 1986).

Once people begin to realize that they have an addiction problem, they may have inner conflict and

experience dissonance, which is called the contemplation stage. Substance abusers at this stage start to realize there might be a problem with their addiction, though they have not made a commitment to seek help. Prochaska and DiClemete (1986) also suggested that people in the contemplation stage who say that they need to change their behavior say they will find treatment within 6 months. Individuals in this stage often find the positive points of their addiction and try to replace the negative with the positive. This is also a stage of weighing the pros and cons of treatment and their addiction (DiClemente & Velasquez, 2002).

The preparation stage combines intention with action. Minor changes are being made at this stage, such as cutting back from 3 to 1 ounce of cocaine per week. The individual may also be in the process of searching for substance abuse programs. Substance abusers at this stage think about making changes to their addiction within the next month, without attempts to do so within the year (DiClemente & Velasquez, 2002).

Behavior modification, good decision making, and overcoming difficulties describe individuals in the action

stage (DiClemente & Velasquez, 2002). Substance abusers at this stage have modified their behavior for at least 1 day. The maximum amount of time that a substance abuser modifies his or her behavior at this stage is 6 months. After 6 months the client is working on his or her maintenance stage (Prochaska, DiClemente, & Norcross, 1992). Finally, the maintenance stage is where the individual has proactively practiced relapse prevention and maintained his or her new behaviors for at least 6 months to an indefinite number of years (Prochaska, DiClemente, & Norcross, 1992).

Shen, McLellan, and Merrill (2000) described a sixth stage: relapse. This stage occurs when an individual in treatment resorts back to his or her addictive behavior and stops the progressing stages of motivation. It is here where the individual either starts the process over again or regresses back into his or her addictive lifestyle.

Based on these six stages of motivation, it may be necessary to tailor treatment programs that meet individual needs for treatment options, goal setting, and support. However, Miller and Hester (1986) and Marlo and Kalinian (2002) mentioned that thus far, research has shown that there is no single approach to providing effective

psychological treatment for all clients. It has been suggested that individuals be matched with treatment programs that will effectively aid in their recovery based on their specific needs and clients' characteristics (Miller & Hester, 1986). Thornton, Gottheil, Weinstein, and Kerachsky (1998) recommended choosing a program that mirrors the above-mentioned stages of motivation by indicating that this will help aid in the treatment process. Determining which basic or growth need the client has not obtained and helping that client to obtain that need may be more cost effective as the client is receiving monetary help from funding, but is also becoming closer to ultimate self-actualization.

Incorporating stages of motivation for treatment is important for both practitioners and administrators in identifying and tailoring programs to fit clients' needs at certain levels of treatment. Each level is different from the next; thus, a strict and well-organized treatment plan should be followed for each individual's stages of change.

When taking into account the high number of court-ordered offenders in these treatment programs, it should be noted that the participants are at various stages of

motivation to change their behavior. That is, these participants may only be in the precontemplation stage of motivation, while participants who seek out treatment are often in the preparation stage of motivation. Treatment programs tend to treat all substance abusers the same, regardless of their level of motivation when they enter the program. Programs may find that they have participants who are in all levels of the aforementioned motivation levels, which could compromise treatment for those who are highly motivated.

Intrinsic and Extrinsic Motivational Factors Relating to Treatment Retention

Based on the research, assigning certain individuals to specific treatment programs may help in their relapse prevention progress. Insufficient research has been conducted to determine the point at which motivation is highest or lowest among the substance abuse population while in mandated substance abuse treatment. Some mandated substance abuse offenders seem to be motivated when beginning recovery while others are not (Farabee, Simpson, Dansereau, & Knight, 1995). Noncompliance, whether early during the treatment or frequent, is essential in

determining why some substance-abusing treatment clients drop out of treatment.

As with any program, there are participants who drop out or recidivate during treatment. Understanding the causes for these occurrences is essential in treating substance abuse clients. As mentioned previously, because Proposition 36 has not been in effect for long, information regarding dropout and recidivism rates has not yet been thoroughly researched (California Proposition 36, 2000). However, in 2004, Farabee and colleagues found that SACPA clients were recidivating at a higher rate within 12 months of ending treatment than were non-SACPA clients (Farabee, Hser, Anglin, & Huang, 2004).

Numerous researchers have attempted to identify factors related to why clients drop out of treatment or recidivate after treatment. Herning (1996) and Spooner (1999) suggested that it can be difficult for mandated clients to follow the course of treatment due to the complex biopsychosocial problems that are accompanied by their addiction.

Clients who are accepting of feedback from other clients and group facilitators and who are willing to help

with feedback for other clients are actively engaged in their treatment programs. Those who are actively engaged in their treatment process seem to have a higher completion rate (Dynia & Sung, 2000; Sung, Belenko, Feng, & Tabachnick, 2004). Bandura (1986) also explained that mental pictures, words, or symbols allow humans to give meaning and form to their experiences. The ability to give meaning to symbols enables the person to store information that can be retained at a later date. Sung et al. (2004) hypothesized that motivated clients who actively engage in the treatment process and build a therapeutic relationship with counselors tend to stay in treatment longer. The researchers explored extrinsic and intrinsic motivation by sampling 150 criminal justice mandated participants who were part of the DTAP in Brooklyn, New York. Clients who allowed past marriage or employment failures to act as an incentive for treatment engagement showed higher levels of motivation. Fear of returning to jail or prison is an example of extrinsic or external motivation. There is a fear of something external that encourages the individual to associate the addictive behaviors they exhibit. External motivators help clients to complete treatment (Cosden et al., 2006). Intrinsic or

internal motivation is a more personal and individual characteristic. An example is when a substance abuser realizes how his or her addiction has ruined his or her life. It is the intrinsic motivation factor that clients need to experience before they can accept that they have made mistakes and need to recover from them (Ryan, Plant, & O'Malley, 1995).

When intrinsic and extrinsic motivations are high, clients tend to be actively involved in their treatment programming. It has also been found that when intrinsic motivation is low, clients in substance abuse treatment performed the poorest (Ryan et al., 1995).

Whether clients are motivated to start treatment actually maintain the same level of motivation throughout their treatment program is unknown. No information is available regarding whether those who are unmotivated at the start of treatment continue at the same level of nonmotivation, as hypothesized by Sung et al. (2004).

As previously mentioned, psychological motivation generally follows a five-step process: precontemplation, contemplation, preparation, action, and maintenance. If an individual cannot complete each step, in order, the

likelihood of a successful treatment outcome is limited (Giovazolias & Davis, 2005; Longshore & Teruya, 2006; Prochaska & DiClemente, 1986). Involvement in treatment can also indicate one's motivational level. In a prison in Texas, a total of 419 prisoners participated in a research sample. Using a series of linear regression models, demographics such as age, gender, ethnicity, marital status, employment history, drug use problems, and arrest history were assessed. Researchers Hiller, Knight, et al. (2002) determined that high involvement could be attributed to greater desire for help ($b = .21$, $p < .05$) and readiness for treatment ($b = .16$, $p < .05$). Reasons for low involvement in treatment may be due to being clinically dependent to opioids ($b = -.30$, $p < .05$). Interestingly enough, those substance abusers who had been separated, divorced, or widowed showed less motivation during their treatment ($b = -.34$, $p < .05$). Substance abusers, who reported fewer years of drug use, also self-reported lower motivation (Hiller, Knight, et al., 2002).

Shen et al. (2000) suggested that fewer years of drug use may result in less motivation for treatment because the addict may not feel he or she needs treatment for his or her

addictions (Cosden et al., 2006). These researchers also reported that if a client does not believe that he or she needs treatment, he or she might not be motivated, which is explained by Bandura's social cognitive theory (Bandura, 1989). He suggested that if an individual's foresight is to maintain sobriety, he or she should be in the process of self-regulating his or her behavior and should expect to maintain sobriety. In order for researchers to understand clients' motivation levels, it is necessary to utilize an instrument that can determine levels of motivation.

Treatment Motivation Instruments

Several motivational questionnaires attempt to assess individuals' motivation levels. One motivational questionnaire often used is called the Treatment Motivation Questionnaire (TMQ). Ryan et al. (1995) created the TMQ in an attempt to assess internal and external motivational factors, interpersonal help seeking, and nonconfidence in treatment. Internalized motivation means the person understands that he or she has a substance abuse problem and that it has ruined many areas of his or her life. External motivation drives people to want to quit. An example would

be a client attending treatment because his or her loved one persuaded him or her to do so.

The Interpersonal Help Seeking scale measures how the client perceives himself or herself sharing problems and interacting with other clients during treatment. Finally, Nonconfidence in Treatment is a subscale measuring the client's expectations of treatment outcome. The questionnaire has 29 self-report items assessing the reasons why people enter treatment and their feelings regarding treatment. The test is based on a 5-point Likert-type scale ranging from 1 (not at all true) to 5 (very much true). It attempts to examine potential influences that clients have upon entering a substance abuse treatment program.

In a study completed by Cahill, Adinoff, Hosig, Muller, and Pulliam (2003), the researchers assessed 98 patients enrolled in an 8-week alcohol outpatient treatment program. The researchers used several assessment instruments, including the TMQ and Beck Depression Inventory (BDI), to correlate their findings. When clients displayed significant numbers of difficulties, as determined by the BDI, they also scored high on pretreatment internal motivation (being motivated before treatment begins) and

interpersonal help seeking, as measured by the TMQ. The TMQ was not used in this study to determine if certain variables, such as demographics, drug use, or drug of choice, altered the client's motivational levels. Although the pretreatment internal motivation and interpersonal help seeking were tired to higher levels of problem severity (i.e., depression), these individuals had higher levels of attendance and involvement in treatment. It was also determined that high levels of internal and external motivation were correlated with treatment retention. In their findings, pretreatment to posttreatment motivation levels actually declined. They also pointed out that external motivational factors decreased over the duration of treatment, which may be due to clients *forgetting* about the external pressures from spouses, probation officers, or friends.

Retention Rates Over Specified Time Ranges

An individual's motivation and lack of basic or growth needs may be a key component to why he or she has higher craving levels, recidivates, or does not complete community-based substance abuse programs. Several studies have

speculated that extraneous variables (e.g., job loss or probation/parole problems) might hamper motivation for treatment. Conversely, it has been found that such reasons might also motivate the client (Longshore & Teruya, 2006).

Researchers have yet to attempt to break down motivation into time-sensitive stages. Hiller, Knight, et al. (2002) were able to predict that higher levels of self-reported motivation were indicative of higher rates of treatment attendance in the first 90 days of treatment. A sample of 419 felony probationers who had been admitted to the Dallas County Judicial Treatment Center (DCJTC) in Texas were given several assessments, including a demographic and history questionnaire and the Treatment Motivation Assessment (TCU). The TCU is a self-report study that assesses motivational readiness stages such as problem recognition, desire for help, and treatment readiness. Coefficient alpha levels for the three stages ranged from .67 to .82. The researchers found that treatment readiness and desire for help were highly correlated with personal involvement in the treatment program. They also attributed higher motivation to the client's recognition of his or her personal progress and willingness to remain in treatment.

Simply stated, if the client has intrinsic motivation, he or she will have a stronger desire to stay in treatment. However, the researchers did not break down the levels of motivation across the 90 days that they initially studied (Hiller, Knight, et al., 2002).

DeLeon et al. (1997) researched retention rates for individuals using certain drugs. The researchers examined cocaine, opiate, marijuana, and alcohol addicts at 30 days and at 10 months into treatment. DeLeon et al. found that in the 30-day follow up 87.2% of individuals in treatment for alcohol were still in treatment, followed by 76.7% of those in treatment for cocaine, and around 70.0% for both opiate and marijuana abusers. Ten months later, however, retention rates dropped by almost half. Thirty-eight percent were still in treatment after 10 months for marijuana abuse, followed by 35.9% of alcoholics, and about 35.0% for both cocaine- and opiate-addicted clients. Results from this study also showed that at the 30-day mark significant predictors of dropping out of the program were being male, African American, primary alcoholics, and over 27 years of age (DeLeon et al., 1997).

Craving Levels

Research has indicated that craving predicts substance abuse for several narcotics, including cocaine, nicotine, alcohol, and methamphetamine (Hartz, Frederick-Osborn, & Galloway, 2001; Rohsenow, Martin, & Monti, 1998; Weiss et al., 2003). Researchers have also suggested that individuals who rate their craving levels high at the onset of a treatment program will have fewer consecutive months of abstinence (Crits-Cristoph et al., 2007). In a research study conducted by Weiss et al. (2003), researchers found that individuals who used cocaine the following week indicated high craving scores the week before, as indicated by the Cocaine Craving Scale. The same researchers suggested that regularly measuring individuals' craving levels while in treatment may be helpful in predicting future drug use. Furthermore, effective treatment may decrease the relationship between additional substance abuse and craving by helping individuals abstain, regardless of high craving levels (Weiss et al., 2003).

Theory of Motivation and Hierarchy of Needs

As previously mentioned, one of the most researched reasons for dropping out of mandated or voluntary substance abuse treatment is motivation (DeLeon et al., 1997). Maslow's theory of motivation helps to explain why individuals may become unmotivated (Maslow, 1970, 1987). He stated that the most important goal is for individuals to learn what is being taught to them. Equally as important is that of retaining the information and using it in their daily routines. If an individual is not motivated, there will not be learning or retention of the information presented to him or her (Maslow, 1987).

Additionally, Maslow (1970) developed a model in which certain needs must be met before the individual can move to the next level within the hierarchy of needs. In general, individuals like to maintain a steady level of homeostasis (Maslow, 1970).

Level 1 needs are physiological, such as sleep, air, water, and nourishment. Maslow (1970) explained the basic needs: "If a human being is missing everything in life in an extreme fashion, it is most likely that the major motivation would be the physiological needs rather than any

others" (p. 37). For example, Maslow suggested that when a certain chemical is missing and the individual feels hunger, he or she will develop a specific appetite for the element he or she is missing. If substance abuse treatment counselors were able to provide a meal to a client or to find housing services, it may make the difference that client needed in order to become more determined in becoming a law-abiding citizen. In general, if there are limited or no basic needs met, the individual will not be able to focus on other needs and may turn to illegal acts in order to obtain his or her basic needs.

Level 2 needs are feelings of safety, such as living in a safe area, job security, stability, dependency, protection, freedom from fear, freedom from chaos, temperature extremes, separation, or divorce. For court-ordered clients, living in a world of substance abuse can be unsafe. According to Jones (2004), though these offenders may want to live in safe areas, they may be the ones who are creating an unsafe atmosphere. According to Maslow (1970), individuals strive for predictability, orderliness, and homeostasis within their environment. Clinicians can help individuals who are stuck on this level by having them open

savings accounts, take out home insurance, and also encourage them to obtain satisfactory, accessible medical care.

Level 3 needs are social, such as needing friends and a sense of belongingness. Belonging to a family, group, or gang does not always have to have negative connotations. The need to belong or the feeling of interconnectedness is characteristic to all individuals from all cultures. Relationships that allow individuals to feel gratification and a sense of worth enable the person to achieve self-actualization. Oftentimes, building networks for people lies in the hands of mental health professionals or educators (Wubbolding, 2005). It is important for human beings to belong to a group in order to feel accepted, have a sense of belonging, and a general feeling of being grounded (Maslow, 1970). For example, if an individual moves to a new location, he or she may feel a sense of loneliness and exclusion from activities and groups in the new area. Most often, substance abusers who are trying to maintain sobriety do not have a large support network or group of friends and family they can rely on because they most likely did not associate with nonusers.

Level 4 needs are esteem needs. In almost all cultures, excluding those individuals who exhibit psychopathic tendencies, there is a need for stability, to have a high self-evaluation, the need for self-respect or self-esteem, and for the esteem of others (Maslow, 1970). When an individual successfully completes a task there is satisfaction in knowing that he or she has mastered something (Wubbolding, 2005).

There are two subsets for this level. The first subset covers the desire for strength. Such needs would include achievement, adequacy, mastery, competence, confidence, independence, and freedom. The second subset focuses on individuals having a reputation. Prestige, status, fame, glory, dominance, recognition, attention, and dignity encompass this subset. Incarcerated individuals may not be able to move forward from this level due to lack of freedom and independence. Additionally, court-ordered clients may not be able to move from this level because of limitations regarding their independence. They are often mandated to attend weekly classes, individual therapy, and report to probation for urinalysis testing. However, Jones (2004) suggested that oftentimes substance-abusing individuals

become members of a gang or turn to gambling in order to gain praise or self-esteem. Level 4 is where substance abuse treatment becomes a need, and the individuals begins to recognize their substance abuse problems. Overcoming individuals' cravings may become their main focus. Without the feelings of self-confidence, self-worth, strengths, capability, and adequacy, feelings of inferiority, weakness, and helplessness set in (McClelland, 1961).

Finally, self-actualization needs are at the top of the hierarchy, such as truth, justice, wisdom, and meaning. This level signifies ultimate peace with oneself and the desire to become all that one can be (Maslow, 1970). Goldstein (1939) referred to this level as *man's desire for self-fulfillment*. Individual interpretations may vary with this level. A new father may want to be the best father he can be, or a recent high school graduate may wish to continue education. For substance abusers in the Proposition 36 population, this level may signify becoming a law-abiding citizen and attempting to maintain sobriety. Maslow (1987) suggested that if each level is not satisfied in order, then an individual's motivation level becomes stagnant.

Essentially, if substance abusers in mandated treatment are not meeting each level of the hierarchy, there will not be motivational progression; therefore, no new information will be retained and the rate of recidivism will increase. At any given point, lower level needs must be met, causing the substance abuse offender to focus on that lower need, consequently abandoning his or her higher needs. According to Maslow (1987), those offenders who are concerned with basic needs being met are most likely not interested in thinking about how to become *law-abiding citizens*.

Miller and Rollnick (2002) described motivation for treatment as, "a state of readiness or eagerness to change, which may fluctuate from one time or situation to another" (p. 14). Basically, a process of change is essential in order to produce successful psychological and behavioral modifications relative to substance abuse, seeking treatment, and successful completion of treatment (DiClemente & Velasquez, 2002). Clinicians view motivation and readiness for treatment as essential factors that help to explain why substance abusers either stay or drop out of treatment (DeLeon et al., 1997). In addition, substance abusers who show less motivation upon starting treatment

tend to have a poor outcome. They are usually less compliant, have fewer therapeutic alliances, possibly drop out of treatment, and potentially recidivate (Kelly et al., 2004).

In a study by Ball et al. (2006), 24 men and women in New Haven, Connecticut, who had recently dropped out of treatment were assessed using the Reasons for Leaving Treatment Questionnaire (RLTQ), Addiction Severity Index (ASI), University of Rhode Island Chance Assessment Scale (URICA), and the Schedule for Non-Adaptive and Adaptive Personality (SNAP). Findings suggested that approximately half of dropouts occurred because of lack of motivation. Demographic variables, such as age, education, employment, race, and gender, were not highly associated with reasons for dropout (Ball et al., 2006). Motivation was also highly correlated with participating in community-mandated treatment (DeLeon & Jainchill, 1986; DeLeon et al., 1997; Hiller, Knight, et al., 2002). Some clients in treatment may appear to be motivated, but they are actually detached and do not participate in the therapeutic process. Others may be involved allowing themselves to become active in their treatment.

Self-Determination Theory

Several theories can help explain clients' motivations for staying in treatment. Court-ordered clients who enter a mandated drug treatment program vary in their motives, whether autonomous or controlled. Even though court-ordered clients are mandated to treatment, some may feel relief that they are in treatment and have an inner desire to change. In order for patients to feel involved and determined in treatment, they must feel autonomous rather than controlled in the treatment environment (Deci & Ryan, 1985; Ryan & Deci, 2000; Williams et al., 1998). The term *autonomous* refers to behaviors that are volitional or have a perceived internal locus of causality (Ryan & Connell, 1989). These behaviors allow the client to make his or her own choices, be authentic, and have personal endorsement. In contrast, when pressure motivates an individual, or contingent rewards are at stake, he or she is motivated by controlled behaviors. This is called having a perceived external locus of causality (Ryan et al., 1995). The SDT suggests that if the person's behavior is more internal, the more he or she is expected to continue the activity and possibly adhere to a treatment regime. Conversely, the more

eternally based a person's reasons for entering treatment the less persistence and adherence is predicted (Zeldman, Ryan, & Fiscella, 2004).

Social Cognitive Theory

Within the last 50 years, Miller and Dollard (1941) and Bandura and Walters (1963) have all proposed theories of social learning. Essentially, each proposed that environment, people, and behavior all influence the ability to retain information. Social cognitive theory suggests that most human behavior is regulated by forethought, meaning that people need to be capable of motivating themselves to guide their actions. The underlying purposes of this theory are to "understand and predict individual and group behavior; to identify methods in which behavior can be modified or changed, and; to be frequently used in interventions aimed at personality development, behavior pathology and health promotion" (Bandura, 1989, p. 29). Bandura also suggested that individuals have the ability to control their outcomes, which allows for them to predict the outcome of their behavior. Expectations, goals, intentions, beliefs, and self-perceptions all give shape to one's behavior. It is, however, the behavior that will affect the

individual's emotions and thoughts (Bandura, 1977, 1986, 1989). Forethought and self-regulation, "an internal control mechanism that governs what behavior is performed" combine together to motivate behavior (Bandura, 1989, p. 85). Essentially, if an individual has the forethought that he or she will receive adequate substance abuse treatment, along with self-regulation, the individual will be more motivated and successful in his or her recovery.

Bandura (1977, 1986, 1989) suggested three factors that determine whether or not self-motivation will occur. The first is the ability for an individual to feel capable of achieving his or her goal. This is called self-efficacy. The second is feedback. Through feedback the individual is able to adjust his or her goals to make them more realistic and feasible. The third factor is anticipated time to goal attainment, which suggests that proximal goals are more effective in maintaining higher motivational levels.

Substance Abuse Treatment in Lieu of Imprisonment

The implications for dropout and recidivism among substance abusers in mandated substance abuse treatment programs include the costs to society when treatment needs

are not met. Incarceration is expensive, and at $30,000 per inmate per year, incarcerating nonviolent substance abusers can be costly (California Proposition 36, 2000). If a substance abuser does not receive adequate relapse prevention skills while in treatment, the likelihood of criminal activity increases. As substance abusers try to fund their expensive habit by either selling or purchasing drugs, they engage in criminal activity, which hurts victims both financially and emotionally.

Researchers have suggested that if a client has high internal motivation at intake, he or she will show greater motivation while in treatment (Pitre et al., 1998). In addition, it is when the client has enough foresight and expectancy to change that the client's behavior will change. Many demographic variables, such as age, gender, ethnicity, and genetic disposition, can affect behavior; however, social cognitive theory (Bandura, 1977, 1986, 1989) suggested that there are other factors involved, such as goal setting, vicarious learning, self-efficacy, and symbolizing, which all merge together to allow the individual to change his or her behavior. In addition to Bandura's social cognitive theory, Maslow (1970) suggested

that if individuals' basic physiological needs, such as food and shelter, are not met, they will not be motivated to achieve self-actualization by becoming law-abiding citizens.

The present study helps to explain the relationship that length in treatment, craving level, Maslow's (1970, 1987) basic needs and growth needs, and motivation have to court-ordered substance abuse offenders in mandatory treatment, along with which variable is the strongest predictor of increased craving levels.

Chapter 3

METHODS

Participants

The researcher approached Drug Court and Proposition 36 clients in the Central Valley area in California. Five substance abuse treatment programs participated. One location mixed both Drug Court and Proposition clients together for treatment. All active clients were asked to participate. Participants were both male and female, over the age of 18, and from a variety of ethnic backgrounds (see Table 1). Participants came from a variety of locations within the Central Valley and had abused a variety of drugs or alcohol.

The researcher assessed 88 participants, although Cohen (1988) suggested 84 total participants for a medium effect size using multiple regression, an alpha level of .05, and a total of four variables. Only 70 of the 88 participants' data were analyzed due to Drug Court participants' data having a strong positive correlation between internal and external motivation.

Table 1

Demographic Statistics

Participants	Number	Frequency %
Gender		
Male	57	81
Female	13	19
Age (in years)		
18-30	24	34
30-40	26	37
40-50	12	17
50-60	8	11
60+	0	00
Ethnicity		
Hispanic	24	34
Caucasian	34	49
Asian American	3	4
African American	3	4
Native American	3	4
Indian American	0	0
Other	3	4
Weeks in current treatment		
1-15	27	39
16-30	19	27
31-45	8	11
46-60	16	23
Drug of choice (DOC)		
Methamphetamine	40	57
Cocaine	3	4
Marijuana	16	23
Crank	0	00
PCP	2	3
Heroin	2	3
Inhalants	2	3
Other	5	7

Table 1 (continued)

Participants	Number	Frequency %
Age (in years) of first use DOC		
< 12	11	16
13-16	29	41
17-20	14	20
21-24	4	6
25-30	7	10
31-40	3	4
41-50	2	3
51-60	0	0
60+	0	0
Length of time (in years) using DOC		
< 1	3	4
1- 4	8	11
5- 8	15	21
9-12	11	16
13-15	19	27
16+	14	20
Number of previous incarcerations		
0	4	6
1	8	11
2	11	16
3	10	14
4+	37	53
Number of previous substance abuse treatments		
0	30	43
1	23	33
2	12	17
3	2	3
4+	3	4

Table 1 (continued)

Participants	Number	Frequency %
Number of children living at home		
0	39	56
1	9	13
2	10	14
3	7	10
4	1	1
5+	4	6

Procedure

Participants were asked to participate by their group leader several days in advance. Participants' assessment day counted as one of their treatment days, with the duration of testing lasting approximately 1 hour. The researcher used the Treatment Motivation Questionnaire (TMQ; see Appendix A), Cocaine Craving Questionnaire-Now-Brief (CCQ-NOW-BRIEF; see Appendix B), and the Needs Assessment Questionnaire (NAQ; see Appendix C). The TMQ and CCQ-NOW-BRIEF are both in public domain.

Information including basic and growth needs, such as food, housing, sex, feeling safe at home, a sense of belongingness, and esteem needs, were included in the Needs Assessment Questionnaire. Participants were informed that the information they filled out would be included in the researcher's dissertation. Participants were told that their participation was completely voluntary and that they could withdraw at any time. In addition, they were informed that no adverse action would be taken if they refused to participate.

Participants were offered a chance to view a summary of the dissertation findings by filling in their contact

information on the informed consent form (Appendix D). Approximately 75% of participants included their contact information. Clients were also instructed to inform the administrator if they needed debriefing after completing the questionnaires. Participants had the option to make an appointment with the researcher to have a personal debriefing if they became agitated, uncomfortable, or distressed during or after the assessments. As predicted, no participants requested that service. Participants were informed there would be no further interaction unless a personal debriefing was requested. If participants chose to see a copy of the results and also provided the researcher with their mailing address, the researcher sent them project findings as they became available. Additionally, participants were eligible to enter their name for a $50 raffle as part of an incentive.

The researcher assessed participants during their 2-hour treatment group. Upon completion of the assessment, participants were able to leave the facility. Five substance abuse treatment program facilities participated, with 88 participants total. The researcher handed out the assessment packet and answered questions as they came up

over the hour. The researcher explained what the dissertation focused on and briefly explained what the expectations of each participant were and that involvement was voluntary. On all three assessments in the packet, there was a space for clients to indicate what week they were in treatment. The 70 participants assessed were not evenly distributed among four time periods. Approximately 27 participants were within Weeks 1 and 15, 19 were in Weeks 16 to 30, 8 were in Weeks 31 to 50, and approximately 16 were in the last weeks of treatment, Weeks 46 to 60. The purpose for determining what time bracket participants were in was to help the researcher determine if a relationship existed between the criterion and predictor variables. The researcher assessed clients in different time periods to establish a relationship between clients in their first weeks of treatment versus last weeks and which variable was the strongest predictor of craving levels.

Instruments

Treatment Motivation Questionnaire

The Treatment Motivation Questionnaire (TMQ) is a self-report questionnaire that until 2006 had only been used to

assess alcohol abusers' level of motivation (see Appendix A). In 2006, the scope of the instrument was expanded, assessing those in a methadone clinic. Ryan, Plant, and O'Malley developed the TMQ in 1995 and used the test to study alcoholics' motivation upon entering treatment. Because of the pertinent questions it asks, this test should be appropriate to administer to drug abusers, although it has yet to be used on criminal publications. Permission was granted from the publisher of the TMQ to the researcher to use and to reprint in the completed dissertation (see Appendix E).

The TMQ was developed to measure clients' pretreatment motivation levels, with the goal of predicting treatment attendance, participation level, and treatment outcome. The normative population for the TMQ was 109 outpatient alcoholics who were about to enter a treatment program. Seventy-six percent were male, and the average age was 30.5 years old, with a standard deviation of 8.31. Sixteen percent were married, 10% were separated, 20% were divorced, 1% was widowed, and 53% were single. The majority, 63%, were legally mandated to the outpatient treatment. Eighty percent of the clients were Caucasian, 19% were African

American, and only 1% were Hispanic. Finally, 66% were employed at the time of testing. Results indicated that coefficient alpha levels demonstrating reliability for the four subscales the TMQ assesses were .73 for external, .83 for internal, .76 for interpersonal help seeking, and .85 for treatment confidence.

The TMQ is a Likert-type scale ranging from 1 (not at all true) to 7 (very true). The test has 26 questions, divided into three sections. Section A assesses why the individual is seeking treatment, and it includes five questions, such as "I feel so guilty about my problem that I have to do something about it." Section B assesses why the clients may stay in treatment, and this includes six questions, for example, "I'll feel very bad about myself if I don't [stay in treatment]." Section C assesses general motivation, and there are 15 questions, for example, "I decided to come to treatment because I was interested in getting help." Once all questions have been answered, the researcher can calculate four subscale scores by averaging the responses for each subscale. All of the questions load onto one of the four mentioned subscales: External Reasons, Internalized Reasons, Help Seeking, and Confidence, although

the researcher is only interested in internal and external motivation.

Motivation is one of the most frequently researched reasons for client dropout, relapse, and other detrimental treatment outcomes (DeLeon et al., 1997). The TMQ was used for the purposes of the researcher's study because of its ability to determine motivation levels in individuals seeking substance abuse treatment.

Cocaine Craving Questionnaire-Now-Brief (CCQ-NOW-BRIEF)

The Cocaine Craving Questionnaire-Now-Brief (CCQ-NOW-BRIEF) was used to determine what level of craving each client was experiencing at the time (Appendix B). It was originally developed by Tiffany, Singleton, Haertzen, and Henningfield in 1993, under the name Cocaine Craving Questionnaire-NOW Brief (CCQ-NOW BRIEF). It was designed for cocaine users to rate their cravings. The reliability for the CCQ-NOW-BRIEF is .92 for the 10-item test and is a Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree) where the client checks his or her response. Tiffany, an original designer of the test, granted the researcher permission to use the questionnaire,

to reprint in the completed dissertation, and to generalize the questions to include all substances, not just cocaine (Appendix F).

Needs Assessment Questionnaire (NAQ)

The Needs Assessment Questionnaire (NAQ) is a 33-question self-report, Likert-type scale, ranging from 1 (need not being currently met) to 4 (need has been met or is being met). It was given to clients and included the basic and growth needs information necessary for the independent variables correlating to Maslow's Hierarchy of Needs and certain demographic information (Maslow, 1970, 1987). Ten questions were pertinent demographic questions, and the remaining 24 questions assessed the clients' current needs. Questions on the NAQ include, but were not limited to, Physiological Needs (such as sleep, medical accessibility, food, sex, and a place to live), Safety Needs (such as feeling safe at home, child care, and having a supportive family life), Need to Belong (such as belongingness in a group, family, or religious group), Esteem Needs (such as mastering or having knowledge of a special trade or task and attention and recognition from others), and

Self-Actualization (which would include the needs for personal growth and self-fulfillment). As the score increases, the level of needs met also increases, consequently allowing for the client to become more motivated to stay in treatment. To the researcher's knowledge, only one additional questionnaire relating to Maslow's Hierarchy of Needs had been created (Maslow, 1970, 1987).

Chapman (2003) devised an 8-item inventory assessing needs. Because there were only eight items and not in Likert-type data, the researcher devised her own questionnaire, borrowing Items A ("I am successful in life and/or work and I'm recognized by my peers for being so. I'm satisfied with the responsibility and role that I have in life and/or work, my status and reputation, and my level of self-esteem") and D ("My aim is self-knowledge and enlightenment." "The most important thing to me is realizing my ultimate personal potential. I seek and welcome 'peak' experiences"). Alan Chapman has granted the researcher permission to use and reprint the above-mentioned statements in the entire dissertation (see Appendix G).

Operational Hypotheses and Data Analyses

Hypotheses

Hypothesis 1. Clients at the beginning weeks of treatment (Weeks 1-6) will score higher on external motivation measured by the TMQ (External Motivation subscale) than will those at the end of treatment (Weeks 19-24).

Hypothesis 2. Clients at the beginning of treatment (Weeks 1-6) will score lower on internal motivation, measured by the TMQ (Internal Motivation subscale) than will those at the end of treatment (Weeks 19-24).

Hypothesis 3. Clients in all four time brackets who have all of their basic, safety, and belongingness needs met (as measured by the NAQ, Questions 1-15, with scores ≥ 3) will be defined as Group 1. It is hypothesized that this group will score lower on craving levels, as measured by the CCQ-NOW-BRIEF than will those without their needs met (as measured by the NAQ, Questions 1-15, with scores ≥ 3), which will be defined as Group 2. It is hypothesized that Group 2 will rate higher on their craving levels.

Hypothesis 4. Clients who are at the end of their treatment (Weeks 19-24) will score higher on both internal and external motivation (as measured by the TMQ, Internal and External Motivation subscales) and have 80% of their basic needs met (as measured by the NAQ, with a mean score of < 3 on 24 items).

Based on social cognitive theory, theory of motivation, and numerous research studies, recidivism associated with mandated treatment programming is growing. Clients in treatment are learning from their facilitators and other group members, aiding in the cognitive development of that client, ultimately affecting their motivation to achieve or maintain sobriety.

According to Bandura's social learning theory, if the group facilitators are modeling positive reinforcement, group members will learn vicariously and also maintain sobriety. The increase in motivation was hypothesized to be due to length in treatment. However, it has also been evidenced that clients' motivation will decrease toward the end of treatment. Additionally, according to Maslow's Hierarchy of Needs (Maslow, 1970, 1987), clients who have their basic needs met will be able to concentrate on their

self-actualization needs, such as motivation to stay in treatment, in order to decrease craving levels, maintain sobriety, and reduce recidivism. This study attempted to explain how time in treatment, basic needs, growth needs, motivation, and craving levels affect individuals in specific weeks of treatment.

Data Analyses

This study was a comparative correlation. The predictor variables being assessed were the basic and growth needs, time in treatment, and both internal and external motivation. The criterion variable was the craving score from the CCQ-NOW-BRIEF.

To support the first and second hypotheses, an independent *t* test was run to compare means of internal and external motivation at both the beginning and at the end of treatment. For the third hypothesis, an independent *t* test was also used to compare means of two groups' craving levels. Group 1 consisted of clients who had their needs met and scored low on cravings. The second group consisted of those who did not have their needs met and scored high on their cravings. The groups were divided based on whether or not they had at least 80% of their needs met (a score of at

least 3 on the basic and safety needs domains on the Needs Assessment Questionnaire).

To support the fourth hypothesis, a multiple regression was run to determine whether there was a relationship between clients' needs, internal and external motivation, time, or craving differences that existed between the 69 participants. This enabled the researcher to determine the overall model and significance that the predictor variables had on the criterion variable. A Bonferroni correction was then performed on correlations that had not reached significance in the original analyses. The Bonferroni corrects for alpha inflation that can occur when multiple correlations are performed.

Chapter 4

RESULTS

The purpose of this study was to measure clients' internal and external motivation, time in treatment, basic needs, and craving levels, with craving levels being the criterion or dependent variable. Four hypotheses were tested, and data were analyzed using multiple regression and *t* tests, with an alpha level of .05. In addition, five post hoc analyses were completed.

The original group of research participants sample included 88 Proposition 36 and Drug Court participants. Cohen (1988) suggested 84 total participants for a medium effect size using multiple regression, alpha of .05, and four variables. However, data from Drug Court participants appeared to be invalid because of a strong positive correlation between internal and external motivation, $r = .67$, $n = 18$, $p < .01$. Consequently, the 18 Drug court participants' data were removed from all analyses. The outcome expectancy for this analysis was a mild negative correlation between internal and external motivation, which was found in the Proposition 36 participants' data

($r = -.13$, $n = 69$, $p > .05$). Participant 22 was removed from the internal motivation analysis because his score was over 4 standard deviations below the means. This would have had undo influence on the mean for the group.

Thirteen of the 70 participants were female; 57 were male. For a list of other demographic characteristics, please refer to Table 1 (p. 53). After the initial analyses were completed, a Bonferroni correction was done to correct for alpha inflation. This was necessary because when multiple *t* tests are run the cumulative Type 1 error risk increases. This risk was calculated by multiplying the number of corrections run (3) by the alpha level (.05) = .17. After performing this correction, there were no significant comparisons.

The External and Internal Motivation subscales both had internal consistency checks run on them. Internal Motivation yielded a .80 Cronbach's alpha, while the External Motivation subscale yielded a .61. In addition to the TMQ's internal consistency check, the Needs Assessment Questionnaire was checked for internal consistency, and it yielded a .81 alpha.

Additionally, multicollinearity was present in two subscales; however, they did not violate any assumptions. Internal motivation was correlated with having one's needs met at the .05 level.

The first hypothesis was not statistically significant. It predicted that clients at the beginning weeks of treatment (Weeks 1-15) would score higher on external motivation measured by the TMQ (External Motivation subscale) than would those at the end of treatment (Weeks 46-60). A *t* test was conducted to determine if significant differences in external motivation existed between these treatment periods. A Bonferroni correction was done prior to running analysis. The difference in external motivation reported by Weeks 1 to 15 (M = 5.43, SD = 1.48) and Weeks 46 to 60 (M = 4.88, SD = 1.38) was not statistically significant, $t(38) = 1.19$, $p > .05$ (see Table 2). The results indicate that there was no significant decrease. (Individuals at the end of treatment reported lower levels of external motivation, but they were not significant.)

Table 2

Internal and External Motivation Difference Between Participants in Beginning and End of Substance Abuse Treatment

	Weeks 1-15		Weeks 46-60			
Motivation	*M*	*SD*	*M*	*SD*	*df*	*t*
External	5.43	1.49	5.02	1.51	50	.911
Internal	5.88	.91	6.00	.89	49	-.441

The second hypothesis was not statistically significant. It predicted that clients at the beginning of treatment (Weeks 1-15) would score lower on internal motivation, measured by the TMQ (Internal Motivation subscale) than would those at the end of treatment (Weeks 46-60). Another *t* test was conducted to determine if significant differences in internal motivation existed between Weeks 1 and 15 and Weeks 46 and 60 of treatment. A Bonferroni correction was done prior to running analysis. The difference in internal motivation reported by Weeks 1 to 15 (M = 5.89, SD = .87) and Weeks 46 to 60 (M = 6.01, SD = .92) was not statistically significant, $t(37) = -.39$, $p > .05$ (see Table 2).

The third hypothesis was not statistically significant. It predicted that participants who scored a 3 or higher on basic needs, safety needs, and belongingness would also have low scores on the CCQ-NOW-BRIEF. A third *t* test was conducted on clients regardless of time brackets. Participants were divided into two groups: those who had their basic, safety, and belongingness needs met and those who had not. Only 6 out of the 70 participants endorsed had all 15 needs met. The groups were divided based on whether

or not they had at least 80% of their needs met (a score of at least 3 on the basic and safety needs domains on the Needs Assessment Questionnaire). The difference in basic needs, safety needs, and belongingness met between participants with less than 80% of their needs met (M = 2.03, SD = 1.04) and those with at least 80% of their needs met (M = 1.83, SD = .82) was not statistically significant, $t(68) = -.92$, $p > .05$.

The fourth hypothesis was statistically significant. It predicted that clients who were at the end of their treatment (Weeks 46-60) would score high on both internal and external motivation and have 80% of their basic needs met (basic, safety, and belongingness). This hypothesis was assessed using a stepwise multiple regression and found two significant predictor variables among the four variables, $F(1, 67) = 4.19$, $p < .05$. The best predictors of craving were external motivation and needs met, specifically that external motivation accounted for 6% of the variance in craving levels and needs met accounted for 5% (see Table 3). Contrary to the hypothesis, as external motivation and one's needs met increased, craving also increased. The remaining

Table 3

Relationship Between Internal Motivation, External Motivation, Basic Needs, and Time in Treatment Predictor Variables on Craving Levels

Variable	*M*	*SD*	1	2	3	4
Cravings	1.95	.94	.24*	-.05	-.01	-.23*
Predictor variables						
1. External motivation	5.22	1.45	-	-.13	-.15	-.10
2. Internal motivation	6.00	.78	-	-	.02	.36**
3. Time in treatment	2.25	1.23	-	-	-	.07
4. Basic needs	3.25	.40	-	-	-	-

*$p < .05$ accounts for variance in craving

**$p < .05$ accounts for variance in internal motivation/basic needs

predictor variables, internal motivation and time in treatment, did not.

Five post hoc analyses were completed using demographic data and either motivation or craving; however, none were significant. First, participants' number of previous incarcerations and their craving levels were compared, and it was determined that the number of previous incarcerations did not predict craving (r = .102, n = 70, p > .05. The second post hoc analysis compared the reported number of years participants used their drug of choice and their internal and external motivation levels. Again, it was determined that the length of time using drug of choice did not predict participants' motivation levels (external motivation: r = .00, n = 70, p > .05; internal motivation: r = -.08, n = 70, p > .05). The third analysis compared participants' ages and their reported craving levels, and it was determined that age did not predict craving level (r = .08, n = 70, p > .05). The fourth analysis compared age at first drug use and their reported craving level, and it was determined that age at first drug use did not predict craving level (r = .12, n = 70, p > .05). Fifth, participants' ethnicity and craving levels were analyzed

using an analysis of the variance (ANOVA) to determine if certain ethnicities would affect craving levels. On the CCQ Likert scale (1-5), African Americans' craving levels (M = 2.5, SD = 2.00) were not representative of the sample, as there were only 3 African American participants. Anglo American participants' craving levels (M = 1.99, SD = .87, n = 34) were approximately .1 points higher than Hispanic/ Mexican participants' scores (M = 1.87, SD = .84, n = 24), which suggested that there was a nonsignificant difference between the two (see Table 4).

In conclusion, one of the four hypotheses was significant. The multiple regression predicted that of the variables out of time in treatment, needs met, internal and external motivation, external motivation was the best predictor of craving level for individuals at the end of their substance abuse treatment. Additional post hoc analysis did not suggest the number of years participants used their drug of choice predicted their motivation level, nor did the number of previous incarcerations, age, age at first use, or ethnicity predict craving levels.

Table 4

Ethnicity and Reported Craving Levels

Craving levels	*M*	*SD*	*n*
Hispanic/Mexican	1.87	.84	24
Anglo American	1.99	.87	34
Asian American	1.07	.06	3
African American	2.50	2.00	3
Native American	1.63	.55	3
Other	2.47	1.82	3

Chapter 5

DISCUSSION

This study found significant results for one hypothesis that investigated the relationship between internal motivation, external motivation, time in treatment, Maslow's Hierarchy of Needs (Maslow, 1970, 1987), and reported craving levels. The findings for this sample suggested that external motivation and needs met were predictive of craving levels among substance abusers in mandated substance abuse treatment programming. Specifically, as the two variables increased, craving levels did too.

Other findings were inconsistent and thus cannot support the main theory: Maslow's Hierarchy of Needs (1970, 1987). This theory suggested that individuals must have basic needs met before they can become self-actualized. It was hypothesized that individuals who had 80% of their basic, safety, and belongingness needs met would rate lower on craving levels due to a desire for self-actualization. Participants in the study who had higher levels of internal or external motivation did report 80% of their needs met. However, participants' craving scores, regardless of time in

treatment, were not lower than those who reported less basic, safety, or belonging needs being met.

Additionally, those in the beginning weeks of treatment (Weeks 1-15) did not differ in external or internal motivation levels from those in the last weeks of treatment (Weeks 41-60). This was consistent with Ryan et al.'s (1995) findings that clients in substance abuse treatment will report a range of motivational influences over time. Additionally, participants at the end of their treatment (Weeks 41-60) were assessed. Time in treatment, internal and external motivation, and needs met were assessed to determine which variable was a better predictor of craving increase. Contrary to the hypothesis, participants who rated high on the TM's External Motivation subscale also rated their craving levels higher. This external motivation variable made up 6% of the variance in craving levels. More research is required to assess additional determinants for drug craving levels in this population.

This study is unique in that it sampled participants from California's Proposition 36 substance abuse treatment programming--a group who have not been widely evaluated. Coincidentally, researchers have suggested this treatment

population is recidivating at a high rate (Farabee, Hser, et al., 2004). The criminality associated with recidivating substance users creates an additional concern. Substance abusers often support their habit by illegal means, such as theft or murder, often jeopardizing the safety of their community (Executive Office of the President, 2001; French & Martin, 1996; French et al., 2004; Harwood et al., 1999; Wilson, 2000).

As mentioned in the previous chapter, 18 Drug Court clients were omitted from the research sample because of a strong positive correlation between internal and external motivation. Drug Court clients are mandated to treatment; however, unlike Proposition 36 clients, they pay for treatment. It is possible that Drug Court clients were less willing to participate since they might assume their 2 hours of test taking would replace the 2-hour class for which they had paid. This may have led to some inconsistency in test taking.

Results pertaining to Proposition 36 clients are consistent with Ryan et al.'s (1995) research, which concluded that participants with higher external motivation than internal motivation would drop out of treatment. When

combined with literature that suggests when individuals report high craving levels they are prone to recidivating (Hartz et al., 2001; Rohsenow et al., 1998; Weiss et al., 2003), high external motivation may help to predict recidivism.

Research regarding demographic variables contributing to drop has been highly debated (Ball et al., 2006; Gossop, Green, et al., 1990; Hall et al., 1990; Hiller, Knight, et al., 2002; Leukenfeld et al., 2002; Wexler et al., 1988). Preexisting literature has suggested the link between cravings and select demographic variables, such as ethnicity, age, number of times incarcerated, and number of years the individuals have used their drug of choice (Weiss et al., 2003). This study was unable to determine dropout rate. However, participants' information, such as age, age of first use, number of years using drug of choice, number of times incarcerated, and ethnicity, were analyzed to determine if they helped to predict craving levels. The post hoc findings were unanticipated, as a majority of the preexisting literature suggested otherwise. None of these demographics helped to predict craving levels.

Clinical Implications

Based on the results, individuals in substance abuse treatment programming rated their craving levels higher when they were more externally motivated and when they had more basic, safety, and belongingness needs met. This suggests that even though they do not have to go to prison and are essentially being given a second chance, they still report having high craving levels. External motivation can come from spouses, loved ones, parole officers, or the judge forcing the individual into treatment. Possible reasons for having higher craving levels with higher external motivation and needs met could be that participants did not have enough support from their one-to-one therapist, group leaders, or group members to help them with their craving. The Treatment Motivation Questionnaire's questions that load onto the External Motivation subscale indicate forceful external motivation, such as "12) I came to treatment now because I was under pressure to come."

All Proposition 36 individuals are mandated to treatment without the freedom to drop out without consequence. Low internal treatment motivation has been identified as an important factor in program noncompliance

(Sung et al., 2004). For court-based drug treatment program clients, coercion is a major external motivating factor. Programs such as Proposition 36 serve clients who are in treatment because they are mandated and want to avoid incarceration. Drug Courts tend to serve clients based on suitability criteria, such as the individual's perceived need for substance abuse treatment and possibility of benefitting from treatment (Cosden et al., 2006). These findings support the old adage that clients cannot be forced to benefit from treatment when mandated into it. Essentially, mandating clients does bring clients to treatment; however, it cannot force them to be actively participating or engaged.

There has not been any research to help explain substance abuse using Maslow's Hierarchy of Needs; therefore, it is possible that substance abusers view their needs differently than do non-substance-abusing individuals. When substance abusers have their basic, safety, belongingness, and self-esteem needs met, they may crave their drug of choice more if they do not have access to it. Conversely, non-substance-abusing individuals may seek out higher education, to become law-abiding citizens, and to

give back to their communities. Future research in this area may help clarify or justify this study's findings.

It is well-evidenced that clients who enter treatment voluntarily recidivate less than do those who are forced, and perhaps, if clients are preselected prior to their entering their treatment program they may be less likely to recidivate. Researchers have suggested that the number of years an individual uses drugs may predict his or her level of motivation (Hiller, Knight, et al., 2002). According to the first and second hypotheses, external motivation does not appear to be higher in individuals entering treatment compared to those at the end of treatment. Treatment program clients may benefit if clinicians explore more interpersonal styles instead of pure behavioral therapy. As is the case in psychotherapy, oftentimes clients benefit when therapists work more in depth to try to understand why the individual used drugs the first time. Focusing on the individuals' personal strengths and self-esteem building may be beneficial in helping them to understand their cognitions and become masters of their own behaviors. Master's level clinicians and above should delve into the underlying reasons for the substance abuse.

Researchers have also suggested that one's craving levels can predict his or her recidivism rate (Weiss et al., 2003). Determining specific demographic variables and their links to craving levels, based on this research, was insufficient. However, with future research in the areas of motivation, craving, and certain demographic variables, researchers can begin to build empirically based treatment using risk assessments. If clients are assessed using these measurements, such as recidivism risk assessment and motivation questionnaire, they can be placed into appropriate groups based on their treatment needs. It may be beneficial to have Master's level clinicians and above to neurologically assess new program admits. This would help determine if there are any neurological deficits that may interfere with clients' cognitive abilities. If they are neurologically impaired from substance abuse, traumatic brain injury, and so forth, clinicians may be able to better assist them in their treatment program so they can comprehend treatment. When in their appropriate treatment programs, clients may be more likely to understand and comprehend treatment when they are matched with similar

group members. This may help reduce or eliminate their craving levels and ultimately lower societal costs.

Limitations

This study has several limitations that should be addressed by future researchers. First, data from the 18 Drug Court participants appeared to be invalid because of a strong positive correlation between internal and external motivation for members of this group. Consequently, the 18 participants were removed from the present study, leaving only Proposition 36 clients. This limits the generalizability of the results to those who have been forced into treatment. The results may have been different had Drug Court clients' data not been invalid. While this research is generalizable to the rest of the Proposition 36 clients in California, it may not be an accurate portrayal of other individuals in substance abuse treatment within or outside of Central Valley, California.

Although the recommended sample size for statistical purposes was 84 (Cohen, 1988), additional statistical significance may have been discovered with a larger sample size, with an even distribution of males to females, and similar variance across other demographic variables. The

multiple regression correlation was completed using only 69 to 70 participants, which does go against Cohen's recommended number of 84. Additionally, Participant 22 was omitted from the internal motivation analysis because his score was over 4 standard deviations below the mean. Unfortunately, the omitted participants' scores may represent those who do have extreme behavior; however, it is unclear how this research would apply to others with similarly extreme behavior.

This study was completed with a convenience sample, which limits its reliability and validity. There are many reasons why using a random sample from this population may have been difficult. One was the limited number of participants in the program. Another limitation was the lack of obtaining specific demographic variables, such as education level, socioeconomic status, sexual preference, marital status, and employment status. These variables may have been helpful in researching post hoc analyses to determine if certain demographic variables, such as those omitted, helped explain treatment motivation or craving. Another limitation was the inability to assess clients at the beginning of their treatment regime, two times half way

through, and their last week of treatment. Clients' responses may have been different at other times in treatment, which could help determine if clients' motivation, craving levels, or needs are higher or lower at any given week. Continuous data may have provided a more comprehensive picture.

Furthermore, clients were assessed while in treatment and were seated within 1' to 2' from other clients due to limited space. It is possible that clients may have been uncomfortable answering sensitive information truthfully because of their close proximity to others. Honesty and response accuracy to surveys can be of concern when using self-rating scales. As with any therapeutic alliance, building rapport is essential. It is possible that not enough rapport was built with the participants to allow them to feel comfortable and safe in their answering.

All questionnaires administered were self-report, which can jeopardize the validity of the testing, as participants are able to answer questions dishonestly. This may be especially true for court-mandated drug clients, as suspicion of legal consequences could occur despite reassurances related to confidentiality.

Another limitation was due to the instrumentation. All four subscales were used in norming the Treatment Motivation Questionnaire. Two of the four subscales (Help Seeking and Confidence) were removed from the present study, with permission granted from the researchers. Although the participants were to answer every question, approximately half of the items did not load onto Internal and External Motivation. In essence, important correlations may be missing from the TMQ due to not using all four subscales. The External Motivation subscale measured forced external motivation and did not take into consideration positive external motivation, such as familial support. A more positively geared external motivation questionnaire may be helpful in assessing a well-rounded view of the participants' external motivators.

The Cocaine Craving Questionnaire Now-Brief was not normed on the general substance abuse population, as the name implies. With permission from the researchers, this questionnaire was used to gain a basic level of craving from the participants. Although the questions were reworded to fit any participant's drug of choice, the instrument was originally normed on cocaine abusers, who do not represent

the entire substance-abusing population. The researcher created the Needs Assessment Questionnaire, including two questions from preexisting measurements; however, it yielded a Cronbach's alpha level of .81, which is strong considering the questions were made up. Because there was no established reliability, results from this instrument may not be accurate for the rest of the substance abuse treatment population.

One of the five post hoc analyses compared the number of years participants used their drug of choice to determine if years could predict motivation. Only one drug of choice was permitted on the demographic questionnaire. Consequently, if a participant entered 10 years using X drug, although he used Y and Z drug in between for 5 years, the additional drugs were not included in the analysis, though they may have affected his or her motivation. It may have been beneficial to have more of a selection for participants' ethnicity and possibly combine into an *other* category for those who represented less than .4% of the population. With the six forced ethnicities it may have been difficult for participants to adequately answer. The remaining three post hoc analyses completed may be difficult

to interpret due to the low number of participants and the lack of significance. Because of this, it was difficult to make comparisons to the large body of research suggesting a link between demographic variables and craving levels.

Recommendations for Future Research

Neither Proposition 36 nor Drug Court treatment has been extensively researched, leaving many options for future research. It would be useful to compare motivation, time in treatment, Maslow's Hierarchy of Needs (Maslow, 1970, 1987), and craving levels between Proposition 36 and Drug Court treatment clients. If there is a definite difference in these variables it may help to determine what treatment would be most beneficial to the client and for the safety and well-being of society. The current study successfully found statistical significance in terms of external motivation and craving levels; however, there might be differences inherent between the two treatment populations.

It is highly recommended that future researchers complete a follow-up study on their participants to determine if they completed treatment. If their participants relapsed, researchers could compare their treatment questionnaire and demographic variable answers to

others who did not drop out of treatment. The research findings could help predict whether or not participants will recidivate and help aid in program evaluation, which is a major aspect that was emphasized in the 2000 Act (California Proposition 36, 2000). This may help researchers develop a risk assessment tool for incoming substance abuse treatment clients. In addition to researching between substance abuse treatment programming, it may be helpful to compare motivation for treatment, craving levels, and needs met within the forensic population (Proposition 36 or Drug Court clients) and Narcotics Anonymous or Alcoholics Anonymous (AA or NA).

Determining a relationship between specific demographic variables and their links to craving levels goes beyond the scope of this research. However, with future research in the areas of motivation, craving, and certain demographic variables, researchers can begin to build empirically based treatment using risk assessments. If clients are assessed using these measurements, such as recidivism risk assessment and motivation questionnaire, they can be placed into appropriate groups based on their treatment needs. It is well-evidenced through research that certain demographic

variables do help predict dropout rate and craving levels. This research did not support these predictions due to a lack of participants and participant diversity. It is suggested that clinicians continue placing individuals in gender or ethnic specific treatment until more evidence is found. When in their appropriate treatment programs, clients may be more likely to understand and comprehend treatment when they are matched with similar group members, which may reduce or eliminate their recidivism, consequently reducing societal costs.

In addition to reducing the amount of psychoeducational therapy with Proposition 36 clients, it may be beneficial to include activities that may help provide a *high* that clients have been used to. Programs such as Adventure Therapy (Berman & Davis-Berman, 1995) help individuals become more independent, develop skills, and support their own solutions, which may be complementary to more interpersonal-based treatment.

Identifying variables may include severity of their drug use, number of previous treatment placements, perception of their substance use problem, criminal involvement, and motivation for change. Essentially,

assessing potential substance abuse treatment clients may help to identify these critical factors, internal and external, which may help predict their treatment outcome.

Furthermore, a larger sample size (> 200) may be beneficial in determining significance, as it is possible that there may have been more significant findings had the sample size been larger. It was difficult to obtain participants, though incentives such as gift certificates were helpful. It is also recommended that future researchers try to assess clients in a comfortable, spacious environment where clients cannot see each other's answers and that researchers build rapport prior to testing. Gender might be evaluated if the number of male and female clients were equal. An ethnically diverse population may provide greater knowledge about the differential responses of those from various groups within the United States.

It is recommended that researchers assess new admits two times in the middle of their treatment program and the last week using this study's instruments. Although this researcher attempted to determine their craving levels and motivation for treatment at certain stages, it is possible

that clients' responses may have been dramatically different at other times in treatment.

For future research it may be beneficial to include in the demographic questionnaire a list from 1 to 5 for participants to record their top five drugs and for how long they used each. Although a participant's drug of choice may have been cocaine and it has been used the longest, he or she may have used 15 other drugs intermittently. Each instrument used in the present study was helpful in determining which variable was the most predictive of craving; however, several other self-report craving instruments that cover all of a client's potential craving should be used. The researcher chose the Cocaine Craving Questionnaire because of its relatively quick administration. Issues of reliability and validity are inherent when using a self-report questionnaire; therefore, it is recommended that behavioral observation or other methods be used to assess variables such as cognitive deficits, attention deficit disorder, and memory. All of these factors have been linked to decreased motivation and increased craving levels within the substance abusing population (Aharonovich et al., 2006; Becker & Jaffe, 1984;

O'Malley et al., 1992). It may be beneficial to incorporate instruments that assess for these impairments. Future research in the area of substance abusers' needs using the Needs Assessment Questionnaire may help explain the results from this study.

Substance abuse programs should balance their ability to effectively treat individuals who are more likely to succeed by developing program components to help offenders who are at a greater risk for failure, which is what the Drug Courts attempt to do. In combination with screening out potential admits, giving each participant a risk assessment based on future research may help preselect treatment clients more appropriately, which may help clinicians and researchers provide more evidence-based treatment. This prescreen procedure will help clinicians and researchers to develop additional substance abuse programs for individuals, potentially population-specific (methamphetamine users, long-term users, etc.), ultimately keeping them out of jail or prison. When these individuals complete treatment and stay sober, societal costs go down, jail and prison space becomes free, and the clients can

become more self-actualized in their lives because of their sobriety.

Conclusions

The purpose of this study was to determine if motivation, time in treatment, and the ability to meet basic needs would help predict craving levels. Substance abuse is prominent in the United States and will continue to be if proper changes are not made to the current treatment programming. Societal costs, such as loss of loved ones, taxes paid, and home security systems, are among the many detriments that substance abusers create.

Although programs such as Proposition 36 have been implemented to divert non-dangerous-substance abusers away from overcrowding jails or prisons, there is still a substantial number of individuals recidivating. Overall, this study has found that clients in the last weeks of treatment generally reported higher needs having been met, although, when they had higher external motivation they had higher levels of reported craving. Time in treatment did not affect levels of internal or external motivation, nor did having more needs met decrease craving levels.

The major contribution of this study is that individuals who have higher levels of external motivation may report higher craving levels. This study also supported the need to continue researching the substance abuse population and create evidence-based treatment programming to reduce the rates of recidivism.

REFERENCES

REFERENCES

Agosti, V., Nunes, E., & Ocepeck-Welikson, K. (1996). Patient factors related to early attrition from an outpatient cocaine research clinic. *American Journal of Drug and Alcohol Abuse, 22*, 29-39.

Aharonovich, E. (2003). Cognitive impairment, retention and abstinence among cocaine abusers in cognitive-behavioral treatment. *Drug and Alcohol Dependence, 71*, 207-213.

Aharonovich, E., Hasin, D. S., Brooks, A. C., Liu, X., Bisaga, A., & Nunes, E. V. (2006). Cognitive deficits predict low treatment retention in cocaine dependent patients. *Drug and Alcohol Dependence, 81*, 313-322.

Anglin, M. D., & Hser, Y. (1990). Treatment of drug abuse: In M. Tonry & J. Q. Wilson (Eds.), *Drugs and crime* (pp. 393-460). Chicago: University of Chicago Press.

Ball, S. A., Carroll, K. M., Canning-Ball, M., & Rounsaville, B. J. (2006). Reasons for dropout from drug abuse treatment: Symptoms, personality and motivation. *Addictive Behaviors, 31*, 320-330.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1989). Social cognitive theory. *Annals of Child Development, 6*, 1-60.

Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York: Holt, Rinehart, & Winston.

Bartol, C. R., & Bartol, A. M. (2004). *Introduction to forensic psychology*. Thousand Oaks, CA: Sage.

Becker, J. T., & Jaffe, J. H. (1984). Impaired memory for treatment-relevant information in inpatient men alcoholics. *Journal of Studies on Alcohol, 45*, 339-343.

Berman, D. S., & Davis-Berman, J. (1995). Adventure as psychotherapy: A mental health perspective. *Journal of Leisurability, 22*, 21-28.

Brecht, M. L., Anglin, D., & Wang, J. (1993). Treatment effectiveness for legally coerced versus voluntary methadone maintenance clients. *American Journal of Drug and Alcohol Abuse, 19*, 89-106.

Cahill, M. A., Adinoff, B., Hosig, H., Muller, K., & Pulliam, C. (2003). Motivation for treatment preceding and following a substance abuse program. *Addictive Behaviors, 28*, 67-79.

California Proposition 36. (2000). *The substance abuse and crime prevention act of 2000*. Retrieved December 1, 2006, from http://www.prop36.org/

Catford, J. (2001). Illicit drugs: Effective prevention requires a health promotion approach. *Health Promotion International, 16*, 107-110.

Chaiken, J. M., & Chaiken, M. R. (1990). Drugs and predatory crime. In M. Tonry & J. Q. Wilson (Eds.), *Drugs and crime* (pp. 229-237). Chicago: University of Chicago Press.

Chapman, A. (2003). *Quick self-test based on the adapted 8-stage "hierarchy of needs."* Leicester, UK: Businessballs.

Cleaveland, B. L., & Denier, C. A. (1998). Recommendations for health care professionals to improve compliance and treatment outcome among patients with cognitive deficits. *Issues in Mental Health Nursing, 19*, 113-124.

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

Cosden, M., Basch, J. E., Campos, E., Greenwell, A., Barazani, S., & Walker, S. (2006). Effects of motivation and problem severity on court-based drug treatment. *Crime and Delinquency, 52*, 599-618.

Crits-Cristoph, P., Connolly-Gibbons, M. B., Barber, J. P., Hu, B., Hearon, B., Worley, M., & Gallop, R. (2007). Predictors of sustained abstinence during psychosocial treatments for cocaine dependence. *Psychotherapy Research, 17*, 250-263.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

DeLeon, G., & Jainchill, N. (1986). Circumstances, motivation, readiness, and suitability. *Journal of Psychoactive Drugs, 18*, 203-208.

DeLeon, G., Melnick, G., & Kressel, D. (1997). Motivation and readiness for therapeutic community treatment among cocaine and other drug abusers. *American Journal of Drug and Alcohol Abuse, 23*, 169-189.

DiClemente, C. C., & Velasquez, M. M. (2002). Motivational interviewing and the stages of change. In W. R. Miller & S. Rollnick (Eds.), *Motivational interviewing: Preparing people for change* (pp. 217-250). New York: Guilford Press.

Dowden, C., & Brown, S. L. (2002). The role of substance abuse factors in predicting recidivism: A meta-analysis. *Psychology, Crime and Law, 8*, 243-264.

Dynia, P., & Sung, H. (2001). The safety and effectiveness of diverting felony drug offenders into residential treatment as measured by recidivism. *Criminal Justice Policy Review, 11*, 299-311.

Farabee, D., Hser, Y.-I., Anglin, M. D., & Huang, D. (2004). Recidivism among an early cohort of California's Proposition 36 offenders. *Criminology and Public Policy, 3*, 563-584.

Farabee, D. J., Simpson, D. D., Dansereau, D. F., & Knight, K. (1995). Cognitive inductions into treatment among drug users on probation. *Journal of Drug Issues, 25*, 669-682.

Field, G. (1985). The cornerstone program: A client outcome study. *Federal Probation, 49*, 50-55.

French, M. T., & Martin, R. F. (1996). The costs of drug abuse consequences: A summary of research findings. *Journal of Substance Abuse Treatment, 13*, 453-466.

French, M. T., McCollister, K. E., Alexandre, P. K., Chitwood, D. D., & McCoy, C. B. (2004). Revolving roles in drug-related crime: The cost of chronic drug users as victims and perpetrators. *Journal of Quantitative Criminology, 20*, 217-241.

Gebelein, R. S. (2000). Rebirth of rehabilitation: The promises and perils of drug court. *Sentencing and Corrections: Issues for the 21st Century* (NCJ 181412). Washington, DC: U.S. Department of Justice.

Giovazolias, T., & Davis, P. (2005). Matching therapeutic interventions to drug and alcohol abusers' stage of motivation: The clients' perspective. *Counseling Psychology Quarterly, 18*, 171-182.

Goldstein, K. (1939). *The organism*. New York: American Book.

Gossop, M., Green, L., Phillips, G., & Bradley, B. (1990). Factors predicting outcome among opiate addicts after treatment. *British Journal of Clinical Psychology, 29*, 209-216.

Gossop, M., Marsden, J., Stewart, D., & Kidd, T. (2003). The national treatment outcome research study (NTORS): 4-5 year follow-up results. *Addiction, 98*, 291-303.

Hall, S. M., Havassy, B. E., & Wasserman, D. A. (1990). Commitment to abstinence and acute stress in relapse to alcohol, opiates, and nicotine. *Journal of Consulting and Clinical Psychology, 58*, 175-181.

Hall, W. (1997). The role of legal coercion in the treatment of offenders with alcohol and heroin problems. *The Australian and New Zealand Journal of Criminology, 30*, 103-120.

Hartz, D. T., Frederick-Osborn, S. L., & Galloway, C. P. (2001). Craving predicts use during treatment for methamphetamine dependents: A prospective, repeated-measures, within subjects analysis. *Drug and Alcohol Dependence, 63*, 269-276.

Harwood, H. J. Fountain, D., & Livermore, G. (1998). *The economic costs of alcohol and drug abuse in the United States* (Publication No. 98-4327). Bethesda, MD: National Institute of Health.

Hearnden, I., & Harocopos, A. (1999). *Problem drug use and probation in London research findings No. 112*. London: Home Office Research, Development and Statistics Directorate.

Herning, R. I. (1996). cognitive event-related potentials in populations at risk for substance abuse. In H. W. Gordon & M. D. Glantz (Eds.), *Individual differences in the bio-behavioral etiology of drug abuse* (pp. 161-185). Bethesda, MD: National Institute on Drug Abuse.

Hiller, M. L., Knight, K., Leukenfeld, C., & Simpson, D. D. (2002). Motivation as a predictor of therapeutic engagement in mandated residential substance abuse treatment. *Criminal Justice and Behavior, 29*, 56-75.

Hiller, M. L., Knight, K., & Simpson, D. D. (1999). Prison-based substance abuse treatment, residential aftercare and recidivism. *Addiction, 94*, 833-842.

Horton, A. M. (1997). Co-morbidity of drug abuse treatment. *Journal of Psychopathology and Behavioral Assessment, 19*, 79-90.

Institute of Medicine. (1990). *Broadening the base of treatment for alcohol problems*. Washington, DC: National Academy Press.

Johnson, S. L. (2006). *Choosing recovery from substance abuse and dependence: The journey of understanding.* Unpublished manuscript, Alliant International University, Fresno.

Jones, M. (2004, July). Maslow's hierarchy of needs can lower recidivism. *Corrections Today, 7*, 18-22.

Katz, E. C., King, S. D., Schwartz, R. P., Weintraub, E., Barksdale, W., Robinson, R., & Brown, B. S. (2005). Cognitive ability as a factor in engagement in drug abuse treatment. *The American Journal of Drug and Alcohol Abuse, 21*, 359-369

Kelly, J. F., Finney, J. W., & Moos, R. (2004). Substance use disorder patients who are mandated to treatment: Characteristics, treatment process, and 1- and 5-year outcomes. *Journal of Substance Abuse Treatment, 28*, 213-223.

Klag, S., O'Callaghan, F., & Creed, P. (2005). The use of legal coercion in the treatment of substance abusers: An overview and critical analysis of thirty years of research. *Substance Abuse and Misuse, 40*, 1777-1795.

Longshore, D., & Teruya, C. (2006). Treatment motivation in drug users: A theory-based analysis. *Drug and Alcohol Dependence, 81*, 179-188.

Longshore, D., Turner, S., & Anglin, M. D. (1998). Effects of case management on drug user's risky sex. *Prison Journal, 78*, 6-31.

MacCoun, R. J., & Reuter, P. (2001). *Drug war heresies: Learning from other vices, times and places*. London: Cambridge Press.

MacNair, R., & Corazzini, J. (1994). Clinical factors influencing group therapy drop out. *Psychotherapy: Theory, Research, Practice and Training, 31*, 352-361.

Marlo, H., & Kalinian, H. (2002). Utilizing psychoanalytic psychotherapy in the treatment of substance abusers. *Clinical Psychology and Psychotherapy, 9*, 211-223.

Maslow, A. H. (1970). *Motivation and personality*. New York: Harper & Row.

Maslow, A. H. (1987). *Motivation and personality*. New York: Harper & Row.

McCaffrey, R. J., Krahula, M. M., Heimberg, R. G., Keller, K. E., & Purcell, M. J. (1988). A comparison of the trail making test, symbol digit modalities test and the Hooper visual organization test in an inpatient substance abuse population. *Archives of Clinical Neuropsychology, 3*, 181-187.

McCarthy, B. R., & McCarthy, B. J. (1997). *Community-based corrections* (3rd ed.). Belmont, CA: Wadsworth.

McClelland, D. C. (1961). *The achieving society*. New York: Van Nostrand.

Miller, N. E., & Dollard, J. (1941). *Social learning and imitation*. New Haven, CT: Yale University Press.

Miller, W. R., & Hester, R. R. (1986). The effectiveness of alcoholism treatment. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors: Process of change* (pp. 121-174). New York: Plenum Press.

Miller, W. R., & Rollnick, s. (2002). *Motivational interviewing: Preparing people for change*. New York: Guilford Press.

Miller, W. R., & Saucedo, C. F. (1983). Assessment of neuropsychological impairment and brain damage in problem drinkers. In C. J. Golden, J. A. Moses, Jr., J. A. Coffman, W. R. Miller, & F. D. Strider (Eds.), *Clinical neuropsychology: Interface with neurologic and psychiatric disorders* (pp. 141-195). New York: Grune & Stratton.

Mumola, C. J. (1999). *Substance abuse and treatment, state and federal prisoners, 1997* (NCJ 172871). Washington, DC: United States Department of Justice, Office of Justice Programs.

National Institute of Justice. (1996). *1996 drug use forecasting: Annual report on adult and juvenile arrestees*. Washington, DC: U.S. Department of Justice.

Office of National Drug Control Policy. (2001). *Economic costs of drug abuse in the United States, 1992-1998* (Publication No. NCJ-190636). Washington, DC: Executive Office of the President.

Office of National Drug Control Policy. (2003). *Drug policy information clearinghouse fact sheet* (Publication No. NCJ-191351). Washington, DC: Executive Office of the President.

O'Hare, T. (1996). Court-ordered versus voluntary clients: Problem differences and readiness for change. *Social Work, 41*, 417-422.

Oltmanns, T. F., & Emery, R. E. (1999). *Abnormal psychology* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

O'Malley, S., Adamse, M., Heaton, R. K., & Gawin, F. H. (1992). Neuropsychological impairment in chronic cocaine abusers. *American Journal of Drug and* Alcohol Abuse, 18, 131-144.

Pitre, U., Dansereau, D. F., Newbern, D., & Simpson, D. D. (1998). Residential drug abuse treatment for probationers: Use of node-link mapping to enhance participation and progress. *Journal of Substance Abuse Treatment, 15*, 535-543.

Prochaska, J. O., & DiClemente, C. C. (1986). Toward a comprehensive model of change. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors: Process of change* (pp. 3-27). New York: Plenum.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*, 1102-1114.

Rapp, R. C., Siegal, H. A., Li, L., & Saha, P. (1998). Predicting post-primary treatment services and drug use outcome: A multivariate analysis. *American Journal of Drug and Alcohol Abuse, 24*, 603-615.

Roberts, C., & Horton, A. M. (2001). Using the trail-making test to screen for cognitive impairment in a drug abuse treatment sample. *International Journal of Neuroscience, 109*, 273-280.

Rohsenow, D. J., Martin, R., & Monti, P. M. (1998). Predicting cocaine use outcomes from craving in simulated high risk situations: Preliminary results. In L. S. Harris (Ed.), *Problems of drug dependence 1998: Proceedings of the 60th annual scientific meeting of the National Institute on Drug Abuse: NIDA Research Monograph 179* (p. 165). Bethesda, MD: National Institute on Drug Abuse.

Rosenzweig, S., & Folman, R. (1974). Patient and therapist variables affecting premature termination in group psychotherapy. *Psychotherapy: Theory, Research and Practice, 11*, 76-79.

Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology, 57*, 749-761.

Ryan, R. M., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.

Ryan, R. M., Plant, R. W., & O'Malley, S. (1995). Initial motivations for alcohol treatment: Relations with patient characteristics, treatment involvement and dropout. *Addictive Behaviors, 20*, 279-297.

Shen, Q., McLellan, A. T., & Merrill, J. C. (2000). Client's perceived need for treatment and its impact on outcome. *Substance Abuse, 21*, 179-192.

Spooner, C. (1999). Causes and correlates of adolescent drug abuse and implications for treatment. *Drug and Alcohol Review, 18*, 453-475.

Sung, H. E. (2001). Rehabilitating felony drug offenders through job development--A look into a prosecutor-led diversion program. *Prison Journal, 81*, 271-288.

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

Superior Court of California, Santa Barbara County. (2006). *Substance abuse treatment court*. Retrieved November 18, 2007, from http://www.sbcourts.org/special_programs/satc.htm

Thornton, C. C., Gottheil, E., Weinstein, S. P., & Kerachsky, R. S. (1998). Patient-treatment matching in substance abuse: Drug addiction severity. *Journal of Substance Abuse Treatment, 15*, 505-511.

Tiffany, S. T., Singleton, E., Haertzen, C. A., & Henningfield, J. E. (1993). The development of a cocaine craving questionnaire. *Drug Alcohol Dependence, 34*, 19-28.

United States Department of Justice. (1997). *Corrections facts at a glance: Criminal offender statistics.* Washington, DC: Author.

Ward, K. (2005). Is substance abuse treatment providing services to the right population? *Substance Use and Misuse, 40,* 369-373.

Weiss, D. R., Griffin, M. L., Mazurick, C., Berkman, B., Gastfriend, D. R., Frank, A., et al. (2003). The relationship between cocaine craving, psychosocial treatment, and subsequent cocaine use. *American Journal of Psychiatry, 160,* 1320-1325.

Wexler, H. K. (1994). Progress in prison substance abuse treatment: A five year report. *Journal of Substance Abuse, 7,* 117-134.

Wexler, H. K., Falkin, G. P., Lipton, D. S., Rosenblum, A. B., & Goodloe, L. P. (1998). *A model prison rehabilitation program: An evaluation of the "Stay'n Out" therapeutic community.* New York: Narcotic and Drug Research.

Williams, G. C., Deci, E. L., & Ryan, R. M. (1998). Building health-care partnerships by supporting autonomy: Promoting maintained behavior change and positive health outcomes. In A. L. Suchman, P. Hinton-Walker, & R. Botelho (Eds.), *Partnerships in healthcare: Transforming relational process* (pp. 67-87). Rochester, NY: University of Rochester Press.

Wilson, D. J. (2000). *Drug use, testing and treatment in jails* (NCJ 179999). Washington, DC: U.S. Department of Justice, Office of Justice Programs.

Wubbolding, R. E. (2005). The power of belonging. *Journal for Reality Therapy, 24,* 43-44.

Yalom, I. D. (2005). *The theory and practice of group psychotherapy.* Cambridge, MA: Perseus Books.

Young, D., Fluellen, R., & Belenko, S. (2004). Criminal recidivism in three models of mandatory drug treatment. *Journal of Substance Abuse Treatment, 27*, 313-323.

Zeldman, A., Ryan, R. M., & Fiscella, K. (2004). Client motivation, autonomy support and entity beliefs: Their role in methadone maintenance treatment. *Journal of Social and Clinical Psychology, 23*, 675-696.

APPENDICES

APPENDIX A

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 B

COCAINE CRAVING QUESTIONNAIRE-NOW-BRIEF

Cocaine Craving Questionnaire-Now-Brief

Indicate how much you agree or disagree with each of the following statements by placing a single checkmark (like this: ✓) along each line between STRONGLY DISAGREE and STRONGLY AGREE. The closer you place your checkmark to one end or the other indicates the strength of your

1. I want my drug of choice so bad I can almost taste it.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

2. I have an urge to use.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

3. I am going to use as soon as possible.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

4. I think that I could resist using now.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

5. I crave my drug of choice right now.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

6. All I want to use now is my drug of choice.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

7. I have no desire to use right now.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

8. Using my drug of choice now would make things seem just perfect.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

9. I will use as soon as I get the chance.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGREE

10. Nothing would be better than using right now.

STRONGLY DISAGREE____:____:____:____:____:____:____: STRONGLY AGRE

APPENDIX C

NEEDS ASSESSMENT QUESTIONNAIRE

Needs Assessment Questionnaire
(NAQ)

*Please indicate **ONE** choice that **BEST** describes you.*

A. Including today, I have been in treatment _____ weeks.
(IF YOU DO NOT KNOW, ASK YOUR FACILITATOR!)

B. Race or Ethnicity
_____Hispanic/Mexican American
_____Anglo-American (Caucasian)
_____Asian-American
_____African-American
_____Native-American
_____Indian/Pacific Islander-American
_____Other

C. Age in years
_____18-30
_____30-40
_____40-50
_____50-60
_____60+

D. Sex (gender)
_____Male
_____Female
_____Transsexual

E. LONGEST USED drug of choice and age at first use **SELECT ONLY ONE**

_____Meth	Age at first use_____
_____Cocaine	Age at first use _____
_____Heroin	Age at first use _____
_____PCP	Age at first use _____
_____Marijuana	Age at first use _____
_____Inhalants	Age at first use _____
_____Crack	Age at first use _____
_____Other; please explain	Age at first use _____

F. Length of time using drug of choice
_____less than 1 year
_____1-4 years
_____5-8 years
_____9-12 years
_____13-15years
_____more than 16 years

G. How many times have you been incarcerated for ANY charge?
_____0
_____1
_____2
_____3
_____more than 4

H. Previous number of treatment programs (not including current treatment program)
_____0
_____1
_____2
_____3
_____4+

I. Please indicate the *number* of children you have at home
_____Less than 1 years old
_____1-5 years old
_____6-13 years old
_____14-18 years old
_____None

J. How would you describe your English?
_____I can not read or write in English
_____First language/Fluent
_____Second language/Fluent
_____Second language/Somewhat fluent
_____Second language/Not fluent
_____Third language/Fluent
_____Third language/Somewhat fluent

PLEASE CIRCLE THE ANSWER WHICH DESCRIBES YOUR NEEDS
SINCE BEING ENROLLED IN THE CURRENT TREATMENT PROGRAM
USING THE SCALE BELOW:

1= Completely Disagree
2= Slightly Disagree
3= Slightly Agree
4= Completely Agree

Basic Needs

1. I have had a home to go to every night

1 2 3 4

2. I have had enough food to eat every day

1 2 3 4

3. I have been able to perform my daily tasks with the amount of sleep I get at night.

1 2 3 4

4. I have been sexually satisfied

1 2 3 4

5. I have had access to medical care should I need it

1 2 3 4

Safety

6. I feel safe in my neighborhood

1 2 3 4

7. If something were to happen to me, I would feel protected by law enforcement

1 2 3 4

8. My home life has not been chaotic and has not made me overly anxious

1 2 3 4

9. My daily routine has not made me afraid

1 2 3 4

10. I have not worried about my child(ren) having childcare (mark "4" if you do not have children)

1 2 3 4

Belongingness

11. I have been a member of at least one group (therapy group, gang, religious group, etc)

1 2 3 4

12. I have had a significant other (wife, husband, boyfriend, girlfriend)

1 2 3 4

13. I have had friends that I can trust

1 2 3 4

14. I have had friends that I enjoy being around

1 2 3 4

15. My family is supportive and I can trust them

1 2 3 4

Self Esteem

16. I am successful in life and/or work, and I'm recognized by my peers for being so. I'm satisfied with the responsibility and role that I have in life and/or work, my status and reputation, and my level of self esteem (Chapman, 2003).

1 2 3 4

17. I have been able to achieve competence in a specialized area (such as welding, teaching, etc)

1 2 3 4

18. I have felt confident about my abilities and myself

1 2 3 4

19. I consider myself to be independent and able to do things that I want to do

1 2 3 4

20. I have received positive attention or recognition

1 2 3 4

Self Actualization

21. I feel as though I have done everything I can do to be the most successful I can be.

1 2 3 4

22. I currently have all or most of the above-mentioned needs met today.

1 2 3 4

23. I am interested in becoming a law-abiding citizen

1 2 3 4

24. My aim is self-knowledge and enlightenment. The most important thing to me is realizing my ultimate personal potential. I seek and welcome "peak" experiences (Chapman, 2003).

1 2 3 4

APPENDIX D

RESEARCH CONSENT FORM

Participant Consent Form

This consent form is an agreement on your part to participate in a research study on motivation in substance treatment programs. If you agree to participate in this study you will be asked to fill out three brief questionnaires, one time. The questionnaires will take a total of about twenty minutes to complete.

By signing your name below you are giving me permission to collect psychological data from you as a participant in this research project. Please be aware that this data will be kept **confidential** and that the researcher will follow the American Psychological Association Ethical Standards including those for Research with Human Subjects.

Please be aware that you may participate or withdraw from this study at any time. You will suffer no penalty of any kind through your recovery service should you choose to withdraw. I understand that this duty presents little potential risks to my person physically, psychologically, socially or otherwise. But, if I experience some ill effects and am in need of professional help, the present researcher will refer me to a psychotherapist with the understanding that I will be responsible for all resulting expenses. (If you suffer any ill effects as a result of your participation please inform the researcher or research office.)
RESULTS FROM THIS STUDY **WILL NOT** BE SHARED WITH YOUR RECOVERY SERVICES, PROBATION OR OTHER OUTSIDE AGENCIES.

If you chose to receive results from this study, please include your contact information, including your name and at least one method of contact provided.
This information will not be shared with anyone other than the researcher conducting the research.

Name: _____
Phone Number: _____
Email: _____
Mailing Address: _____
_____

If you have any further questions or concerns about the conduct of this research you may reach me at 559-253-2320.

Thank you for agreeing to take part in this research study

_____ _____
Signature of Participant Date

_____ _____
Signature of Researcher Date

APPENDIX E

PERMISSION TO USE AND PRINT THE TMQ

From: Rich Ryan <ryan@psych.rochester.edu> **Date:** Friday, March 23, 2007 5:49 AM
To: Kristin Humann <kristin@humannart.com>
Subject: Re: Treatment Motivation Questionnaire (Permission to Use)
Attachments: (none) **HTML** | Plain Text | Header | Raw Content

Kristin

you have permission to print the dissertation, including our scales.

Richard

Hello Dr. Ryan,
You have graciously allowed me to use the TMQ in my academic research. I have an additional request; I will be printing my research and would like additional permission to print my dissertation which will be using the TMQ.
Thank you for your time.

Sincerely,
Kristin Humann

Rich Ryan wrote:
Kristin
You have my permission to use it. we also applied it to methadone users in a study that came out this last year.

here is the ref:
Zeldman, A., Ryan, R. M., & Fiscella, K. (2004) Client motivation, autonomy support and
entity beliefs: Their role in methadone maintenance treatment./ Journal of Social and Clinical Psychology, 23,/ 675-696/./

richard

Dr. Ryan and Dr. O'Malley,
I am emailing you regarding the Treatment Motivation Questionnaire. I am currently attending Alliant International University- Fresno campus, working on my Master's in Forensic Psychology (2007) and following up with my PsyD in Clinical Psychology (2009). My Master's Thesis, and potentially

dissertation topic requires the use of the TMQ. I will be submitting my application to the IRB in less than a week and would like to receive permission from you, if you are the sole "granter" of permission, or at least point me to the person(s) I need to be in contact with.

My research will be conducted on the substance abuse population. Alliant International University has an outpatient, mandated treatment program for substance abusers in lieu of incarceration, through Prop 36. I understand that the TMQ was normed on alcohol abusers, not drug abusers, which furthers my interest in using it. We admit about 20 clients per month and they are already given about 8 tests, so this one would be "slipped" in with the others, along with my own consent form regarding the reasons for why they are completing this questionnaire.

My thesis is on levels of motivation over time and treatment. I hypothesize that client's treatment levels will be lower at the onset of treatment and increase over a couple of months.

If you need more specific details, please feel free to email or call.

I am not sure of what else I need to inform you of in order to receive permission to use this instrument.

Thank you for your time and consideration,
Kristin Humann.

Richard M. Ryan
Professor of Psychology, Psychiatry and Education
Meliora Hall-CSP
University of Rochester
Rochester, NY, 14627
585-275-8708
website for SDT:
http://www.selfdeterminationtheory.org
website for Motivation and Emotion
http://moem.edmgr.com

Richard M. Ryan
Professor of Psychology, Psychiatry and Education
Meliora Hall-CSP
University of Rochester
Rochester, NY, 14627
585-275-8708

website for SDT:

http://www.selfdeterminationtheory.org
website for Motivation and Emotion
http://moem.edmgr.com

Re: Treatment Motivation Questionnaire- permission to reprint in dissertation
Richard M. Ryan [ryan@psych.rochester.edu]
You replied on 2/19/2008 2:05 PM.
Sent: Tuesday, February 19, 2008 10:34 AM
To: Kristin Humann

Sure Kristin, it can be reprinted there. If possible I would love to receive some summary of your results.

richard

On Tue, February 19, 2008 12:17 pm, Kristin Humann wrote:
Dr. Ryan,
In a previous email to you several months ago, I requested permission to use the TMQ for my dissertation research. You very graciously granted permission to me. However, I forgot to ask you if I have permission to print it in my dissertation in May, 08?

Thank you very much for all of your help along the way,
Regards,
Kristin Humann

****

Kristin Marvin-Humann, M.A.
California School of Professional Psychology at Alliant International University-Fresno
Clinical Psychology Doctoral Student

APPENDIX F

PERMISSION TO USE, ALTER, AND REPRINT

CCQ-NOW-BRIEF

Dear Kristin,

Yes, you have my permission to print the questionnaire in your dissertation.

Regards,

Steve Tiffany

Stephen T. Tiffany, Ph.D.
Empire Innovation Professor
University at Buffalo, SUNY
Department of Psychology
368 Park Hall
Buffalo, NY 14260-4110

Office: 716-645-3650 Ext. 368
FAX: 716-645-3801

-----Original Message-----
From: Kristin Humann [mailto:khumann@alliant.edu]
Sent: Tuesday, February 19, 2008 12:18 PM
To: stiffany@buffalo.edu
Cc: Kristin Humann
Subject: Cocaine Craving Questionnaire

Dr. Tiffany,
I have one final question for you that I should have asked you a couple of months ago. Do I have permission to print this questionnaire in my dissertation when it is bound in May 2008?

Thank you very much for all of your help!

Kristin Humann
****
Kristin Marvin-Humann, M.A.
California School of Professional Psychology at Alliant International University-Fresno
Clinical Psychology Doctoral Student

From: Stephen Tiffany[SMTP:STEPHEN.TIFFANY@HSC.UTAH.EDU]
Sent: Thursday, May 03, 2007 2:28:24 PM
To: Kristin Humann

Subject: RE: Cocaine Craving Questionnaire
Auto forwarded by a Rule

Dear Kristin,

Feel free to use these items in any way you want. It would be possible to convert each instance of the word cocaine to another drug -- indeed, most of these items have been used in studies on cigarette, alcohol, marijuana, and heroin craving.

Regards,

Steve Tiffany

Stephen T. Tiffany, Ph.D.
Professor
Department of Psychiatry
University of Utah
410 Chipeta Way, Suite 222
Salt Lake City, UT 84108

Stephen.Tiffany@hsc.utah.edu

801-581-8428 (office)
801-587-3038 (FAX)

-----Original Message-----
From: Kristin Humann [mailto:khumann@alliant.edu]
Sent: Thu 5/3/2007 2:42 PM
To: Stephen Tiffany
Subject: RE: Cocaine Craving Questionnaire

Dr Tiffany,
Thank you very much for the attachment.
I understand that this test may not be reliable on other substance abusing populations, however, would it be possible to change the wording to include ***all*** substance, not just cocaine. If this is not possible, could I have your permission to subtract the questions that do not specify cocaine?
I also understand if this can not be done because of the already established validity and reliability. I have had the hardest time finding any sort of craving rating scale that does not limit itself to one drug. If you know of any test that might exist, I would appreciate that information, too.

Thank you for your time,

Kristin Marvin-Humann, M.A.
California School of Professional Psychology-Alliant International University- Fresno Campus
Student Government Representative for the Forensic PsyD Program

-----Original Message-----
From: Stephen Tiffany [mailto:Stephen.Tiffany@hsc.utah.edu]
Sent: Thu 5/3/2007 1:21 PM
To: Kristin Humann
Subject: RE: Cocaine Craving Questionnaire

Dear Kristin,

I have attached a packet containing the various versions of the CCQ. I cannot say anything about the validity of these specific questionnaires as applied to other drugs.

Good luck with your research.

Regards,

Steve Tiffany

Stephen T. Tiffany, Ph.D.
Professor
Department of Psychiatry
University of Utah
410 Chipeta Way, Suite 222
Salt Lake City, UT 84108

Stephen.Tiffany@hsc.utah.edu

801-581-8428 (office)
801-587-3038 (FAX)

-----Original Message-----
From: Kristin Humann [mailto:khumann@alliant.edu]
Sent: Tue 5/1/2007 10:35 PM
To: Stephen Tiffany
Subject: Cocaine Craving Questionnaire

Hello Dr. Tiffany,
I am a current clinical psychology graduate student at the California School of Professional Psychology, Alliant International University- Fresno Campus.
My dissertation is focused on craving levels, internal and external motivation and Maslow's Hierarchy of Needs in the court-ordered to treatment substance abuse population.

As I was researching articles on craving levels, which is my predictive variable in my research, I found that you developed a cocaine craving scale.
I am wondering if there is any way to obtain this particular assessment, as I am also using a craving scale, though I created mine and it does not have established reliability or validity. Additionally, has this assessment ever been given to substance abusers in general, and, if not, could it be used on the general substance abuse population? The clients that I will be researching have abused a variety of drugs, not just cocaine.
Any information regarding the Cocaine Craving scale would be appreciated and very helpful for me to continue with my dissertation research.

Kristin Marvin-Humann, M.A.
California School of Professional Psychology-Alliant International University- Fresno Campus
Student Government Representative for the Forensic PsyD Program

APPENDIX G

PERMISSION TO USE AND REPRINT 8-STAGE HIERARCHY OF NEEDS

Sent: Sunday, March 25, 2007 11:09 AM
To: Kristin Humann

Kristin your usage is fine by me.

Best wishes

Alan

----- Original Message -----

From: Kristin Humann

To: ac@alanchapman.com

Sent: Saturday, March 24, 2007 10:05 PM

Subject: Self test questionnaire using Hierarchy of Needs-Permission to use selected statements in dissertation

Hello,
I am a doctoral student at Alliant International University-Fresno campus working on my dissertation. I am looking at motivation levels and needs met by substance abusers in a mandated treatment program. I have devised my own questionnaire relating to my underlying theory- Maslow's Hierarchy of Needs. However, I noticed that you have your own list and I am interested in using a couple of your statements in my questionnaire (your work will be cited in the dissertation and questionnaire, if permitted to use). Please respond at your earliest with permission for 1) using a couple of your statements in my dissertation research, and, 2)printing my dissertation and questionnaire with a couple of your statements.
Thank you for your time,
Take care,

Kristin Marvin-Humann

Kristin Humann, B.A.
Alliant International University- Fresno Campus
Student Government Representative for the Forensic PsyD Program