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INCREASING SEXUAL OFFENDERS' MOTIVATION TO ENGAGE IN MANDATED SUBSTANCE ABUSE TREATMENT: A BRIEF MOTIVATIONAL INTERVENTION

By

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B.S., Psychology, University of California Berkeley, 2006
M.S., Psychology, University of New Mexico, 2013

DISSERTATION

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Doctor of Philosophy
Psychology

The University of New Mexico
Albuquerque, New Mexico

July, 2016

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Acknowledgements

This degree is not only a reflection of my work but also a product of the love, support, generosity and kindness of my mentors, family and friends. To my dear friends, you have been my joy, my laughter, and my spirit. To my sisters and Andy, no matter how far away, you reminded me that I always had a home. Mom, you taught me the skills I needed to successfully live and travel all around the country. Dad, you made sure to instill the importance and value of education. You also sacrificed your own well-being so that mine was better. Linda, you reminded me that I had worth. Dr. Tonigan, you never stopped encouraging me. Dr. Matthews, you made psychology fun and interesting during times that I was not so sure. Dr. Foote, because of you, I discovered who I want to be. Dr. McCrady, words cannot express the gratitude I feel for you. You have an amazing ability to highlight my strengths and work with my weaknesses. I still wonder how I was so lucky to have ended up in your lab. Finally, to my cohort, we did this together. Thank you for dragging me across the finish line with you.

I have been told, a few times, that I have a tendency to collect people. But the truth is that my degree is the product of a community of individuals. So, to my people, thank you. Thank you for always believing in me and shaping me into what I have become. I will be forever grateful.

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ABSTRACT

Background and Aims Previous research has shown that the rate of recidivism for sexual offenders is related to their substance use. Other research has shown that motivation to engage in treatment and motivation to decrease substance use are related to substance use treatment outcome. Thus, the overall goal of the current study was to increase sexual offenders' motivation to engage in mandated substance abuse treatment and decrease their future substance use. There were five aims: (1)Test the feasibility of a brief motivation intervention with a population of sexual offenders who were court mandated to substance abuse treatment. (2) Examine change trajectories in motivation over the four weeks of study participation as well as to test whether the brief motivational intervention lead to differential changes in motivation. (3) Test whether there was a main effect of treatment assignment on follow up measures. (4) Test whether changes in motivation accounted for changes in the behavioral differences that were found. Due to a number of reasons, aim four was not implemented. (5) Conduct exploratory analyses. ***Method*** Twenty-two adult males who

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committed a sexual offense and were receiving treatment in Albuquerque, New Mexico were consented into the study and randomized into a brief motivational intervention condition or educational control condition. Approximately four weeks later, they participated in a follow up assessment. Assessments included measures of motivation, engagement in treatment and utilization of community resources that supported abstinence and substance abuse treatment.

Findings and Conclusions Results showed that the brief motivational intervention was feasible and well-liked by the participants. Additionally, results showed there was no differential change in motivation by group over time but that participants who received the brief motivational intervention were perceived by their therapist as more engaged in treatment than those in the control condition X^2 (1,18) = 3.99, $p<$..04. Finally, this study has helped to fill the gap in statistics regarding the offender population and offender treatment in the state of New Mexico. Future studies should replicate this study using larger sample sizes and female offender populations. Additionally, future studies should include longer follow-up periods and track recidivism rates and reasons.

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Introduction

Sexual crime directed towards adults and children is seen as a violation of the person and has been linked to many negative long-term consequences for the victims, including poor mental health, decreased social functioning, impaired sexual functioning and risks to personal safety (Andersen, Tomada, Vincow, Valente, & Polcari, 2008; Easton, Coohey, O'Leary, Zhang, & Hua, 2011). According to Planty, Langton, Krebs, Berzofsky, & Smiley-McDonald (2013), in 2010, women nationwide experienced 270,000 completed rape or sexual assault victimizations and the rate of completed rape was 1.1 per 1000 women. Before the age of 18, one in four girls and one in six boys will experience some form of sexual assault (Anda, Dube, Giles & Felitti, 2003). Furthermore, one in five children has been sexually solicited by same aged peers or by adults on the internet (Finkelhor & Jones, 2001). Because of the impact of sexual offenses on individuals, families, and society research addressing the prevention of sexual abuse and the treatment of sexual offense behavior of both offender and victim are vital.

One of the problems with research and policy regarding sexual offenders[1] is the lack of agreement about definitions. Because the sexual offender category is broad, there is considerable variability in the literature. Currently, each state uses the sexual offender label differently depending on its legislative statutes and may take the following variables into consideration when labeling a person as a sexual offender: degree of consent from the partner, age, kinship, sex, the behavior involved in the act, the intention of the offender and the setting in which the act was committed. Oftentimes, a behavior may be viewed as

[1] The term *sexual offender* will be used throughout this paper to refer to people who have committed a sexual offense. This term is consistent with current literature.

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acceptable until it violates one of the above variables. For example, intercourse between adults is considered acceptable in America but not when boundary violations occur (i.e., when it happens between a correctional officer and an inmate). Moreover, "blue laws" ban behavior that may otherwise be seen as acceptable. For example, in some states, such as Utah, it is illegal to have intercourse without the intent of procreation. Finally, there are other laws prohibiting "crimes against nature" or behaviors that may be culturally bizarre. This becomes problematic because there are very few taboos that are consistent across cultures (Wortis, 1939). Because laws and definitions change over time, as well as across cultures and states, populations of people considered sexual offenders are highly heterogeneous, making research quite difficult.

A useful definition, and one that will be used for this paper, was provided by Gebhard, Gagnon, Pomeroy, and Christenson (1964). They defined sexual offenders as people who are convicted for committing overt acts for their immediate sexual gratification that are contrary to the prevailing sexual mores of their society and thus are legally punishable. This should be differentiated from sexual deviant individuals, who may commit the same acts but have never been adjudicated in connection with their behavior.

The debate about whether sexual offenders are suffering from a mental illness is ongoing (Schwartz, 2001). Some report that offenders are "victims of a disease from which they suffer more than their victim" (p.482; Karpman 1954) and that they are not conscious of their acts. Others maintain, however, that offenders, like others, are endowed with free will and make a choice to engage in unlawful and sexually offensive acts (DeRiver, 1949).

Most acts that may be considered sexually offensive by the law are not defined in the DSM-5. These include: rape, possession of child pornography, and molestation. Other acts

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that may be considered a sexual offense range from indecent exposure to sexual contact with a minor. Although definitions for offense types are not clear, most would agree that preference for sexual deviant behaviors for some, is a chronic and well established disposition that often leads them to commit crimes and that this condition cannot be cured but can be managed (Laws, 1996).

The policy decision to treat sexual offenses as crimes rather than mental illness shifted the responsibility for managing offenders from the field of mental health to the Department of Corrections. This changed, however, when civil commitment laws were enacted because they targeted sexual offenders as having a personality disorder or a mental disease that made them likely to be dangerous to themselves, others or property. Because of these laws, sexual assault, again, has been viewed as the product of a mental disease or defect, which allows states to institutionalize a person for treatment instead of punishment at the discretion of the judge (Schwartz, 2001).

Characteristics of Sexual Offenders

The brain and cognitive skills. Although brain damage rarely induces genuine deviance that is limited only to sexual behavior (Mendez, Chow, Ringman, Twitchell, & Hinkin, 2000), sexual offenders have been found to have abnormalities in both the prefrontal and temporal areas of the brain. Specifically, abnormalities are most often found in the anterior cerebral areas of the brain (Flor-Henry, 1987; Joyal, Black & Dassaylva, 2007). These areas are thought to be involved in the modulation of drive, initiation of behavior, and sexual activation. Although abnormalities in these areas of the brain are not thought to specifically cause sexual deviance, a link is thought to exist between temporal lobe dysfunction and aberrant sexual behaviors. In their study of 64 sexual offenders and 12

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nonviolent non-sexual offender controls, Wright, Nobrega, Langevin, and Wortzman (1990) found that sexual offenders, as compared to a normal control group, had smaller left and frontal temporal areas of the brain. Others have observed dilation in the left and/or right temporal or anterior horns of the ventricles more often in pedophiles than in nonsexual violent offenders (Hucker et al., 1986) although these results have failed to be replicated (Langevin, Wortzman, Wright, & Handy, 1989; Langevin, Ben-Aron, Wright, Marchese, & Handy, 1987).

In addition to brain abnormalities, cognitive capabilities have been found to vary among sexual offenders. Specifically, studies have reported that low IQ is correlated with greater sexual deviance. In comparison to a general population of non-offenders, sexual offenders have been shown to have a lower full scale IQ (Joyal et al., 2007) and verbal ability scores (Gillespie & McKenzie, 2000; Joyal et al., 2007). Furthermore, attempts to distinguish between homogenous groups of sexual offenders have shown that pedophiles, on average, have lower IQ scores than rapists (Blanchard, et al., 2000; Joyal et al., 2007) and that lower IQ scores are correlated with more extreme forms of sexual deviance such as sexual interest in very young children (Cantor, Blanchard, Robichaud, & Christensen, 2005) and in boys, as well as victims in a variety of age and gender categories (Rice, Harris, Lang, & Chaplin, 2008). Interestingly, Verbal IQ in sexual offenders is more impaired than Performance IQ and the level of verbal fluency impairment is linked to the level of sexual deviance such that pedophiles often have lower Verbal IQ scores than do rapists (Joyal et al., 2007). Given these characteristics, it is possible that men with lower IQ scores may not have the requisite skills and abilities to have effective social and sexual interactions with same-aged peers. They may also be child-like in their cognitive and emotional development,

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which contributes to them attending to certain features in their attraction to others. As with many aspects of human behavior, there is likely to be an interaction between genetics and the environment. For many sexual offenders, relatively low cognitive ability may adversely impact their sexual functioning in a variety of ways including normal peer interactions, impulse control, and characteristics of sexual interest, attraction and arousal.

Physical characteristics. Some research has found that sexual offenders are shorter than normal controls and that level of sexual deviance was inversely correlated with height such that the more sexually deviant a person is, the shorter that person is as well. For instance, Cantor and colleagues (2007) found that, in an all-White sample of males, pedophiles and hebephiles were shorter than teleiophiles, and that pedophiles were the shortest of the groups but only by centimeters. Height and IQ have been found to be correlated such that those who are shorter also have a lower IQ. Most explain these findings using a combination of genetic factors and in utero and childhood conditions such as nutrition, pathogen exposure and economic conditions. Others have found that extreme sexual deviance is associated with non-right-handedness (Bogaert, 2001; Cantor et al. 2004; Cantor et al., 2005). Bogaert (2001) and Cantor et al. (2004) found a higher rate of sinistrality in sexual offenders with victims that were unrelated children under 12 years of age as compared to controls. Cantor et al. (2005) found that the rate of sinistrality in pedophilic men was triple the rate of teleiophilic men. Authors of these studies suggest that height may be helpful in identifying factors that are present during development that increase the probability of developing deviant sexual interests. Furthermore, some posit that in utero and in childhood certain conditions such as poor nutrition and exposure to toxins and infections may have affected the development of the brain in a way that not only increased the probability of

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developing deviant sexual interests but also interfered with growth in general (Cantor et al., 2007).

Lifestyle. In general, sexual offenders, like non-offenders in the community, spend most of their time engaging in noncriminal activity. They are often employed, attend church, spend time with friends, participate in social activities, play sports, watch TV and spend time with family. Studies investigating the possible links between everyday activities and sexually deviant behaviors have generally found mixed results, and have been unable to identify a pattern that would account for sexually deviant behavior (Deslauriers-Varin & Beauregard, 2010; Pedneault & Beauregard, 2013). However, these studies did find that high levels of social engagement correlated with more offending at night, whereas low level of social engagement correlated with more offending during the day. Also those that consumed alcohol often offended at night when they were intoxicated and tended to coerce their victims before sexually assaulting them in single sexual events. These studies did not find that lifestyle accounted for victim characteristics (Deslauriers-Varin & Beauregard, 2010; Pedneault & Beauregard, 2013).

Religion. Because of unusual opportunities for clergy to engage emotionally and privately with adults and children who are vulnerable and who come to trust them, sexual abuse by priests and male members of religious orders may follow a different pattern than that of other sexual offenders (Eshuys & Smallbone, 2006). Also, data have not born out whether it is unique situational factors or the nature of the intimate and authoritative relationship that account for the connection between religion and sexual offending. Generally, the literature has shown that religion is a deterrent for general criminal activity (Baier, Colin & Wright, 2001; Ellis & Peterson, 1996); however, Eshuys and Smallbone

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(2006) reported that for sexual offenders, religion was positively related to the individual's number of sexual offense convictions and to the number of their victims. Greater religious identification is associated with a larger number of victims and convictions and younger victim age. However, the direction of causality, if any, amongst these variables is unknown (e.g., guilt for wrongful acts leads to increased religiosity; interest in vulnerable children led to religion as a salve or salvation).

Psychiatric disorders. The research findings on the prevalence of mental illness in sexual offenders vary. There has been considerable resistance in the legal and mental health fields to acknowledging that sexual offenders suffer from psychiatric disorders due to fear that these individuals will use their disorders as an excuse from their behavior or to avoid taking responsibility for their actions (Schwartz, 2011). Early researchers reported high rates of psychoses in sexual offenders. Today, most people who have committed a sexual offense show certain traits of personality disorders and there are some subgroups of offenders who meet criteria for serious mental illness or developmental disability.

Some research has shown that a large number suffer from mood disorders (Kafka, 1997; Raymond, Coleman, Ohlerking, Christenson, & Miner, 1999). McElroy et al. (1996) found that 61% of the people who have committed a sexual offense and participated in their research suffered from mood disorder and more than half of their sample suffered from bipolar disorder. Raymond et al. (1999) examined a group of pedophiles and found that 42% of them suffered from some form of mood disorder and 92% of those also had some type of comorbid condition (e.g. social phobia, post traumatic stress disorder). Others examined a group of outpatient sexual offenders and found that a large majority of them suffered from PTSD.

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There have been relatively few studies using standardized measures and control groups to examine substance abuse in populations of sexual offenders. An exception to this was a 1990 study. Langevin and Lang (1990) administered the Drug Abuse Screening Test (DAST) and the Michigan Alcoholism Screening Test (MAST) to a group of sexual offenders and found that alcohol problems (over 50% of their sample) were more common than drug problems (less than 20% of their sample). Because there was no comparison group included in this study, Abracen, Looman and Anderson (2000) used the same instruments to examine a group of sexual offenders and compare it to a sample of non-sexual, violent offenders. They found that the rate of alcohol problems (score of ≥10 on the MAST) in sexual offenders was more than ten times the rate of alcohol problems in non-sexual violent offenders. The opposite was true for drugs such that non-sexual violent offenders had a higher rate of lifetime history of drug problems (score of ≥11 on the DAST) than did sexual offenders. Although empirical data have suggested that substance use is a contributing factor in sexual assault, the literature on substance use by sexual offenders varies greatly. For example, Roizen (1997) found alcohol use to range from 13% to 63% among those who had committed rape and Markos (2005) found that alcohol was used by the perpetrator in up to 72% of college rape cases. This variability is thought to be a result of the assessment methods used, actual differences in samples studied, and the extent to which substance use was assessed (Baltieri & Guerra de Andrade, 2008).

Recidivism

Recidivism is defined as the commission of a subsequent offense. Unfortunately, data on recidivism rates in sexual offenders are unreliable for a variety of reasons. First, researchers differ on what they consider to be the commission of an offense. Varying

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definitions include arrest, conviction, and incarceration. Some may only include sexual crimes while others may count any arrest. There are other issues around the unreliability of estimates of recidivism rates. Recidivism studies differ in their follow up time and populations being studied. It is possible that an offender will recidivate after studies have concluded and their offense would not be counted in statistics. Finally, offense type may differ between studies. For the reasons above, estimates of recidivism are unreliable (Przybylski, 2015).

To date, the largest single study of recidivism in people who have committed a sexual offense included 9,691 male sexual offenders released from prisons in 15 states in 1994. They found that the sexual recidivism rate was 5.3%, based on arrest during their follow-up period of three years (Langan, Schmitt, & Durose, 2003). The violent arrest rate was 17.1% and overall arrest rate was 43%. Additionally, 38.6% of their sample was returned to prison because of a new crime or because of a revocation of their conditional release due to a technical violation. Langan et al., (2003) also compared the recidivism rates of sexual offenders to a population of non-sexual, criminal offenders. They found that sexual offenders had a lower overall rearrest rate but their sexual rearrest rate was four times higher than the sexual rearrest rate of non-sexual offenders. It is important to note that rates differ when studies examine recidivism by follow-up period and offense type. For example, rates range from 4% to 10% for people who have committed incest, 7% to 35% for people who have committed rape, 10% to 40% for people who have molested children, and 41% to 71% for people who have engaged in exhibitionism (Center for Sex Offender Management, 2014). Additionally, research has demonstrated that female sexual offenders reoffend at significantly lower rates than male offenders (Cortoni & Hanson, 2005). A meta-analysis of

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10 studies found an average sexual recidivism rate of three percent in a combined sample of 2,490 females (Cortoni, Hanson, & Coache, 2010).

The recidivism research has highlighted several key points. First, the observed sexual recidivism rates for sexual offenders range from approximately 5 percent after three years to approximately 24 percent after fifteen years (Przybylski, 2015). Lower rates of recidivism have been reported but these studies use follow-up periods that are shorter than five years. Although it is logical that as follow up periods increase the rate of recidivism will also increase, it is important to recognize that using follow up rates of less than five years may mislabel repeat offenders as nonrecidivists. Second, people who have committed a sexual offense are much more likely to reoffend for a nonsexual crime than a sexual crime (Hanson & Morton-Bourgon, 2004). Additionally, those who have committed a sexual offense have lower rates of general recidivism but higher rates of sexual recidivism compared to those who have committed a non-sexual crime (Przybylski, 2015). Finally, different types of offenders have different rates of recidivism.

Research has identified factors related to recidivism in people who have committed a sexual offense (Hanson & Bussiere, 1998; Hanson & Morton-Bourgon, 2005). By evaluating these factors together, one can often identify offenders who have a high probability (greater than 50%) of reoffending and those who will most likely not recidivate (probability of 10% or less; Hanson & Thornton, 2000). Factors can be differentiated into static and dynamic variables. Static variables are historic variables that are unchangeable. Examples of static variables include the number of prior sexual offenses, the characteristics of the offender's victims, and lifetime history of substance abuse. Because these factors cannot be modified, they cannot be used to determine changes in an offender's risk level or to determine how or

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when one should intervene. In order to determine changes in risk level or how/when one should intervene, dynamic variables or factors that can be changed over time must be taken into consideration.

Dynamic risk factors, although not direct causes of sexual offense behavior, are correlated with an increased probability of offending or characteristics of offenders. There are two types of dynamic risk factors: those that are changeable (stable dynamic) but endure for long periods of time (e.g., impulsivity, negative emotionality, and entitlement) and acute dynamic factors, which can be changed in months, days, or even hours (e.g., substance abuse, emotional collapse, and collapse of social supports; Hanson, Harris, Scott, & Helmus, 2007).

One study identified acute and stable dynamic risk factors (Hanson et al., 2007). Because of the paucity of research on dynamic risk factors, evaluators assessing sexual offenders were being forced to make risk decisions based on factors that might or might not have been related to recidivism (Hanson et al., 2007). Because of the lack of data to make evidence-based risk decisions, Hanson and colleagues created the Dynamic Supervision Project, which aimed to identify acute and stable dynamic risk variables for sexual offenders using 156 parole and probation officers who were trained to complete risk assessments on 997 sexual offenders across 16 jurisdictions in Canada and the United States. Potential risk factors were selected to be included in the risk assessment based on previous research (Hanson & Morton-Bourgon, 2004; Hanson & Morton-Bourgon, 2005) as well as from empirically validated risk assessment tools that already included some stable and acute dynamic factors, such as the Sexual Offender Need Assessment Rating (Hanson & Harris, 2001) and the Structured Risk Assessment (Thornton, 2002). Because of the lack of research on dynamic factors, all factors selected for the study were based on indirect evidence or on

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retrospective file reviews. The stable factors were combined to create the STABLE[2]-2000. The acute factors were combined to create the ACUTE[3]-2000. Both measures were then modified based on study results. The results became the STABLE-2007, which included the following stable dynamic risk factors: significant social influences, capacity for relationship stability, emotional identification with children, hostility toward women, general social rejection, lack of concern for others, impulsiveness, poor problem solving skills, negative emotionality, a preoccupation with sex and sexual drive, using sex as coping, deviant sexual interests, and lack of cooperation with supervision. The ACUTE-2007 included the following acute dynamic risk factors: victim access, emotional collapse, collapse of social supports, hostility, sexual preoccupation, rejection of supervision and substance abuse. It has been shown that these factors contribute significantly to the prediction of recidivism above that provided by actuarial measures (Hanson et al., 2007; Hanson & Morton-Bourgon, 2009).

As shown by Hanson et al. (2007), an important dynamic risk factor for sexual recidivism is substance use. The prevalence of alcohol and drug use is four times higher among any category of offenders in the criminal justice population than in the general population (National Institute of Justice, 2010; Substance Abuse Mental Health Services Administration, 2011) and it has been shown that drug and alcohol use affect recidivism (Bennett, Holloway & Farington, 2008; White & Gorman, 2000). For example, after reviewing the literature, Boles and Mitto (2003) concluded that substance abuse may be causally related to violent behavior and others have shown an association between substance use and offending (Langevin, Langevin, Curnoe, & Bain, 2006). One group (Kingston,

[2] STABLE is not an acronym. It refers to stable dynamic variables.

[3] ACUTE is not an acronym. It refers to acute dynamic variables.

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Firestone, Wexler, & Bradford, 2008) examined a sample of 295 sexual offenders and found that substance use was a larger problem for violent recidivists than nonviolent recidivists. Langstrom, Sjostedt, and Grann (2004) found that a history of substance abuse more than doubled the risk of recidivism among sexual offenders. Additionally, longitudinal studies on changes in substance use and crime found that men who use alcohol more frequently have higher rates of criminal behavior. At follow up, more alcohol and drug use was related to higher rates of offending (Welte, Barnes, Hoffman, Weiczorek, & Zhang, 2005).

Various reasons have been suggested for why substance use is related to recidivism including that substance use impairs one's ability to think abstractly, and that it contributes to the likelihood of problematic behavior (e.g., inappropriate sexual behavior) in those who are already at risk for such behaviors (e.g., sexual offenders; Steele & Josephs, 1990). Others (Abracen & Looman, 2004) have suggested that substance abuse may be associated with negative emotionality, another dynamic risk factor that may increase sexual recidivism. Specifically, they have suggested that substance use may exacerbate negative emotionality, a stable dynamic risk factor. Another possible link between substance use and sexual offending is an expectancy effect, in which people use substances because they expect a certain outcome from them (e.g., believing it would be easier to approach members of the opposite sex or to engage in aggressive behavior). Although the link between substance use and recidivism is not fully understood, it is clear that they are related and by reducing the rate of substance use in sexual offenders, recidivism rates also may decline.

In addition to targeting affect, emotion and urges (Howells, Day, & Wright, 2004), an emerging trend in sexual offender treatment is to address dynamic risk factors that are linked empirically to an elevated risk of violent, including sexually violent re-offenses (Newring &

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Wheeler, 2010; Seto & Fernandez, 2011). Thus, for many offenders, substance use may be an important treatment component. It has been shown that those sexual offenders who have a history of substance abuse and complete both substance abuse programming and sexual offender treatment will recidivate at a lower rate than those offenders who complete sexual offense treatment alone (Abracen et al., 2006). Other research has shown that involvement in substance use treatment leads to a decrease in the rate of conviction (Peters, Kearns, Marrin, Dolente, & May, 1993), re-incarceration (Swartz, Lurigo, & Slomka, 1996), and time until recidivism (Wexler, Falkin, & Lipton, 1990).

Although there is research to show that substance use should be addressed in treatment for sexual offenders, there is a paucity of literature to guide exactly how this should be implemented. Some studies briefly address the efficacy of therapeutic communities during incarceration (Wormwith et al., 2007) and others discuss the usefulness of cognitive behavioral therapy (Marshall & Marshall, 2014). Still other studies have noted that substance use was being addressed in therapy but do not describe how (Prendergast, Podus, Chang, & Urada, 2002; Wilson, Mitchell, & MacKenzie, 2006). Just as substance use is addressed in a variety of ways in the general public (e.g., 12-step meetings, cognitive behavioral therapy, mindfulness interventions) and in incarcerated populations, it is most likely being addressed in a variety of ways with the sexual offender population.

Treatment

Brief interventions. The primary characteristic of brief interventions is that they are short in length (one or two sessions; Miller & Wilbourne, 2002). Brief interventions are efficacious and useful when longer treatments are not feasible or when there are not enough resources to implement them (Moyer, Finney, Swearingen, & Vergun, 2001). Furthermore,

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brief interventions for substance use often have a goal of reduced drinking, they can be delivered by a wide variety of treatment providers (e.g., therapist, physician, nurse), they target an individual's motivation to change their drinking, and they are self-directed (Moyer et al., 2001). These characteristics of brief interventions, specifically, that they are short and effective, may be useful for clients who already spend a significant amount of time in mandated treatment.

Motivational interventions. Motivation is an important component of treatment. Specifically, it has been shown to be important for those clients engaging in substance use treatment (Hunter-Reel, McCrady, Hildebrandt, & Epstein, 2010). Intrinsic motivation to attend treatment is often a problem for court mandated clients (Kinlock, Schwartz, & Gordon, 2005; Kinlock, Sear, O'Grady, Callaman, & Brown, 2009; Mateyoke-Scrivner, Webster, Staton, & Leukefeld, 2004) and sexual offenders, specifically (Garland & Dougher, 1991). Currently, motivational interviewing and motivational interventions are being used to increase a sexual offender's engagement in treatment for their sexual offense while in prison (Marshall & Marshall, 2014). Data have shown that this intervention has been successful. For example, the sexual offender literature has shown that between 7% and 80% of sexual offenders refuse treatment while in prison. The program implemented by Marshall and colleagues, which uses motivational interventions, has a reported refusal rate of 3.8% and a completion rate of 95.8% (Marshall & Marshall, 2014). Motivational interventions also have been found to be useful for clients with substance use disorders (Project MATCH Research Group, 1993; Project MATCH Research Group, 1997) and specifically, mandated substance use disorder clients (Kinlock et al., 2005; Mateyoke-Scrivner et al., 2004). Because of the data that support the efficacy of motivation interventions and because motivational therapies

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are often incorporated into brief interventions, brief motivational interventions may be useful interventions with court mandated sexual offenders.

Motivation. There is a large body of research on dual system approaches to motivation. The dual system approach refers to the idea that a person is a complex system made up of several subsystems (Cantor & Blanton, 1996; Deci & Ryan, 2000). In particular, many researchers have focused on implicit and explicit motivational subsystems, which drive, direct, and select behavior (Brunstein, Schultheiss, & Grassmann, 1998; McClelland, Koestner, & Weinberger, 1989). Implicit motivation is thought to relate to basic, organismic (Deci & Ryan, 2000), affective, and unconscious cognitive processes (Maslow, 1943). It is thought that they are less consciously accessible, lead to affective preferences and behavioral impulses (McClelland,1985), and often result in spontaneous and pleasurable behavior (McClelland et al., 1989). Research also has shown that implicit motivation is independent of social demands (McClelland, 1985).

Explicit motivation can be defined as the reasons that people attribute to their behavior (McClelland, 1995). They are consciously accessible and often are assessed with questionnaires or self-report measures. Unlike implicit motives, explicit motives are often driven by social demands and normative pressures (McClelland, 1995).

A common potential threat to the measure of motivation in general, but especially for sexual offenders, is reliance on self-report. Oftentimes, researchers must worry about participants trying present themselves in a positive light (Greenwald, McGhee, & Schwartz, 1998) and simply reacting to the material presented in the questionnaire (Wiers, Sergeant, & Gunning, 2000). For these reasons, this study will assess not only explicit motivation using self report but also implicit motivation. By assessing implicit motivation, it is hoped that

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socially desirable responding will be bypassed. It also is thought that assessing implicit motivation may tap different underlying cognitive motivational processes (Stacy, 1997; Wiers, Van Woerden, Smulders, & De Jong, 2002). Research has shown that brain pathways related to emotion and motivation are important in addiction and that these pathways are not accessible for introspection (Robinson & Berridge, 2003). Implicit measures have been show to correlate with the activation of these pathways (Phelps et al., 2000). Finally, research has found that implicit and explicit measures of motivation have predicted unique variance in alcohol use (Stacy, 1997) and it is thought that motivational interventions may differentially affect implicit and explicit cognitions (Teachman & Woody, 2003). This study will also assess therapist's views of client's motivation to see if they converge or diverge from the client's implicit and explicit assessment of motivation.

Current Study

Many sexual offenders have been diagnosed with substance use disorders and even more of them have been mandated to substance use treatment in addition to court ordered treatment for their sexual offense. Previous research has shown that the rate of recidivism for sexual offenders is related to their substance use. Other research has shown that motivation to engage in treatment and motivation to decrease substance use are related to substance use treatment outcome. Thus, the overall goal of the current study was to increase sexual offenders' motivation to engage in mandated substance abuse treatment and decrease their future substance use. The study was based in the assumption that if a sexual offender's motivation to engage in substance use treatment is increased, he may be less likely to use substances in the future. In turn, a decrease in future substance would likely reduce the offender's chances of recidivism.

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Aims

Because there has been evidence showing that brief motivational interventions increase motivation and reduce future substance use, the purpose of the current study was to test a brief motivational intervention with sexual offenders who have been mandated to substance use treatment in addition to treatment for their sexual offense. This study had five aims.

Aim one. Aim one was to test the feasibility of a brief motivation intervention with a population of sexual offenders who were court mandated to substance abuse treatment. The targets of the intervention included increasing motivation to attend treatment and decreasing future substance use.

Aim two. The second aim was to examine change trajectories in motivation over the four weeks of study participation as well as to test whether the brief motivational intervention lead to differential changes in motivation. It was hypothesized that the participants in the motivational intervention condition would report larger increases in motivation than participants in the control condition.

Aim three. The third aim was to test whether there was a main effect of treatment assignment on follow up measures. It was hypothesized that, compared to the control condition, participants in the brief motivational intervention condition would engage in more help seeking behaviors, increase their engagement in substance abuse treatment, and decrease their substance use.

Aim four. The fourth aim was to test whether changes in motivation accounted for changes in the behavioral differences that were found. Specifically, we were interested in whether changes in motivation accounted for level of engagement in help seeking behaviors,

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engagement in substance abuse treatment, and level of substance use. It was hypothesized that higher rates of motivation would account for increases in level of engagement in help seeking behaviors, engagement in substance abuse treatment, motivation to participate in substance abuse treatment and level of substance use. Due to a number of reasons, discussed later in this paper, aim four was not implemented.

Aim five. The fifth aim was exploratory. The purpose of aim five was to identify potential responder groups as well as to determine predictors of client perceptions of the usefulness, helpfulness, and satisfaction with their intervention and mandated substance use treatment.

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Method

Participants

Participants were recruited from the Albuquerque Sex Offender Treatment Program and Journeys Counseling in Albuquerque, New Mexico. The Albuquerque Sex Offender Treatment Program currently treats approximately 150 convicted sexual offenders who have been court mandated for treatment because of their sexual offense. Approximately 80% of the program's clients have a history of substance abuse and are mandated to substance abuse treatment in addition to treatment for their sexual offense. Most clients are males in their mid thirties and the majority of clients are Hispanic or White. Approximately 10% of the clients are African American. Substance abuse treatment is cognitive behavioral and takes approximately 6 months to complete but this ranges depending on the client.

Journeys Counseling currently treats approximately 150 convicted sexual offenders who have been court mandated for treatment because of their sexual offense. Approximately 75% of the program's clients have a history of substance abuse but less than 20% are mandated to substance abuse treatment in addition to their sexual offense. Most clients are male in their mid thirties and the majority of their clients are Hispanic or White. Approximately 2% of the clients are African American. Substance abuse treatment is cognitive behavioral and takes approximately 30 months to complete but this ranges, depending on the client. For the current study, all participants were adult males who were convicted of a sexual offense and mandated to substance use treatment. Recruitment was accomplished by making announcements about the study at the start or the end of treatment groups (see Appendix A).

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Inclusion criteria. Participants were included if: (a) they were 18 years of age or older; (b) they were male; (c) they had been sentenced to receive treatment for a sexual offense as well as for substance use; and (d) they were available to participate in follow-up assessment four weeks after their baseline assessment.

Exclusion criteria. Because all measures were administered in English and required participants to be fluent in English, individuals were excluded from the study if they were not conversationally proficient in English. Also, participants were excluded if: (a) they were unable to provide contact information for a follow-up assessment; (b) they were unable to schedule a follow-up assessment; (c) they were actively psychotic; (d) they were under 18 years of age; and (e) they would have completed their substance use treatment within three weeks of the study intervention. A participants would have been removed from the study if, at any time, he attempted or completed assault against any member of the study staff.

Measures

Initial contact information form (CIF_I). A contact information sheet was provided to potential participants interested in learning more about the study. This information was used to contact the participant for screening and to schedule a meeting for consent and baseline assessment. Contact information included: (a) participant's name; (b) participant's email address; (c) participant's telephone numbers (i.e., cellular, home, and work phones); and (d) telephone number and name of a friend or family member who could contact the participant.

Blood Alcohol Content (BAC). Because individuals under the influence of alcohol may not be able to make informed decisions, give consent, or provide accurate information, BAC was assessed using a breathalyzer. Participants with a BAC below 0.05 continued with

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the study procedures. If participants had arrived with a BAC of 0.05, they would have been asked to wait 30 minutes and retested to see if their BAC falls below 0.05. If participants had arrived with a BAC greater than 0.05 they would have been asked to reschedule their appointment for a time when their BAC was below 0.05.

Final Contact Information Form (CIF_F). A contact information sheet was provided to participants at the baseline assessment. This information was used to contact the participant for scheduling and to remind them about the follow-up assessment. Contact information collected was similar to that collected earlier and included: (a) participant's name; (b) participant's email address; (c) participant's telephone numbers (i.e., cellular, home, and work phones); (d) telephone number and name of a friend or family member who could contact the participant. Additional information collected also included: (a) street address; and (b) mailing address.

Demographics. A modified version of the CASAA Demographic Interview Form (CASAA Research Division, 1997) was used to collect demographic information about the participant. The form included items about the participant's age, sex, ethnicity, income and education. Additional questions were asked about the participants' ethnic and racial categories as defined by the National Institutes of Health as well as the length of mandated treatment and the number of times the participant had been in substance use treatment.

Crime of record. This two item measure asked the participant to categorize his crime of record. The participant was instructed to place an "x" next to the term that best described his sexual crime of record. Examples of crimes include: kidnapping, incest, rape, and criminal sexual penetration. There was also an opportunity for the client to describe his crime

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if it was not listed. The second item asked the participant if his crime was committed over the internet.

Role of alcohol or drugs in crime of record. This one item measure was designed to assess the participant's belief about the role of alcohol or drugs in his crime of record. Participants were shown a rating scale of 1 – 5 (1 = did not play a role in my crime, 5 = was the reason that I committed my crime). The participant was asked to place an "x" next to the statement that best described the role of alcohol or drugs in his crime of record.

Wechsler Abbreviated Scale of Intelligence – second edition (WASI-II). The WASI-II (Wechsler, 2011) provided composite scores that estimate general intellectual ability. The vocabulary and matrix reasoning subtests were administered. The vocabulary subtest was comprised of 31 words that the participant was asked to define. The matrix reasoning subtest was comprised of 30 matrix puzzles that the participant was asked to solve. Wechsler (2011) reported a reliability coefficient of .94 for this measure.

Readiness Ruler. A modified version of the Readiness Ruler (LaBrie, Quinan, Schiffman, & Earleywine, 2005) was used to assess self-reported (explicit) motivation to change alcohol/drug use. Statements were rated on a one to ten likert scale. Statements included, "Right now, how important is it for you to make a change in your alcohol/drug use?" "Right now, how confident are you that you can make a change in your alcohol/drug use if you decided to?" and "Right now, how ready are you to make a change in your drug/alcohol use?" The questions were modified to address the needs and topic of the current study such that they asked about motivation to change drug and alcohol use specifically. The Readiness Ruler has been shown to be a reliable and valid assessment measure (LaBrie et al., 2005).

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Treatment Needs and Motivation (TCU MOTForm). The TCU MOTForm, developed at Texas Christian University, is a 36 item self report questionnaire containing contains five subscales that have been used to assess a participant's (explicit) motivation to engage in treatment and a participant's perception of his own treatment needs. Scales include problem recognition, desire for help, treatment readiness, pressures for treatment, and treatment needs. Participants were asked to rate the extent to which they agreed with statements such as "You need help dealing with your drug use," "You are ready to leave this treatment program," and, "Your drug use is going to cause your death if you don't quit soon." This measure is reliable, with reported subscale alphas over .88 (Joe, Broome, Rowan-Szal, & Simpson, 2002).

Substance-related Word Association Task (WAT). The purpose of the WAT was to measure a participant's implicit motivation. The WAT is one of the most common memory tests for indirectly assessing the retrieval of preexisting substance-related memory associations (Stacy, 1997). This task presents a series of substance-related cues and participants were asked to respond by writing the first word or short phrase that they could think of. It is thought that those who use substances more frequently will be more likely to think of a substance-related word or short phrase when presented with a substance related cue than those who engage in substance use less frequently. This is because more frequent and longer encounters with substance related cues (e.g., feeling relaxed) and behaviors (e.g., alcohol consumption) are thought to strengthen their association. Substance-related implicit associative memory, as measured by the WAT, has been shown to predict future substance use (Ames et al., 2007; Ames & Stacy, 1998) as well as cigarette use (Kelly, Haynes, & Marlatt, 2008) and risky sexual behavior (Ames, Grenard, & Stacy, 2013; Stacy, Ames,

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Ullman, Zogg, & Leigh, 2006). This unidimensional measure has been found to have good psychometric properties (Shono, Grenard, Ames, & Stacy, 2014).

Structured Clinical Interview for DSM-IV Diagnoses (SCID): Substance Use Disorders Module E. Module E of the SCID-IV (First, Spitzer, Gibbons, & Williams, 2002) was used to assess lifetime and current substance use disorder. Although the SCID-IV was being updated to reflect changes made in the Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (American Psychiatric Association [DSM-5], 2013) the updated version was not yet available at the time this study was being implemented. The updated version will drop criterion E4 (legal consequences) from the assessment and add a new craving criterion. Therefore, although criterion E4 was included in the assessment, it was dropped from analyses and the craving criterion was added to the end of the assessment and included in analyses. With the craving criterion added, there were a total of 11 diagnostic criteria to be scored. Examples of the criteria include persistent desire or unsuccessful efforts to cut down or control substance use and important social, occupational, or recreational activities were given up or reduced because of alcohol use. The SCID-IV Module E is valid and reliable, with a test-retest kappa score ranging between good (.64; Lobbestael, Leurgans, & Arntz, 2010) and excellent (1.0; Zanarini et al., 2000).

Alcohol and Substance Use Form 90-QVF, Form 90-QVF30, Form 90-DI and Form 90-DF (Form 90). The purpose of the Form 90 was to assess the quantity and frequency of drug and alcohol use using a semi structured interview. The Form 90-QVF assessed the quantity and frequency of alcohol use and the Form 90-DI assessed drug use. The Form 90-QVF was the version that used at the baseline assessment. It generated the quantity and frequency of alcohol that was used 90 days prior to the baseline assessment as

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well as the 90 days prior to the crime of record. At follow up, the Form 90-QVF30 was used. It generated the quantity and frequency of alcohol used in the 30 days between the intervention and the follow up. The Form 90-DI is the version of the assessment that was used to assess drug use 90 days prior to the baseline assessment as well as 90 days prior to the crime of record. The Form 90-DF was used at the follow up assessment to assess drug use in the time between the baseline assessment and the follow up assessment. The Form 90 is a structured interview that combines the strengths of existing assessment instruments (i.e., time-line follow back and consumption grid methodology) while avoiding their weaknesses (Miller, 1996). It was developed by the Matching Alcoholism Treatments to Client Heterogeneity (MATCH) Research Project Group (Miller, 1996). The validity of this measure (Tonigan, Miller, & Brown, 1997) in clinical populations ranges from good to excellent (0.6 – 1.0) (Grant, Tonigan, & Miller, 1995).

Therapist rating of client motivation. The purpose of this measure was to assess participant motivation from the perspective of his therapist. To assess this construct the wording of Scale C of the TCUMotform was modified so that questions were directed toward the therapist reporting about the participant instead of the participant reporting about himself. Attempts were made, when possible, to keep the item as similar to the original item as possible. For example, in the original TCU Motform, question 2 stated, “You need to be in treatment now.” The modified version of the questionnaire stated, “Your client believes that he needs to be in treatment right now.”

Group Engagement Measure (GEM). A modified version of the GEM (Macgowan, 1997) was administered to therapists to behaviorally assess motivation to engage in substance use treatment. The original GEM was modified by removing two subscales (“contracting,”

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and “working on own problems”) and adding a question about homework completion. This questionnaire was modified based on a review by Tetley, Jinks, Huband, and Howells (2011), which identified the important dimensions of treatment engagement. The homework completion question was added so that the modified measure included all the important treatment engagement dimensions defined in the Tetley et al., (2011) paper. The original version of the GEM is reliable with subscale coefficient alphas ranging from .72 to .98.

Satisfaction survey. This six item measure was designed by the study team to determine the participant’s satisfaction with his mandated substance use treatment and with the study intervention. Participants were asked to rate on a scale of 0 – 10 (1 = not at all useful, 10 = extremely useful) the extent to which they found the study intervention as well as the mandated substance use treatment useful, and helpful, and how satisfied the participant was with his study therapist and his treatment therapist. Examples of the items included, “To what extent was the content of your meeting with the study therapist useful?” and, “In regards to your substance use, to what extent is your therapist helpful?”

Procedures

Recruitment. Recruitment took place at the Albuquerque Sexual Offender Treatment Program offices and Journeys Counseling offices in Albuquerque, New Mexico. Flyers were posted in the treatment program offices and announcements (see Appendix A) were made by study staff either before or after group therapy sessions. Those who were interested in participating in the study were asked to fill out a Contact Information Sheet (CIF_I) and were contacted at a later time for a phone screen.

Screening. Study staff screened participants by phone. All phone screenings took place inside of a private office at CASAA. If interested individuals met inclusion criteria and

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did not meet exclusion criteria, they were scheduled for consent and their baseline assessment.

Baseline procedures. Participants were given the choice to complete all study procedures at the Albuquerque Treatment for Sexual Offenders offices or at the Center on Alcoholism, Substance Abuse and Addictions (CASAA). Baseline procedures began with assessing BAC and reviewing the consent form.

Assessment of BAC. Before potential participants were asked to review and sign the consent form, they were asked to give a breath sample to assess their BAC. It was explained that the purpose of the BAC assessment was to determine if participants were under the influence of alcohol because alcohol might impede their ability to consent to the study. Potential participants were told that the results of this assessment would be kept confidential and that their therapists and their probation officer would not be informed of the results. They also were told that if their BAC was over 0.05, they would be asked to reschedule their baseline assessment and if BAC was 0.05, they would be asked to wait 30 minutes and then retested to determine if their BAC had dropped to below 0.05. Participants with BACs under 0.05 continued with informed consent. After questions about the assessment of their BAC had been answered, potential participants verbally agreed or declined the BAC assessment. If they chose not to take the test but agreed to take it at a later time, they would have been rescheduled. If they chose not to take the test and did not want to take it at a later time, they were thanked for their interest in the study and their appointment came to an end. If they agreed to the assessment, it was administered immediately. No participants declined BAC assessment and no assessment resulted in a positive BAC.

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Informed consent. After it was determined that a participant's BAC was under 0.05, study staff reviewed the consent form and the study procedures with the participant. Potential participants were given the chance to have their questions about the study answered by study staff. Next, they were asked to read and sign the consent form. Following the signed consent, participants began their initial assessment battery.

Initial assessment battery. The following questionnaires were administered: (1) CIF_final; (2) WASI-II; (3) Readiness Ruler; (4) Demographics; (5) SCID; (6) Crime of Record; (7) Role of Alcohol or Drugs in Crime of Record; (8) TCU MOTForm; (9) Form-90DI; (10) Form-90 QFV; and (11) WAT. On the day of the initial assessment battery appointment, the participant's substance use therapist was asked to complete the GEM and Therapist Rating of Client Motivation questionnaires.

Randomization. After the initial assessment took place, participants were randomized to either the intervention or control condition. To determine each participant's treatment condition a randomization table generated in Excel was used.

Intervention. Depending on assigned condition, participants received a motivational interviewing brief intervention or an educational intervention. Each intervention took approximately 60 minutes to complete and was delivered by one of two clinical psychology graduate students who had been trained in motivational interviewing brief interventions and the educational intervention. Both graduate students were supervised by Dr. Kamilla Venner and for supervision and training purposes, all interventions were audio taped.

The brief motivational intervention (BMI) was developed to include discussion about the role of substances in the participant's crime of record, substance use treatment, and future substance use. Participants were reminded at the start of the intervention that it was recorded

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for the purposes of supervising the therapists and to make sure that the intervention was being delivered properly. Participants also were reminded that all information they gave would be kept confidential unless they expressed intent to harm themselves or another person. Finally, they were reminded that this information would not be shared with their therapist or their probation officer. To ensure that the therapy session adhered to the spirit of MI, the structure of the session was fluid. However, a general outline of the BMI therapy session has been included in Appendix B. This outline includes the various topics that the therapist attempted to cover. These topics included the role of substance use in the participant's crime of record, substance use treatment, and thoughts around the participant's current and future substance use.

The control condition was an educational session about drug and alcohol use. Participants were first reminded at the start of the session that it would be recorded for the purposes of supervising the therapists and to make sure that the intervention was being delivered properly. Recording also took place so that both the intervention and control condition were consistent. Participants were reminded that all information that they gave would be kept confidential unless they expressed intent to harm themselves or another person. Finally, they were reminded that this information would not be shared with their therapist or their probation officer. Following these reminders, participants reviewed a Power Point presentation on a study laptop. The PowerPoint presentation provided didactic information about the following substances: marijuana, alcohol, heroin, methamphetamine, cocaine, lysergic acid diethylamide, mushrooms, and 3,4-methylenedioxymethamphetamine (MDMA). When participants were halfway through the PowerPoint presentation, they were asked a series of questions about the information that they read. After the participants

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finished the PowerPoint presentation, they were asked the same series of questions about what they read. Finally, therapists asked the participants if they had any additional questions about the PowerPoint content and then thanked them for their time. Therapists did not follow up on participant self-disclosure during this intervention. See Appendix C for an outline of the control condition protocol.

Post intervention assessment battery. Following both the BMI and the educational intervention, therapists administered post intervention questionnaires. These questionnaires included: (1) Readiness Ruler; (2) TCU MOTForm; (3) WAT; and (4) Satisfaction Survey. The participant's substance use therapists were also asked to complete Therapist Rating of Client motivation and the GEM at the conclusion of the participant's next substance use therapy session.

Initial assessment and intervention compensation. After participants finished completing all post intervention questionnaires, they were thanked, compensated with a $25 gift card and their follow-up appointment was scheduled.

Follow up procedures. Participants were scheduled for follow up assessment four to eight weeks after their intervention was complete. All effort was made to schedule follow up assessments at four weeks. Participants had the choice to complete follow up meetings at CASAA or at the Albuquerque Sexual offender Treatment Program offices. At the start of the follow up assessment, participants were greeted and reminded of confidentiality procedures. Specifically, they were reminded that the information they gave would not be shared with their substance use treatment therapist or their probation officer. Next, the participant's BAC was assessed. If results showed that their BAC is over 0.05, they were asked to reschedule their appointment. If BAC was 0.05, participants were asked to wait 30

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minutes and then they were retested to determine if their BAC was below 0.05. If their BAC was under 0.05, they continued their appointment. It should be noted that no participants produced a positive BAC at follow up. After answering any questions that the participant had, the following questionnaires were administered: (1) Readiness Ruler; (2) TCU MOTForm; (3) Form-90 DF; (4) Form-90 QFV30; (5) WAT; and (6) Satisfaction Survey. Within one week of the follow up assessment battery appointment, the participant's substance use treatment therapists were asked to complete the GEM and Therapist Rating of Client Motivation questionnaires. Following the completion of questionnaires, study staff answered any questions that the participant had, compensated them with a $20 gift card and provided them with a list of community resources that targeted substance use treatment and other mental health issues (see Appendix D).

Confidentiality

To protect the confidentiality of participants, all study materials were kept in a locked file cabinet, inside of a locked office at CASAA. Furthermore, because sensitive and personal information was collected, we applied for a Federal Certificate of Confidentiality.

Data Analysis Plan

Data management. The distributions of the scales were examined and potential outliers and non-normality were investigated. It should be noted that no outliers were found. In addition, internal consistency of the scales in the sample was examined and compared with published psychometric data.

Hypothesis testing. Aim one examined the feasibility of implementing and conducting the planned study. As such, a mixed method approach was used to address aim one. As examples, qualitative approaches were used to assess the acceptability of

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implementing the study interventions within the criminal justice system as well as the potential modifications in the planned interventions. Continuing quantitative markers of feasibility included participant compliance with the protocol including but not limited to attendance at baseline assessment, intervention and follow up assessments. Finally, participant ratings of the usefulness, helpfulness and satisfaction with the intervention and mandated substance use therapy were summarized.

Aim two examined if BMI produced, as intended, larger gains in motivation relative to the control condition. Two analytic strategies were applied to address this aim. First, at the group level, ANCOVA was used to examine whether, on average, BMI participants report higher pre-post gains in motivation relative to the control condition. Ten measures of patient motivation were administered at all time points, and these measures covered two categories: motivation to engage in treatment (five scales, TCU MOTForm) and motivation to decrease substance use (five scales, Readiness Ruler [3], WAT, and Therapist Rating of Client Motivation). Prior to conducting these analyses, correlations among the ten measures were examined to determine whether family-wise (.05/5 = 0.01) or absolute (0.05/10= 0.005) adjustment was warranted. A second analysis plan was to conduct multi level modeling to assess individual and group change trajectories in the ten measures of motivation over the course of study participation. Differential rates of change, by group, were tested via cross level interaction terms by use of the t statistic. Here, baseline, post intervention and follow up motivational measures were used. In each of these ten MLMs, we used restricted maximum likelihood estimation and tested for trajectory of change. Finally, these growth models were centered at baseline to assess change in motivation from the point of consenting to participate. Partitioning of alpha to control for inflated Type I error was informed through the

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preliminary analyses described above. Secondary analyses were planned to assess the homogeneity of the obtained effect sizes (Q statistic) derived from the ANVOCAs (n=10) and MLMs (n=10). These analyses augmented potentially underpowered significance testing.

Aim three investigated pre-post changes on ten outcome measures by group assignment. Outcome measures collected at follow up included: Form 90 (days of: treatment attendance, medical care, Twelve-Step meeting, counseling session, medication use to stabilize substance abuse), therapist rating on Group Engagement Measure (6 scales: attendance [3 items], contributing [5 items], relating to therapist [4 items], relating to members [6 items], working on other member's problems [7 items], homework completion [1 item]), and decrease in substance use with alcohol use defined as QF and days illicit drug use (combined across ten categories). For analysis purposes each of the six therapist ratings of client treatment engagement scales was averaged and each average was summed Prior to the creation of this total engagement measure we examined bivariate correlations among the six scales to assess the commonality of direction of therapist ratings on the six scales. Interest focused on any help seeking behaviors outside of mandated treatment. For this reason, days of treatment attendance, twelve-step meeting and counseling was to be summed. All help seeking efforts described exclude attendance at weekly mandated therapy sessions. Between group differences were to be tested via ANCOVA with baseline measures used as covariates.

Aim four assessed the role of changes in motivation during treatment in explaining follow up outcome measures tested in aim three. This was to open the perplexing issue of potentially conducting 50 mediational tests (five motivation mediators x ten outcomes). One solution was to simply conduct mediational tests for those outcomes in aim three that were significant, i.e. significant between group differences. Alternatively, Type I error adjustment

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could have been applied to the conduct of 50 tests. The actual mediational tests were to be done via the Process Macro for SPSS. The advantage of the Process macro is that it employs bootstrapping methods, which are optimal for small samples given the procedures produce a better estimation of standard errors that are sample specific. A final option was to conduct multiple mediation models in which therapist and client report were jointly considered mediators in the model (Hayes, 2013).

Aim five was exploratory. One set of analyses was to examine treatment response to identify optimal responders (both within and collapsing treatment assignment). It was thought that likely moderators included offense type, the role that substance use played in participant's crime of record, and longevity in mandated sexual offender and substance use treatment. Second, associations between therapist ratings of treatment engagement (six scales) and participant report of satisfaction with intervention and with mandated substance use treatment were to be examined. Finally, analyses were to focus on the main effect of study therapist (n=2) on outcome at follow up. Due to sample size restrictions, the analysis plan above was changed to better examine the data.

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Results

Sample

This study tested the efficacy of a brief motivation intervention on sexual offender's motivation to engage in mandated substance abuse treatment and future substance use. It was predicted that if a sexual offender's motivation to engage in substance use treatment was increased, he/she might be less likely to use substances in the future. In turn, although not tested in the present study, we predicted that a decrease in future substance use might reduce the offender's likelihood to recidivate. Recruitment occurred between April and July, 2015. Our goal was to recruit 80 participants who completed the study. During this time, approximately 115 people were approached at the Albuquerque Sex Offender Treatment Program and Journeys Counseling and asked if they were interested in hearing more about the study. Of those approached, 40 people (approximately 35%) completed the initial contact form. Of those who completed the initial contact form, 34 (85%) were screened over the phone. Of those screened, 24 (71%) were eligible for the study. Twenty-two consented to participate and 21 people completed the follow-up session. Of the 21 participants who completed the study, all but one was included in analyses. One participant appeared to have low reading ability and study staff determined that although he would be allowed to completes the study, his data would be excluded as likely to be invalid. In total, 20 participants were included in analyses.

Participant Characteristics

Participant characteristics are shown in Tables 1, 2, 3, 4, and 5. On average, participants were in their 30 and 40s (participants' mean age = 41.8, *SD*=10.6) and either White (45%), Native American (10%) or identified some other ethnic group (40%).

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Additionally, more than half of the participants identified as Hispanic (65%). Many of them had completed some post-high school education (50%) and had low-average to average IQ scores (composite IQ score = 89.05, *SD*=11.6). Although some were working full time (35%), many were unemployed (30%) or working fewer than 40 hours per week (20%). Additionally, most participants were not currently in a romantic relationship (85%). Finally, comparison of baseline characteristics of participants in the two study groups (i.e., BMI versus the control condition) indicated no significant differences between the groups on any baseline characteristic.

Participants engaged in the following index crimes: kidnapping (5%), criminal sexual penetration (25%), sexual contact of a minor (50%), enticement of a child (2%) and other (2%). "Other" is used to describe an individual that was convicted of attempting sexual contact with a minor. Interestingly, none of the participants were convicted of possession of child pornography. Victims ranged from age 4 (5%) to age 45 (5%) with the mean age being 15.55(*9.42*). All participants reported using substances at the time of the arrest. However, the *perceived* role that substances played in their index crime varied among participants (see Table 3). Some (15%) reported that substances did not play a role in their index crime while others (25%) reported that substance use was the reason for the completion of the index crime. The majority (35%) reported that substance use played a large role in their index crime. A number of demographic variables were explored to determine their association with participants' perception of the role of substances in their crime including age, income, IQ, and percent days abstinent. None of these variables were significant.

Categorical measures were cross tabulated to identify relationships between participant variables. Chi-square tests were conducted to determine if the participant's ethnic

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identification differed depending on their marital status and employment. Participants did not differ in marital or employment status based on Hispanic/non-Hispanic ethnicity. Additionally, Chi-Square tests were conducted to determine if the participants' marital status and employment differed depending on the age of the participant's victim. Three age categories were created. Categories included children (under age 12), adolescents (ages 13 – 17), and adults (age 18 and over). Again, no relationships were observed.

One way ANOVA was conducted to determine if the two treatment conditions differed on baseline substance use, health care utilization, or motivation. Of the thirty three tests conducted, groups only differed on item two ("How confident are you that you can make a change in your substance use if you wanted to") of the Readiness Ruler, $F(1,18) = 8.233$, $p<0.01$. Because of the large number of tests run, this finding should be viewed as a potential Type I error. As shown in tables 6, 7 and 8 we found that the groups did not differ on any substance use, health care utilization, or baseline motivation measure.

Scale Internal Consistency

As shown in Tables 9, 10, 11, and 12, internal consistency was calculated for measures that were adapted for this study. Cronbach's alphas indicate the extent to which items within a hypothesized scale consistently represent the construct of interest. Alphas were calculated for the following scales: Group Engagement Measure (GEM; all items), GEM_Attendence, GEM_Contributing, GEM_Relate, Readiness Ruler (all items), Therapist Rating of Client Motivation (all items), TCU_Problem Recognition, TCU_Desire for Help, TCU_Treatment Readiness, TCU_Pressures for Treatment, and TCU_Treatment Needs. Although alphas ranged from .953 to .548, overall, they were acceptable. Six subscales were less than acceptable. These included the following: $GEM_Relate_{2,}$ $Readiness\ Ruler_{1,}$

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Readiness Ruler$_2$, TCU_Treatment Readiness$_1$, TCU_Treatment Readiness$_2$, and TCU_Pressures for Treatment$_1$. One reason for less than acceptable internal consistency may be that these scales included fewer items and the items that were included may have been insufficient to tap the subject of interest.

Aim One - Feasibility

Aim 1 examined the feasibility of implementing and conducting the planned study. As such, a mixed method approach using quantitative and qualitative methods was used. Implementing this study proved more difficult than expected for a number of reasons.

Institutional barriers. First, there were numerous institutional barriers to overcome, which made approval to conduct the study arduous. Barriers included difficulty obtaining funding to complete the study, trouble obtaining departmental approval, and challenges obtaining university approval.

A number of applications for funding were completed, some for funds within the institution and others for funds from outside the institution. Comments from outside of the institution included "while this application was well written and this study was thoughtfully planned, this study is beyond our funding initiative." Within the institution, scores were never high enough to meet criteria to grant funding. Because grants are competitive, it is unclear whether there were any study-specific factors (e.g. the population of interest) that contributed to the negative decisions. Next, obtaining departmental approval took longer than usual. After our study was reviewed at the Departmental level, we were asked to implement safety procedures above and beyond those that had been used in previous studies that examined adjudicated substance users. Each time listed concerns were addressed and resubmitted to the department for review, the protocol was returned with a number of new

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comments. Institutional barriers included requiring us to treat our outpatient population of sexual offenders as a prison population even though they did not meet the definition of "prisoners" and follow the additional rules and standards that are required of studies that include a prison population. For example, we were asked to obtain a letter of support from the New Mexico Secretary of Corrections. These barriers were overcome but it took an exceptionally long time to gain approval from all required parties. This prolonged the start of data collection and points attention to the challenges inherent in working with high-risk and vulnerable populations.

Recruitment barriers. Study recruitment also proved to be challenging. Although the Albuquerque Sex Offender Treatment Program and Journeys Counseling served a large number of court mandated offenders, many were not interested in participating in our study. Of those that did, many did not meet criteria for the study. When asked why people did not want to participate, many stated that their schedule did not allow it. However, a large number of people would not give a reason for their disinterest. It is possible that there were unknown differences between that those who did and did not want to participate. For example, the majority of our participants reported abstinence at baseline. Those that had used substances only did so one or two times during our window of interest. It is possible that those who were using substances regularly were less willing to participate in the study.

After it became apparent that we were struggling to reach our recruitment goal, we began looking for other organizations that could provide a pool of potential participants. Unfortunately, there were few other providers in the Albuquerque and Santa Fe area who treated sexual offenders. Of those who endorsed treating offender clients, they reported that the sexual offense was a secondary, not primary, treatment goal. Multiple sources were used

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to locate potential sexual offender treatment providers. For example, the New Mexico probation and parole department was contacted. Multiple unanswered messages were left for the Federal parole office. Additionally, the Association for the Treatment for Sexual Abusers (ATSA), a national organization that specializes in the research and treatment of sexual offenders, provided a list of treatment providers in the New Mexico area. Of the approximately 50 providers contacted in the Albuquerque and surrounding area, the only active treatment programs included the Albuquerque Sex Offender Treatment Program and Journeys Counseling. The number of offenders in New Mexico is not decreasing, and this highlights the dire need for trained and competent mental health providers to work with this population of people.

Study implementation. Although our recruitment procedures did not yield the targeted sample size of 80 participants, we were able to obtain a sample of individuals that was demographically representative of the Albuquerque area. The sample was distributed well in terms of age, ethnicity, and age of victim. Interestingly, there were no participants with an index crime that focused on the internet (e.g., possession and/or distribution of child pornography). This is especially surprising because of the rising rates of people convicted of child pornography crimes in the United States (Wolak, Finkelhor, and Mitchell, 2011). It is possible that due to our limited sample size individuals who engaged in child pornography were not recruited simply by chance. It is also possible that these individuals differed in some way from those that agreed to participate (Seto, 2015).

In general, once participants were enrolled in the study, they completed the study protocol. Most participants arrived on time and attended scheduled appointments. Those that were unable to attend an appointment or knew they would be late were able to call and

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reschedule. Additionally, those that completed baseline and post intervention assessments typically attended follow-up appointments. Of the twenty two participants who completed baseline and post intervention phases of the protocol one became incarcerated and thus was unable to complete follow-up assessments. Otherwise, all other individuals completed all phases of the study.

Study therapist training went smoothly. Both therapists took part in a two-day basic motivational interviewing seminar taught by an instructor from the Motivational Interviewing Network of Trainers (MINT). Following the seminar, therapists met with a MINT supervisor to review the intervention study protocol. Therapists also met with the supervisor on a weekly basis to review intervention sessions and discuss problems or questions that might have come up. Finally, an intervention outline was provided to the therapists to provide guidance but also to allow for flexibility in order to keep the "spirit of MI".

Participant satisfaction. Following post intervention and follow-up assessments, participants were asked to rate the usefulness, helpfulness and satisfaction with the intervention and mandated substance use therapy. Two scales were created by summing the three study satisfaction items and summing the three therapist satisfaction items. Groups were compared on individual item means (see Table 13), as well as scale means using one-way ANOVAs. Results showed that, post intervention, groups differed on their individual item ratings and the scaled score item, $F(1,18) = 6.97$, $p<.017$, of intervention satisfaction such that the intervention group was more satisfied with their study therapist than the control group. Groups did not differ on their scaled, $F(1,18) = .918$, $p<.351$, or individual ratings of satisfaction with mandated treatment, meaning that the groups did not differ in their satisfaction with their mandated substance abuse treatment therapist. Post intervention, the

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scales had a correlation of .129, indicating that immediately after the intervention, participants were not responding the same way to all items.

When participants with complete data (n=18) from both the control and intervention group were combined, a paired samples t- test showed that ratings of the intervention, $t(17)=1.699$ $p<.105$, and mandated treatment, $t(17)=0.572$ $p<.575$, scales did not change from post intervention to one-month follow up. Two one-way repeated measure ANOVA's were conducted to assess changes in satisfaction with the intervention and treatment. The between-subject factor was treatment group assignment (df = 1) and the within-subject factor had two levels (i.e., post intervention and one-month follow-up). Considering satisfaction with the intervention first, there was a significant group by time interaction, $F(1) = 4.81$, $p < .04$. Inspection of group means indicated that satisfaction with the intervention declined significantly over time for the intervention group, but remained relatively constant for the control condition. Neither the group nor time main effects were significant. Turning to the treatment satisfaction measure, none of the terms tested in the repeated measures ANOVA were significant $F(1) = .009$, $p < .927$. Means for this test are listed in Table 14.

Aim Two – Changes in Motivation

Aim two was intended to examine change trajectories in motivation over the four weeks of study participation as well as to test whether the brief motivational intervention lead to *differential* changes in motivation. It was hypothesized that the participants in the motivational intervention condition would report larger increases in motivation relative to participants in the control condition. Two analytic strategies were applied to address this aim. First, at the group level, GLM was used to examine whether, on average, BMI participants report higher pre-post changes in motivation relative to the control condition, controlling for

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baseline differences. Ten measures of patient motivation were administered at all time points, and these measures covered two categories: motivation to engage in treatment (five scales, TCU MOTForm) and motivation to decrease substance use (five scales, Readiness Ruler, WAT, and Therapist Rating of Client Motivation).

Table 15 shows the grand mean for all baseline motivation scales. In general, participants reported high levels of motivation at baseline. Specifically, on the TCU MOTForm scales, participants were uncertain about recognizing their substance use problem, agreed that they needed to be in treatment, strongly agreed that they wanted help with their substance abuse problem, agreed that they had external pressures to engage in treatment and strongly agreed that they needed help with substance abuse treatment. Additionally, therapists rated their clients as having strong motivation to engage in treatment. Average scores on the WAT showed that, on average, participants were not implicitly motivated to engage in substance use. Finally, average scores on the Readiness Ruler showed that participants generally saw changing their substance use and readiness to change substance use as not at all important and were somewhat confident that they could make a change if they wanted to.

Tables 16, 17, and 18 show the intercorrelations among motivation scales used in the study. Overall, the correlations were positive but not large in magnitude. Although the majority of correlations were not significant, there were a number of significant values. The Problem Recognition subscale of the TCU MOTForm was strongly correlated with the Desire for Help subscale and moderately correlated with the Treatment needs subscale at baseline, post intervention and at follow up. The Problem Recognition Scale also ranged from strongly to moderately correlated with the Pressures for Treatment subscale at baseline,

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post intervention and at follow up. Finally, at follow up, it was highly correlated with the Treatment Readiness subscale at follow up. Taken together, it is possible that there is overlap in what these subscales are measuring.

The Treatment Readiness subscale of the TCU MOTForm was moderately correlated with the Desire for Help subscale at baseline, post intervention and at follow up. It also was moderately correlated with Pressures for Treatment at follow up. Taken together, it is possible that there is some overlap between what these scales are measuring.

The Desire for Help subscale of the TCU MOTForm was moderately correlated with the Pressures for Treatment and Treatment Needs subscales at all three time points, meaning that there is some overlap between what these scales are measuring. The Treatment Needs subscale of the TCU MOTForm was moderately correlated with the Pressures for Treatment subscale also showing that it is possible that these items somewhat overlap in the content that they are measuring.

There was also some shared variance between items on the Readiness Ruler. Specifically, readiness to make a change in substance use was highly correlated with importance of changing substance use at all three time points, again showing that these items may not be measuring unique constructs. Finally, confidence in ability to make a change in substance use was correlated with importance of making a change in substance use post intervention and therapist rating of client motivation at baseline. It was expected that items or scales from each measure will overlap. However, given that generally, measures were not significantly correlated with each other, we can assume that each measure was tapping a different aspect of motivation. Table 19 shows the between-group contrasts immediately after the intervention on motivation measures. As shown, most of the changes in motivation were

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not significant. However, there were three significant changes: TCU_TR, RR_1a and RR_1c. For each of these scales, the control group reported, on average, higher motivational ratings relative to the experimental group. Here, the control group reported that they were (1) more ready for treatment, (2) more ready to make a change in their substance use and (3) saw more importance in making a change in their substance use.

Ten latent growth models, one for each motivation measure, were conducted using a three-step procedure as recommended by Raudenbush and Bryk (2001). First, an unconditional random intercept model was constructed to determine if there was sufficient variability in a given motivational measure to model change over time. Table 20 shows that all measures had sufficient variability to model change over time. The next step involved creating a growth model to explore whether variability in score was predicted by time using three time points. Two of the ten tests were significant (see Table 21). Specifically, ignoring group membership, Treatment Readiness scores declined over time while therapist ratings of client motivation increased over time. The third and final step explored whether trajectories differed between groups or if there was a time by group interaction. As shown in Table 22, there were no differences in scores over time for the control group but the intervention group showed a significant decline in ratings over time on the Readiness Ruler item that measured readiness to make a change in substance use.

Aim Three - Outcomes

The third aim investigated pre-post changes on ten outcome measures by group assignment. Outcome measures collected at follow up included: Form 90 (days of treatment attendance, medical care, Twelve-Step meetings, counseling sessions, medication use to stabilize substance abuse), therapist rating on Group Engagement Measure (4 scales:

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attendance [3 items], contributing [5 items], relating to therapist [4 items], homework completion [1 item]), and decrease in substance use with alcohol use defined as QF and days of illicit drug use (combined across ten categories). Interest focused on any help seeking behaviors outside of mandated treatment. For this reason, days of treatment attendance, twelve-step meeting and counseling were summed. Between group differences were tested via GLM because it uses a maximum likelihood method, which is a robust approach.

As shown in Table 23, the Relating to Therapist subscale of the GEM was significant such that participants in the motivational condition were rated higher by their treatment therapist than participants in the control condition at follow up. Specifically, items with higher ratings were related to positive interactions between the participant and his therapist. A number of models were not significant including Form 90, Group Engagement Measure (3 scales: attendance, contributing and homework completion), and days of illicit drug use. Unfortunately, due to lack of variance QF models did not run.

Aim Four – Motivation as a Mediating Variable

The fourth aim was intended to assess the role of changes in motivation during treatment in explaining follow up outcome measures tested in aim three (mediation testing). Aim four was not investigated for a number of reasons. First, our sample size was not only below our projected number but it was also far below the minimum recommended numbers to derive reliable parameter estimates (Hayes, 2013). Also, there was no evidence that motivation changed over time and we did not find differential changes in motivation between groups.

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Aim Five – Exploratory Relationships

The fifth aim five was exploratory. First, we examined in greater detail the associations between treatment and motivation (see Tables 24 and 25). Specifically, we examined how number of months in treatment for substance abuse and sexual offense as well as number of times in treatment for substance use were associated with the following: therapist ratings of treatment engagement, therapist ratings of client motivation, implicit motivation (WAT), and explicit motivation (TCU and Readiness Ruler). Nine relationships were significant out of 129 tested. Therapist ratings of treatment attendance were negatively correlated with the number of months a participant had been in treatment for their sexual offense such that participants who had spent less time in treatment were rated as attending more scheduled sessions at follow up. External pressures for treatment were negatively correlated with the number of months a participant had been in treatment for substance abuse such that those who had been in treatment for a shorter amount of time were more likely to have more external pressures to engage in substance abuse treatment at baseline. The number of months a participant had been in treatment for their sexual offense was positively correlated with motivation to make a change in drug/ alcohol use both at baseline and follow up but not post intervention such that those who had been in treatment for their sexual offense longer rated that it was more important for them to make a change in their drug and alcohol use and that they were more ready to make a change in their drug and alcohol use. Finally, the number of times in treatment for substance abuse was negatively correlated with a participant's satisfaction with the intervention post intervention and at follow up as well as satisfaction with treatment at follow up such that the more times a participant had been in treatment, the lower their satisfaction ratings.

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Next, we examined associations between IQ/education and motivation (see Table 26). Specifically, we examined how IQ composite score and years of education were associated with implicit motivation (WAT), explicit motivation (TCU and Readiness Ruler), the treatment therapist's perception of motivation (Therapist Rating of Client Motivation) and treatment therapist's perception of engagement in group (group engagement measure). We found 25 significant relationships out of 39 tested. IQ score was negatively correlated with Desire for Help pre and post intervention, Problem Recognition pre and post intervention, External Pressures for Treatment pre and post intervention, Recognition of Treatment Needs pre intervention and at follow up, and confidence that the participant could make a change in their substance use pre and post intervention. Years of education was negatively correlated with importance of making a change in substance use post intervention, confidence the participant could make a change in their substance use pre and post intervention, and readiness to make a change in substance use post intervention such that more years of education were related to lower scores on these scales. IQ score and years of education were positively correlated with the therapist rating of client's motivation such that higher IQ scores and more years of education were associated with higher motivation ratings by the therapist both at baseline and post intervention. More years of education also were positively correlated with attendance (GEM_attend) both at baseline and post intervention, contribution to group at follow up, and relating to the therapist at baseline. Finally, IQ score was positively correlated with attendance at baseline and post intervention as well as relating to the therapist at follow up such that higher IQ was associated with higher rankings on these scales.

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Next, we examined associations between the participant's perception of the role that alcohol and drugs played in the crime of record and their baseline motivation. Specifically, we examined how the participant's rating of the role that alcohol and drugs played in their crime was associated with explicit motivation (TCUMotform and Readiness Ruler), implicit motivation (WAT), and the treatment therapist's rating of the participant's motivation. No significant relationships were found (see Table 27).

We then examined the relationship between satisfaction and therapist ratings of in-session behavior as well as IQ. Specifically, we examined how IQ and therapist perception of the participant's engagement in treatment (Group Engagement Measure) at baseline, post intervention and at follow up were related to the participant's ratings of the study intervention therapist and their treatment therapist (Satisfaction Survey) post intervention and at follow up. No significant relationships were observed (See Table 28).

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Discussion

The purpose of the current study was to test the impact of a brief motivational intervention on sexual offenders' motivation to engage in mandated substance abuse treatment and decrease their future substance use. The study was based in the assumption that if a sexual offender's motivation to engage in substance use treatment is increased, he may be less likely to use substances in the future. This study had five aims. Aim one tested the feasibility of a brief motivation intervention with a population of sexual offenders who were court mandated to substance abuse treatment. The second aim examined change trajectories in motivation over the four weeks of study participation. The third aim tested whether there was a main effect of treatment assignment on follow up measures. The fourth planned aim was to test whether changes in motivation accounted for changes in the behavioral differences that were found but due to a number of reasons, aim four was not implemented. Finally, the fifth aim was exploratory.

Qualitative aim one findings showed that study implementation was more difficult than anticipated. Study approval and funding were difficult to obtain. Additionally, recruitment was challenging because of lack of study interest among potential participants and lack of available treatment providers in the community. We did find, however, that participants generally completed the protocol once they were enrolled in the study and that they were generally satisfied with the study intervention as well as their treatment therapist. Speculation about reasons for the high follow up rate include participants being very familiar with having to make and keep multiple appointments given the large quantity of therapy, probation and other court-mandated tasks that they must complete. Another reason may include that participants simply enjoyed taking part in the study. Finally, therapist training

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and supervision were manageable. Quantitative findings showed that post intervention, intervention groups were more satisfied with the intervention than the control group. Groups did not differ in their satisfaction with mandated treatment. Also, intervention satisfaction ratings declined for the intervention condition from post-intervention to follow-up.

Contrary to the hypothesis in aim two that participants in the motivational intervention condition would report larger increases in motivation than participants in the control condition, there was no differential change in motivation by group over time, except for a significant decline in ratings on the Readiness Ruler item that measured readiness to make a change in substance use. Additionally, controlling for baseline, there were some group differences on motivation post intervention such that the control group reported higher motivational ratings relative to the experimental group on three scales: TCU_TR, RR_1a and RR_1c.

For aim three, we hypothesized that compared to the control condition, participants in the brief motivational intervention condition would engage in more help seeking behaviors, increase their engagement in substance abuse treatment, and decrease their substance use. Unfortunately, due to lack of variance, many models did not run. Of those that did, only one was significant, showing that participants in the motivational condition were rated higher by their mandated (non-study) therapists on the Relating to Therapist subscale of the GEM.

Aim five found negative relationships between therapist ratings of treatment attendance and number of months in sexual offender treatment, external pressures for treatment and number of months a participants had been in treatment for their substance abuse, number of times in treatment for substance abuse and satisfaction with their treatment, as well as number of times in treatment for substance abuse and satisfaction with the

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intervention. Positive relationships were found between motivation to make a change in substance use and number of months a participant had been in treatment for their sexual offense, Significant negative relationships were found between IQ composite score and explicit motivation (TCU), as well as years of education and explicit motivation (TCU and Readiness Ruler). Significant positive relationships were found between the treatment therapist's perception of motivation (Therapist Rating of Client Motivation) and IQ composite score, as well as years of education. Additionally, significant positive relationships were found between years of education, IQ and treatment therapist's perception of engagement in group (group engagement measure). No significant relationships were found between the participant's perception of the role that alcohol and drugs played in the crime of record and their baseline motivation. Finally, no significant relationships were observed between satisfaction and therapist ratings of in-session behavior as well as IQ.

Findings based on the Readiness Ruler measure seemed to be contrary to study hypothesis. However, it is important to understand the context in which this measure was completed. The Readiness Ruler is a measure of motivation to change. When measures for the study were being selected, it was expected that participants would be actively using substances. However, most participants were completely abstinent at the time of the study. Thus, when participants completed the measure, they based their answers on their motivation to change their *lack of* substance use. For example, question one of the Readiness Ruler asks the participant how important it is for him to change his substance use. Change for a completely abstinent participant would imply resuming substance use. Question three of the Readiness Ruler asks the participant how ready he is to make a change. Most participants were not ready to change their substance use because they were already abstinent. From this

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perspective, results of Aim two are more consistent with our hypothesis. Specifically, the control group was more motivated to *change* than the intervention group meaning that the intervention group was less motivated to make a change in their *abstinence* than the control group. From this perspective, just as our hypothesis suggests, the intervention group seemed to be more interested in remaining abstinent.

One novel component of the study was the measurement of motivation three ways: implicitly, explicitly, and behaviorally. Generally, implicit and explicit ratings seemed to be similar. However, this finding is difficult to interpret because of the lack of variance in the data. More varied data may have given very different results. Differences were found between the participants' rating of motivation and the therapist rating of motivation. Data showed that although participants' ratings of their own motivation declined, therapists rated them as increasing their motivation to engage in treatment. This is consistent with some literature that suggests that therapists in forensic settings tend to overestimate motivation, engagement in treatment (Driescher & Boomsma, 2008) and progress in treatment (Beech & Fordham, 1997). There are also studies that suggest that therapist rating measures have little or no relation to client's self report questionnaire measures (Hare, 1985; Scissons, 1978) and that many are not reliable (Anderson, Gibeau, & D'Amora, 1995). One way to think about these results is that motivation and actual behavior are different and should be thought of as two different constructs that manifest differently and are measured differently. Additionally, these results may be a reflection of therapists' own hope that their clients' motivation increase over time.

Aim 5 results seemed to show that participants who had higher IQ and more education received higher ratings of motivation by their treatment therapists. One explanation

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is that those that had higher IQ and education had more ability to understand and engage in the treatment. Treatment at Journeys Counseling and Albuquerque Sex Offender Treatment program used a lot of cognitive behavioral components that required the participant to understand and remember specific concepts as well as apply them to his own life. The understanding and application of skills in therapy may be easier for those with higher intelligence and education, allowing them to contribute more in therapy, giving the appearance that they are more engaged and motivated. It is possible that those with lower intelligence or education were spending more time trying to understand and apply the therapeutic concepts and less time speaking in therapy, thus appearing but not actually being less motivated and engaged. If in fact, those with lower IQ are less engaged in treatment, one implication is that an adapted version of the treatment may be helpful to some. It could be argued that one of the most important findings to come from this study is the lack of treatment availability for sexual offenders in the state of New Mexico and the need for more empirically validated treatments for this population. After reviewing the list of providers in the Albuquerque area, it became clear that there are not enough people in the area who are willing and/or qualified to provide sexual offender treatment. Because the number of offenders in New Mexico is not decreasing, this highlights the dire need for trained and competent mental health providers who are willing to work with this population.

For many years now, recidivism has been a concern of the criminal justice system and policymakers, as well as the general public. Because of media attention and because research has demonstrated that repeat offenders, in general, account for a disproportionate amount of crime, there is a lot of stigma and prejudice focused on sexual offenders. Specifically, it is the common belief that sexual offenders are more likely to recidivate than other offenders.

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Additionally, because early reviews of sexual offender treatment outcome research produced inconclusive results, it has been the longstanding belief that treatment for sexual offenders is ineffective. Recently, however, synthesis research has shown more positive and qualified findings (Przybylski, 2015b). For example, Marques et al. (2005) found that specific subgroups of offenders, like high-risk offenders who seemed to understand treatment, recidivated at a much lower rate than offenders who did not seem to understand treatment. Additionally, newer treatment programs that seemed to rely more on cognitive behavioral techniques and adhere to empirically supported treatment techniques were found to have a positive effect on recidivism rates (Hanson et al., 2002). Data from our study support the assertion that although there is a need for more providers of treatment, those that are currently implementing the treatment are being effective. Our participants and their therapists reported that participants were actively involved in their treatment. Given that almost all participants were abstinent, one explanation is that substance abuse treatment for mandated offenders has been effective in reducing substance use. However, other explanations must also be considered including that being convicted of a crime provided a chance for the individual to make positive changes in his life, that it was a negative experience that the person does not want to experience again, or that monitoring by probation and parole has been effective.

Finally, trying to implement this study highlighted the need to educate the community about this population in hopes of reducing the negative stigma that follows this population. The amount of time and effort that it took to obtain study approval within the department and within the university setting was arduous compared to studies with similar protocols and high risk populations. Additionally, the lack of funding available for the study also suggests that

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prejudice toward this population exists, even in the research community. This is unfortunate, given the need for more well-designed and executed studies, including randomized clinical trials (Przybylski, 2015).

The proposed study helped to address the need for empirically supported treatments for sexual offenders with substance use disorders. Our results may be used to help identify effective treatments or components of treatments that can be applied to offenders who have been mandated to substance use treatment. Additionally, this study has helped to fill the gap in statistics regarding the offender population and offender treatment in the state of New Mexico. Specifically, this information may be useful to inform probation/parole and treatment providers about the strengths and weakness of their clients as well as potential areas of treatment focus. Other strengths of this study include the use of an empirically supported treatment and well validated measures to investigate an underrepresented population of individuals.

There also are limitations of the study. Due to recruitment challenges and limited resources, our sample was small, leading to lack of power to detect differences in outcome. Next, there was minimal baseline substance use among participants. Given that participants were already abstinent before the intervention, we were unable to determine if our intervention had any effect of future substance use. We conducted an extremely large number of statistical tests, greatly increasing our risk of type I error. This study included only male participants, making it difficult to generalize our findings to females. Additionally, we are unable to generalize out findings to internet offenders because our sample did not include offenders with internet sex crimes. In addition to population characteristics, another limitation was the short time period between the intervention and follow-up assessment.

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Increasing follow-up time would allow for higher rates of change in treatment motivation, treatment engagement and substance abuse. Finally, we did not track recidivism rates in our sample and are unable to assess whether our intervention led to changes in recidivism rates.

Future studies could address these limitations in a variety of ways. First, recruiting a larger sample size and including participants who varied in their baseline substance use and had completed a variety of index crimes would allow greater generalization of our findings and possibly detect an intervention effect. It would also be useful to test this intervention with females. Also, most participants were abstinent and motivated to engage in treatment at baseline. It would be useful to recruit participants who varied in their motivation to engage in treatment and use substances in the future to see if the intervention has a different effect or larger effect on them. Additionally, future studies should include longer follow-up periods and track recidivism rates and reasons. By continuing research, new information will, hopefully, lead to more effective treatments and a reduction in recidivism for this population of individuals.

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Tables

Table 1

Participant Gender and Ethnicity

Variable	**Description**	**Control %(n)**	**Intervention %(n)**	**Total %(n)**
Gender	Male	100 (10)	100 (10)	100 (20)
Hispanic	Hispanic	80 (8)	50 (5)	65 (13)
	Not Hispanic	20 (2)	50 (5)	35 (7)
Ethnicity	American Indian or Alaska Native	66.6 (6)	20 (2)	40 (8)
	White	0 (0)	20 (2)	10 (2)
	Other ethnic group	33.3 (3)	60 (6)	40 (9)

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Table 2

Participant Education, Degree and Employment

Variable	Description	Control %(n)	Intervention %(n)	Total %(n)
Education	Completed 6th grade	20 (2)	0 (0)	10 (2)
	Completed 9th grade	10 (1)	10 (1)	10 (2)
	Completed 10th grade	30 (3)	10 (1)	20 (4)
	High school graduate	20 (2)	0 (0)	10 (2)
	Two years post secondary	20 (2)	70 (7)	45 (9)
	Three years post secondary	0 (0)	10 (1)	05 (1)
Degree	No degree	30 (3)	30 (3)	30 (6)
	GED	30 (3)	20 (2)	25 (5)
	High School Diploma	10 (1)	10 (1)	10 (2)
	Trade School Certificate	20 (2)	20 (2)	20 (4)
	Associate Degree	10 (1)	20 (2)	15 (3)
Employment	40 hours / week	60 (6)	11.1 (1)	35 (7)
	Less than 40 hours / week	20 (2)	22.2 (2)	20 (4)
	On disability	0 (0)	22.2 (2)	10 (2)
	Unemployed	20 (2)	44.4 (4)	30 (6)

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Table 3

Participant Marital Status

Variable	Description	Control %(n)	Intervention %(n)	Total %(n)
Marital Status	Single, never married	30 (3)	55.5 (5)	40 (8)
	Legally married	10 (1)	0 (0)	05 (1)
	Cohabitating	10 (1)	0 (0)	5 (1)
	Separated	20 (2)	11.1 (1)	15 (3)
	Divorced	30 (3)	33.3 (3)	30 (6)

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Table 4

Continuous Demographic Variables

Variable	Description	Control X(SD)	Intervention X(SD)	Total X(SD)
Age	Years	38.3 (9.4)	45.2 (10.6)	41.8 (10.6)
IQ	WASI composite IQ	86.2(12.4)	91.9 (10.6)	89.1 (11.6)
Household Income	Dollars	$19,999 (15,883)	$9,948 (7,471)	$14,969 (13,133)
Substance Abuse Treatment	Total months in substance abuse treatment	25.3 (22.0)	25.3 (16.1)	25.3 (19.0)
Treatment for sexual offense	Total months in treatment for sexual offense	57.4 (50.0)	34.1 (22.7)	46.4 (40.3)
Number of times in treatment for substance abuse	Total number times participant has been in substance abuse treatment	3.3 (3.2)	1.9 (1.4)	2.6 (2.5)

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Table 5

Participant Index Crime

Variable	Description	Control %(n)	Intervention %(n)	Total %(n)
Index Crime	Kidnapping	10 (1)	0 (0)	05 (1)
	Criminal sexual penetration	40 (4)	10 (1)	25 (5)
	Sexual contact of a minor	40 (4)	60 (6)	50 (10)
	Enticement of a child	10 (1)	10 (1)	10 (2)
	Other	0 (0)	20 (2)	10 (2)

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Table 6

Baseline Health Care Utilization and other Resources by Treatment Condition

	Control Group	Intervention Group			
Scale	X (*SD*)	X (*SD*)	*df*	*F*	*p*
Residential Treatment	0(0)	0(0)	--	--	--
Outpatient Therapy	.17 (.13)	.16 (.15)	1,18	.01	.93
12 Step Group	.02 (.04)	.05 (.16)	1,18	.36	.56
Work	1.5 (3.0)	.23 (.32)	1,18	1.87	.19
School	1.00 (3.11)	.06 (.06)	1,18	.75	.40
Religion	1.04 (3.10)	.06 (.06)	1,18	1.00	.33
Non-psychiatric Medication	4.05 (12.45)	1.09 (3.44)	1,18	.53	.48

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Table 7

Baseline Substance Use by Treatment Condition

Scale	Control Group X (*SD*)	Intervention Group X (*SD*)	*Df*	*F*	*p*
$PDA_{1,3}$	99 (01)	100 (00)	1,18	1.00	.33
PDA_{2}	43 (41)	61 (41)	1,18	.95	.34
Alcohol $use_{1,4}$	00 (00)	0 (0)	1,18	1.00	.33
Alcohol use_{2}	60 (42)	38 (44)	1,18	1.33	.26
Marijuana use_{1}	0 (0)	0 (0)	--	--	--
Marijuana use_{2}	49 (42)	32 (47)	1,18	.73	.40
Tranquilizer use_{1}	0 (0)	0 (0)	--	--	--
Tranquilizer use_{2}	01 (02)	00 (00)	1,18	.68	.42
Sedative use_{1}	0 (0)	0(0)	--	--	--
Sedative use_{2}	00 (01)	03 (09)	1,18	.77	.39
Steroid use_{1}	0 (0)	0 (0)	--	--	--
Steroid use_{2}	0 (0)	0 (0)	--	--	--
Stimulant use_{1}	0 (0)	0 (0)	--	--	--
Stimulant use_{2}	03 (06)	16 (36)	1,18	1.41	.25
Cocaine use_{1}	0 (0)	0 (0)	--	--	--
Cocaine use_{2}	22 (32)	11 (21)	1,18	.83	.37
Hallucinogen use_{1}	0 (0)	0 (0)	--	--	--
Hallucinogen use_{2}	00 (00)	01 (02)	1,18	.68	.42
Opiate use_{1}	0 (0)	0 (0)	--	--	--
Opiate use_{2}	10 (32)	15 (30)	1,18	.12	.73
Inhalant use_{1}	0 (0)	0 (0)	--	--	--
Inhalant use_{2}	00 (01)	0 (0)	1,18	1.0	.33

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Scale	Control Group X (*SD*)	Intervention Group X (*SD*)	*Df*	*F*	*p*
Tobacco use[1]	56 (49)	49 (47)	1,18	.11	.74
Tobacco use[2]	78 (37)	67 (47)	1,18	.38	.55

[1] During 90 days before baseline assessment

[2] During 90 days before index crime

[3] Percent Days Abstinent 90 days prior

[4] Any consumption during assessment period of interest

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Table 8

Baseline Motivation Measures by Treatment Condition

Scale	Control Group X (*SD*)	Intervention Group X (*SD*)	*df*	*F*	*P*
TCU_PR	27.67 (10.34)	28.11 (12.80)	1,17	.01	.93
TCU_TR	35.75 (4.26)	39.50 (7.25)	1,17	1.99	.18
TCU_DH	34.5 (7.66)	35.0 (10.94)	1,17	.01	.91
TCU_PT	28.86 (6.83)	27.00 (10.11)	1,17	.23	.64
TCU_TN	27.60 (11.19)	30.00 (8.84)	1,17	.28	.60
RR_item 1	1.3 (3.2)	.60 (1.58)	1,17	.39	.54
RR_item 2	.82 (3.08)	3.00 (4.83)	1,17	8.23	.01
RR_item 3	1.10 (3.14)	.80 (1.75)	1,17	.070	.80
WAT	0 (0)	.80 (1.93)	1,17	1.71	.21
Therapist Rating of Client Motivation	28.10 (6.38)	28.78 (6.63)	1,17	0.51	.82

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Preatment; TN = Treatment Needs; RR = Readiness Ruler

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Table 9

Group Engagement Measure (GEM) Reliability

Scale Name	Number of items	Cronbach's Alpha	Cronbach's Alpha After the Removal of Most Reliable item	Cronbach's Alpha After the Removal of Least Reliable Item
GEM_1	09	.91	.88	.91
GEM_2	09	.84	.79	.86
GEM_3	09	.86	.81	.93
GEM_Attend_1	03	.79	.32	.95
GEM_Attend_2	03	.74	.08	.98
GEM_Attend_3	03	.94	.85	.95
$GEM_Contribute_1$	03	.92	.79	.95
$GEM_Contribute_2$	03	.82	.54	.94
$GEM_Contribute_3$	03	.95	.91	.95
GEM_Relate_1	02	.74	---	---
GEM_Relate_2	02	.65	---	---
GEM_Relate_3	02	.74	---	---
$GEM_Homework_1$	01	---	---	---
$GEM_Homework_1$	01	---	---	---
$GEM_Homework_1$	01	---	---	---

[1] Administered at baseline
[2] Administered post intervention
[3] Administered at follow up

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Table 10

Therapist Rating of Client Motivation Reliability

Scale Name	Number of items	Cronbach's Alpha	Cronbach's Alpha After the Removal of Most Reliable item	Cronbach's Alpha After the Removal of Least Reliable Item
Therapist Rating of Client Motivation[1]	08	.93	.91	.93
Therapist Rating of Client Motivation[2]	08	.94	.92	.94
Therapist Rating of Client Motivation[3]	08	.84	.78	.90

[1] Administered at baseline
[2] Administered post intervention
[3] Administered at follow up

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Table 11

Readiness Ruler Reliability

Scale Name	Number of items	Cronbach's Alpha	Cronbach's Alpha After the Removal of Most Reliable item	Cronbach's Alpha After the Removal of Least Reliable Item
Readiness $Ruler_1$	03	.59	.28	.97
Readiness $Ruler_2$	03	.81	.61	.92
Readiness $Ruler_3$	03	.63	.40	.96

[1] Administered at baseline
[2] Administered post intervention
[3] Administered at follow up

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Table 12

TCU_MotForm Reliability

Scale Name	Number of items	Cronbach's Alpha	Cronbach's Alpha After the Removal of Most Reliable item	Cronbach's Alpha After the Removal of Least Reliable Item
TCU_PR_1	09	.90	.88	.91
TCU_PR_2	09	.93	.92	.93
TCU_PR_3	09	.91	.88	.93
TCU_DH_1	06	.76	.72	.75
TCU_DH_2	06	.81	.73	.82
TCU_DH_3	06	.83	.77	.83
TCU_TR_1	08	.63	.52	.73
TCU_TR_2	08	.55	.40	.64
TCU_TR_3	08	.70	.58	.76
TCU_PT_1	07	.65	.55	.67
TCU_PT_2	07	.76	.69	.75
TCU_PT_3	07	.76	.66	.78
TCU_TN_1	05	.71	.56	.74
TCU_TN_2	05	.79	.69	.83
TCU_TN_3	05	.84	.78	.84

[1] Administered at baseline
[2] Administered post intervention
[3] Administered at follow up

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Treatment; TN = Treatment Needs

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Table 13

Group Differences on Individual Items of Satisfaction with Intervention and Therapy

Item Stem To what extent….	Control Group X (*SD*)	Intervention Group X (*SD*)	*df*	*F*	*p*
was the content with study therapist useful	6.70 (2.45)	9.60(.70)	18	12.94	.00
was your study therapist helpful	7.80 (2.66)	9.60 (.52)	18	4.42	.05
are you satisfied with your meeting with study therapist	7.80 (3.01)	9.60 (.70)	18	3.39	.08
was the content with treatment therapist useful	8.00 (1.56)	9.00 (2.21)	18	1.36	.26
was your treatment therapist helpful	8.80 (1.40)	9.20 (2.21)	18	0.24	.63
are you satisfied with your treatment therapist	9.60 (.70)	9.90 (.32)	18	1.53	.23

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Table 14

Satisfaction at Follow Up By Group

Item Condition	Factor	X (*SD*)
Control Group	Post Intervention	24.44 (0.95)
	One-Month Follow Up	24.78 (1.91)
Intervention Group	Post Intervention	28.67 (0.95)
	One-Month Follow Up	24.33 (1.91)

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Table 15

Grand Means for Baseline Motivation Measures

Measure Name	x (*SD*)
TCU_PR	26.76 (11.33)[1]
TCU_TR	35.94 (6.38)[1]
TCU_DH	33.56 (9.62)[1]
TCU_PT	28.00 (8.90[1]
TCU_TN	29.09 (9.88)[1]
RR_item 1	1.17 (2.98)[2]
RR_item 2	5.31 (4.69)[2]
RR_item 3	1.14 (3.29)[2]
WAT	0.22 (0.90)[3]
Therapist Rating of Client Motivation	34.97 (8.64)[1]

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Treatment; TN = Treatment Needs; RR = Readiness Ruler

[1]Possible scores range from 10 – 50.
[2]Possible scores range from 1 - 10.
[3]Possible scores range from 0 - 1.

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Table 16

Correlations Among Baseline Motivation Scales

Measure r(p)	1.	2.	3.	4.	5.	6.	7.	8.	9.
2.	.35(.13)								
3.	.83(.00)	.48(.03)							
4.	.72(.00)	.12(.61)	.69(.00)						
5.	.51(.02)	.27(.25)	.60(.00)	.56(.01)					
6.	.12(.63)	.13(.58)	.24(.31)	.02(.95)	.11(.66)				
7.	.22(.34)	.04(.88)	.28(.23)	.29(.22)	.26(.27)	.20(.40)			
8.	.02(.94)	.18(.44)	.23(.34)	-.10(.69)	.18(.45)	.94(.00)	.27(.25)		
9.	.25(.29)	.35(.13)	.32(.16)	.05(.84)	.17(.46)	.37(.11)	.12(.61)	.34(.14)	
10.	-.01(.97)	-.09(.72)	-.14(.57)	-.29(.23)	-.28(.24)	-.18(.45)	-.48(.04)	-.30(.22)	.20(.41)

Note. 1. TCU_Problem Recognition; 2. TCU_Desire for Help; 3. TCU_Treatment Readiness; 4. TCU_Pressures for Treatment; 5. TCU_Treatment Needs 6. Readiness Ruler item 1 7. Readiness Ruler item 2 8. Readiness Ruler item 3 9. WAT 10. Therapist Rating of Client Motivation

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Table 17

Correlations Among Post Intervention Motivation Scales

Measure *r*(*p*)	1.	2.	3.	4.	5.	6.	7.	8.	9.
2.	.38(.10)								
3.	.87(.00)	.56(.01)							
4.	.80(.00)	.20(.39)	.75(.00)						
5.	.49(.03)	.44(.05)	.73(.00)	.47(.04)					
6.	.27(.26)	.01(.98)	.29(.22)	.23(.32)	.13(.59)				
7.	.28(.23)	.17(.49)	.18(.46)	.28(.24)	.04(.87)	.45(.05)			
8.	.05(.83)	-.03(.89)	.11(.65)	-.01(.98)	-.08(.73)	.85(.00)	.52(.02)		
9.	.12(.62)	.44(.05)	.28(.24)	.02(.93)	.24(.31)	-.12(.62)	-.25(.28)	-.13(.58)	
10.	-.21(.43)	-.32(.21)	-.31(.23)	-.23(.37)	-.09(.72)	-.43(.09)	-.37(.14)	-.31(.23)	.03(.91)

Note. 1. TCU_Problem Recognition; 2. TCU_Desire for Help; 3. TCU_Treatment Readiness; 4. TCU_Pressures for Treatment; 5. TCU_Treatment Needs 6. Readiness Ruler item 1 7. Readiness Ruler item 2 8. Readiness Ruler item 3 9. WAT 10. Therapist Rating of Client Motivation

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Table 18

Correlations Among Follow-Up Motivation Scales

Measure Name $r(p)$	1.	2.	3.	4.	5.	6.	7.	8.	9.
2.	.80(.00)								
3.	.88(.00)	.65(.00)							
4.	.61(.01)	.50(.03)	.67(.00)						
5.	.75(.00)	.48(.04)	.77(.00)	.60(.01)					
6.	.13(.62)	.20(.43)	.05(.85)	-.06(.82)	.10(.69)				
7.	-.30(.23)	-.18(.48)	-.15(.56)	.11(.67)	-.16(.53)	.30(.24)			
8.	.08(.77)	.07(.78)	-.04(.88)	-.05(.84)	.02(.94)	.92(.00)	.30(.23)		
9.	.18(.48)	.39(.11)	.18(.48)	.19(.45)	.16(.53)	-.02(.95)	.04(.88)	-.11(.65)	
10.	-.07(.82)	.12(.71)	-.05(.87)	-.16(.62)	-.24(.45)	.00(.99)	.16(.62)	.01(.97)	.38(.23)

Note. 1. TCU_Problem Recognition; 2. TCU_Desire for Help; 3. TCU_Treatment Readiness; 4. TCU_Pressures for Treatment; 5. TCU_Treatment Needs 6. Readiness Ruler item 1 7. Readiness Ruler item 2 8. Readiness Ruler item 3 9. WAT 10. Therapist Rating of Client Motivation

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Table 19

Mean Contrast Between Groups Post Intervention Scores Adjusted for Baseline Measures

Measure	Control Group X (*SE*)	Intervention Group X (*SE*)	Wald Chi Square $X^2(1)$	*p*
TCU_PR	27.99 (.88)	24.79 (1.56)	3.21	.07
TCU_TR	37.54 (.79)	34.96 (1.04)	4.29	.04
TCU_DH	33.40 (.93)	33.10 (2.14)	0.02	.90
TCU_PT	27.67 (1.22)	27.76 (1.08)	0.00	.96
TCU_TN	28.45 (1.08)	31.25 (2.91)	0.73	.39
RR_item 1	3.48 (1.30)	0.32 (0.35)	5.10	.02
RR_item 2	6.64 (.69)	3.96 (1.34)	1.90	.17
RR_item 3	4.83 (1.46)	0.07 (0.26)	10.00	.00
WAT	0.06(0.01)	0.04(0.03)	1.17	.28
Therapist Rating of Client Motivation	39.21(1.89)	41.67(1.60)	0.97	.33

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Preatment; TN = Treatment Needs; RR = Readiness Ruler

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Table 20

Variability in Motivational Measures

Measure	*df*	Chi-Square	*P*
TCU_PR	19	333.30	0.00
TCU_TR	19	78.86	0.00
TCU_DH	19	247.89	0.00
TCU_PT	19	401.12	0.00
TCU_TN	19	262.68	0.00
RR_item 1	19	85.26	0.00
RR_item 2	19	123.09	0.00
RR_item 3	19	60.79	0.00
WAT	19	67.46	0.00
Therapist Rating of Client Motivation	19	36.76	0.01

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Treatment; TN = Treatment Needs; RR = Readiness Ruler

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Table 21

Total Sample Change Over Time in Motivation

Measure	*b*	*SE*	*T*	*df*	*p*
TCU_PR	-1.14	0.89	-1.28	56	0.21
TCU_TR	-1.84	0.78	-2.38	56	0.02
TCU_DH	-1.12	0.73	-1.53	56	0.13
TCU_PT	0.05	0.57	0.09	56	0.93
TCU_TN	-0.01	0.09	-0.12	56	0.91
RR_item 1	-0.10	0.17	-0.60	56	0.55
RR_item 2	-0.11	0.50	-0.21	56	0.83
RR_item 3	0.00	0.19	0.01	56	1.00
WAT	-0.10	0.10	-1.01	56	0.32
Therapist Rating of Client Motivation	5.62	0.62	9.13	56	0.00

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Treatment; TN = Treatment Needs; RR = Readiness Ruler

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Table 22

Group By Time Change in Motivation

Measure	b_0 (control)	b_1 (experimental)	t_0	t_1
TCU_PR	-0.29	1.40	-0.21	-1.03
TCU_TR	-1.13	0.31	-1.61	-1.13
TCU_DH	-1.13	-1.12	-1.20	0.01
TCU_PT	0.32	0.86	0.37	-0.47
TCU_TN	-0.06	-0.16	-0.24	0.22
RR_item 1	0.27	1.02	0.87	-1.92
RR_item 2	-0.53	-1.39	-0.77	1.06
RR_item 3	0.65	-1.32	1.84	-2.75^*
WAT	-0.09	-0.08	-1.27	-0.23

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Treatment; TN = Treatment Needs; RR = Readiness Ruler
$^*p<.008$

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Table 23

Changes in Outcome Measures

Measure	Control Group X(*SE*)	Intervention Group X(*SE*)	*df*	Wald Chi Square X^2	*p*
PDA_COR	.91 (.09)	.89 (.10)	1	.02	.89
PDA_interview	.89 (.10)	.91 (.10)	1	.01	.94
QFV_30_2	0 (0)	0 (0)	--	--	--
QFV_COR_2	0 (0)	0 (0)	--	--	--
QFV_30_3	0 (0)	0 (0)	--	--	--
QFV_COR_3	0 (0)	0 (0)	--	--	--
GEM_attend	4.65 (.21)	4.96 (.05)	1	2.01	.16
GEM_contribute	4.42 (.14)	4.57 (.15)	1	.66	.42
GEM_relate	4.39 (.09)	4.60 (.11)	1	3.99	.04
GEM_homework	3.96 (.32)	3.33 (.36)	1	1.94	.16
Help_meds_total	13.71 (12.39)	37.19 (17.66)	1	1.17	.28
Help_religion_total	3.48 (3.15)	9.32 (4.48)	1	1.10	.30
Help_residential_total	3.63 (3.31)	10.45 (4.85)	1	1.35	.25
Help_therapy_total	.33 (.18)	.31 (.17)	1	.01	.95
Help_work_total	4.04 (3.13)	9.26 (4.42)	1	.90	.34
Help_12step_total	.12 (.09)	.14 (.10)	1	.02	.88

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Table 24

Correlations Between Time in Treatment and Self-Report Motivation Measures

Measure Name	Months in treatment SUD *r*(*p*)	Months in treatment for sexual offense *r*(*p*)	Number of times in SUD treatment *r*(*p*)
WAT (pre)	.13 (.61)	.18 (.47)	-.08 (.75)
WAT (post)	.14 (.58)	.23 (.35)	-.06 (.81)
WAT (f/u)	.08 (.75)	.04 (.87)	-.12 (.66)
TCU_DH (pre)	-.15 (.54)	.04 (.87)	-.18 (.49)
TCU_DH (post)	-.20 (.43)	.00 (.99)	-.19 (.45)
TCU_DH (f/u)	-.07 (.77)	-.22 (.37)	-.26 (.29)
TCU_PR (pre)	-.07 (.79)	-.16 (.51)	.03 (.90)
TCU_PR (post)	-.18 (.47)	-.18 (.46)	.01 (.96)
TCU_PR (f/u)	-.07 (.77)	-.22 (.37)	-.27 (.29)
TCU_PT (pre)	-.49 (.03)	-.23 (.34)	.03 (.90)
TCU_PT (post)	-.42 (.08)	-.10 (.68)	.11 (.65)
TCU_PT (f/u)	-.07 (.77)	-.22 (.37)	-.26 (.29)
TCU_TN (pre)	-.17 (.49)	.03 (.90)	-.20 (.43)
TCU_TN (post)	-.20 (.42)	.07 (.79)	-.32 (.19)
TCU_TN (f/u)	-.23 (.37)	.02 (.93)	-.16 (.54)
TCU_TR (pre)	-.05 (.84)	.04 (.88)	-.44 (.07)
TCU_TR (post)	.06 (.81)	.18 (.47)	-.23 (.36)
TCU_TR (f/u)	-.04 (.88)	.14 (.57)	-.28 (.26)

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Measure Name	Months in treatment SUD *r*(*p*)	Months in treatment for sexual offense *r*(*p*)	Number of times in SUD treatment *r*(*p*)
RR_1 (pre)	.30 (.22)	.71 (.00)	-.05 (.84)
RR_1 (post)	-.14 (.58)	.08 (.75)	-.02 (.93)
RR_1 (f/u)	.32 (.22)	.77 (.00)	-.09 (.74)
RR_2 (pre)	.12 (.64)	.30 (.21)	.22 (.37)
RR_2 (post)	.07 (.79)	.24 (.33)	.25 (.31)
RR_2 (f/u)	.10 (.70)	.45 (.07)	.33 (.20)
RR_3 (pre)	.37 (.12)	.74 (.00)	-.14 (.57)
RR_3 (post)	-.18 (.47)	.10 (.68)	-.09 (.72)
RR_3 (f/u)	.25 (.34)	.63 (.01)	-.03 (.92)
Satisfaction with intervention (post)	.10 (.70)	.18 (.47)	-.72 (.00)
Satisfaction with intervention (f/u)	-.19 (.47)	.12 (.64)	-.52 (.03)
Satisfaction with treatment (post)	-.03 (.89)	.16 (.52)	-.29 (.24)
Satisfaction with treatment (f/u)	-.03 (.92)	.16 (.54)	-.51 (.04)

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Preatment; TN = Treatment Needs; RR = Readiness Ruler

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Table 25

Correlations Between Time in Treatment and Therapist Rating of Motivation Measures

Measure Name	Months in treatment SUD *r*(*p*)	Months in treatment for sexual offense *r*(*p*)	Number of times in SUD treatment *r*(*p*)
GEM_attend (pre)	.17 (.50)	.10 (.68)	.20 (.42)
GEM_attend (post)	.03 (.91)	-.13 (.64)	.16 (.56)
GEM_attend (f/u)	-.20 (.54)	-.65 (.02)	.21 (.52)
GEM_contribute (pre)	-.20 (.41)	-.08 (.74)	-.15 (.56)
GEM_contribute (post)	-.26 (.34)	.02 (.95)	-.28 (.32)
GEM_contribute (f/u)	-.52 (.08)	-.21 (.52)	-.49 (.11)
GEM_relate (pre)	-.28 (.35)	-.13 (.60)	-.23 (.37)
GEM_relate (post)	-.03 (.93)	-.08 (.77)	-.06 (.82)
GEM_relate (f/u)	-.20 (.53)	-.28 (.37)	-.08 (.81)
Therapist Rating of Motivation (pre)	-.01 (.96)	-.03 (.89)	.26 (.29)
Therapist Rating of Motivation (post)	-.18 (.49)	-.03 (.91)	-.22 (.41)
Therapist Rating of Motivation (f/u)	.07 (.83)	.10 (.75)	.17 (.60)

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Table 26

Correlations Between IQ/Education and Motivation Measures

Measure Name	Years of Education *r*(*p*)	IQ Composite Score *r*(*p*)
TCU_DH (pre)	-.22 (.35)	-.62 (.00)
TCU_DH (post)	-.32 (.17)	-.77 (.00)
TCU_DH (f/u)	-.28 (.24)	.01 (.96)
TCU_PR (pre)	-.30 (.20)	-.68 (.00)
TCU_PR (post)	-.40 (.08)	-.75 (.00)
TCU_PR (f/u)	-.28 (.24)	.01 (.96)
TCU_PT (pre)	-.31 (.19)	-.69 (.00)
TCU_PT (post)	-.30 (.20)	-.61 (.00)
TCU_PT (f/u)	-.28 (.24)	.01 (.96)
TCU_TN (pre)	-.16 (.49)	-.64 (.00)
TCU_TN (post)	.19 (.43)	-.08 (.75)
TCU_TN (f/u)	-.14 (.58)	-.68 (.00)
TCU_TR (pre)	.19 (.43)	-.17 (.49)
TCU_TR (post)	-.00 (.99)	-.38 (.10)
TCU_TR (f/u)	-.11 (.64)	-.33 (.16)
RR_1 (pre)	-.24 (.32)	-.07 (.78)
RR_1 (post)	-.69 (.00)	-.41 (.07)
RR_1 (f/u)	-.25 (.33)	-.10 (.69)
RR_2 (pre)	-.60 (.00)	-.52 (.02)

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Measure Name	Years of Education $r(p)$	IQ Composite Score $r(p)$
RR_2 (post)	-.73 (.00)	-.51 (.02)
RR_2 (f/u)	-.12 (.64)	-.04 (.87)
RR_3 (pre)	-.23 (.33)	-.07 (.78)
RR_3 (post)	-.65 (.00)	-.27 (.24)
RR_3 (f/u)	-.45 (.06)	-.10 (.70)
WAT (pre)	.24 (.30)	.09 (.71)
WAT (post)	.19 (.43)	-.00 (.99)
WAT (f/u)	.26 (.31)	.21 (.41)
Therapist Rating of Client Motivation (pre)	.57 (.01)	.52 (.02)
Therapist Rating of Client Motivation (post)	.53 (.03)	.49 (.05)
Therapist Rating of Client Motivation (f/u)	.18 (.58)	.49 (.11)
GEM_attend (pre)	.58 (.01)	.52 (.02)
GEM_attend (post)	.54 (.03)	.56 (.02)
GEM_attend (f/u)	.21 (.52)	.32 (.31)
GEM_contribute (pre)	.26 (.29)	.21 (.38)
GEM_contribute (post)	.26 (.33)	.01 (.97)
GEM_contribute (f/u)	.63 (.03)	.52 (.09)
GEM_relate (pre)	.53 (.02)	.44 (.06)
GEM_relate (post)	.48 (.06)	.31 (.25)
GEM_relate (f/u)	.57 (.05)	.60 (.04)

Note. PR = Problem Recognition; DH = Desire for Help; TR = Treatment Readiness; PT = Pressures for Preatment; TN = Treatment Needs; RR = Readiness Ruler; GEM = Group Engagement Measure

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Table 27

Correlations Between Perceived Role of Substances and Motivation

Measure	*r*(*p*)
TCU_Problem Recognition	-.29 (.22)
TCU_Treatment Readiness	-.32 (.16)
TCU_Desire for Help	-.27 (.25)
TCU_Pressures for Treatment	.02 (.95)
TCU_Treatment Needs	-.04 (.87)
Readiness Ruler_item 1	.07 (.78)
Readiness Ruler_item 2	.07 (.77)
Readiness Ruler_item 3	.10 (.69)
WAT	.18 (.45)
Therapist Rating of Client Motivation	.00 (.99)

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Table 28

Correlations Between Treatment Engagement/IQ and Satisfaction

Measure / Scale	Intervention Satisfaction (post) *r*(*p*)	Intervention Satisfaction (f/u) *r*(*p*)	Treatment Satisfaction (post) *r*(*p*)	Treatment Satisfaction (f/u) *r*(*p*)
GEM_attend (pre)	-.25 (.30)	-.47 (.06)	-.01 (.98)	-.30 (.25)
GEM_attend (post)	-.14 (.61)	-.38 (.16)	.18 (.50)	-.21 (.44)
GEM_attend (f/u)	-.09 (.79)	-.43 (.16)	-.06 (.85)	-.32 (.31)
GEM_contribute (pre)	-.02 (.93)	-.30 (.24)	-.26 (.28)	-.22 (.40)
GEM_contribute (post)	.06 (.83)	-.03 (.92)	-.22 (.05)	-.02 (.94)
GEM_contribute (f/u)	.55 (.06)	-.02 (.95)	.65 (.02)	.15 (.64)
GEM_relate (pre)	.15 (.54)	-.21 (.42)	-.08 (.75)	-.15 (.56)
GEM_relate (post)	.11 (.69)	-.30(.28)	-.14 (.60)	-.15 (.67)
GEM_relate (f/u)	.21 (.51)	-.39 (.21)	-.12 (.77)	-.13 (.68)
IQ Composite Score	.06 (.79)	-.32 (.20)	.10 (.68)	-.18 (.49)

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Appendices

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Appendix A

Recruitment Script

"A graduate student at the University of New Mexico is conducting a study looking at the thoughts, feeling and experiences of sexual offenders who have been mandated to substance abuse treatment. Participants will meet with study staff to fill out questionnaires and talk about their experiences. In exchange for their time participants will be compensated with 50 dollars in Target gift cards. If you are interested in learning more about participating, please leave your name and phone number on one of these sheets and someone will get back to you."

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Appendix B

Brief Motivational Intervention Guideline

The goals of the BMI intervention are to increase the participant's motivation to engage in mandated substance abuse treatment and to decrease his substance use. During the session, the therapist should elicit and reinforce participant speech regarding concerns about current use, reducing substance use, and engaging more fully in mandated substance abuse treatment. Additionally, the therapist should explore whether the client is ready to set and commit to goals around engaging in treatment and decreasing substance use. If the client is willing to set goals, these should be explored. If the client is not ready, the therapist should work with the client to explore how they may go about changing their engagement in treatment and decreasing their substance use if and when they are ready to change.

INTRODUCTION

The purpose of this section is to introduce the therapist to the participant and lay out the goals and expectations of the session.

Hi! My name is XXX. I am a graduate student in clinical psychology at the University of New Mexico. It is nice to meet you.

Thank you for coming in today. I want to start by reminding you that everything you say in this session is completely confidential. That means that this information will not be shared with anyone, including Bonnie or Linda unless you express intent to harm yourself or someone else. Do you have any questions about that?

Great. We have about 50 minutes to chat today and I want to let you know that the reason I am here is to talk with you about issues surrounding your drug/alcohol use and the substance use treatment that you attend with Bonnie and Linda. I am not here to make you do something that you don't want to do. So, before we begin, what questions do you have for me?

THOUGHTS ABOUT SUBSTANCE USE

The purpose of this section is to gather information about the participant's substance use.

I would like to get an idea of what your substance use has been like? (they can choose time period)
What do you think about your substance use?
If it is okay with you, I would like to hear about a time you were using most.
What is your substance use like now?

The purpose of this section is to try to elicit change talk around reducing or stopping substance use.

What have been the not-so-good things about your substance use?

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What concerns, if any, do you have about your substance use?
What concerns have others had about your substance use?
Why might you want to cut down on drinking / drug use?
What would happen if you did not cut back?
What might be the worst thing that could happen if you did not cut back?
How would you know if your substance use became a problem?
What would be the signs that your substance use is a problem?

The purpose of this section is to encourage the participant to talk about thoughts about substance involvement in crime of record.

What role, if any, did substance use play in your crime of record?
What was your substance use like before you were sentenced?
[if don't see a connection or seems really touchy] Why do you think substance use treatment was part of your sentencing?

If participant does not see benefit to cutting back, use reflections and emphasize autonomy.

You are ok with your substance use at this time.
You are not seeing any reason to worry about your substance use.
You are in the driver's seat – you get to choose your path.

THOUGHTS ABOUT SUBSTANCE USE TREATMENT

The purpose of this section is to gather information about the participant's thoughts around substance use treatment.

How do you feel about being mandated to drug / alcohol treatment?

The purpose of this section is to discuss ways the participant sees benefit to attending treatment.

What might be the best thing that would happen if you complete treatment?
How do you think treatment has or will benefit you?
What are some things that you like about treatment?
What would happen if you did not attend treatment?
What might be the worst thing that happened if you did not attend treatment?

If participant does not see benefit to attending treatment, use reflections and emphasize autonomy.

This feels like a waste of time to you.
You hate being here.
What you don't like about it is... Is there anything that you find useful from this treatment program?

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What could be beneficial about it?
You think treatment is ridiculous. You don't see any concern. But, given that you have to be here, what can you get out of this?
Have you attended treatment in the past? What was helpful about it?
What would keep you from going to treatment?
What else can you do to keep yourself away from substances?

If the client cannot give any example of what could happen if he did not attend treatment, use Ask-provide-Ask formula.

Ask: Do you mind if I talked to you about some consequences that others have mentioned to me?
Ask: I thought of a few things that could happen. Would you like to hear them?
Provide: Others have mentioned that they are worried about drinking for the rest of their lives and how expensive that would be.
Provide: Some people are worried about going back to jail or prison because of drinking or not attending treatment.
Provide: You mentioned that you are trying to stay on good terms with your PO. Is it possible that not going to treatment would upset her?

Ask: What do you think about what I just said?
Ask: How does that apply to you?
Ask: Do you ever feel that way?

The purpose of this section is to gather information about the participant's plans for substance use after treatment ends.

I would like to know more about your thoughts on using in the future.
What are your plans for substance use after you are no longer mandated?
How important would it be for you to cut back on substance use after you are no longer mandated?

GOALS AND PLANS TO MAKE CHANGES

The purpose of this section is to encourage Commitment Language from the participant around engaging in substance use treatment and substance use in the future. The therapist will also want to discuss discrete goals with the participant. They can be written on a form and handed to the participant at the end of the session.

What might be the next step for you?
What would be a good outcome for your substance use/treatment?
What would you like to see happen?

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The following are examples of possible goals to help the therapist facilitate this section:
Abstinence
Complete treatment
Mindfulness
Help others
Distress tolerance
Decrease substance use/moderate
Make no changes

Goals should be specific, measurable, achievable, realistic, time-limited
Are there any barriers or obstacles to XXX? How will you work around those?
What will you do if XXX happens?
If there anyone who can help you with XXX? How? Who are they?
How confident are you that you can achieve XXX?

If the client does not want to change, at all

Talk about pros/cons
Use the readiness ruler
When would you know that your substances were causing a problem?
Elicit, provide, elicit

SUMMARY AND THANKS
The purpose of this section is to summarize what the client and therapist discussed in the session.
Summarize client's thoughts and feelings about substance use.
Summarize client's thoughts and feelings about mandated treatment.
Summarize client's goals.
Check in with the participant to make sure that summary is correct.
Thank participant for time and give follow up questionnaires.

The following are examples of summaries:

Our time is almost up so I just want to make sure that I have a complete picture of what we talked about. We talked a lot about alcohol and drugs and it is important for you to stay clean so that you do not go back to jail. You are upset that treatment for substances has been mandated but you think the mindfulness and distress tolerance could be helpful for you. Even though you do not want to be forced to treatment, you think that it could help and you try to complete each session. In the future, you want to stay away from all drugs and only drink every once in awhile. But, that is only after you are legally allowed to. How did I do?

Our time is almost up so I just want to make sure that I have a complete picture of what we talked about. We talked a lot about alcohol and drugs and how you do not think they are a problem for you. You want to stay out of jail and move on with your life but you do not like being forced to go to a

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treatment that you do not find helpful. You will continue to go because you have to but you are looking forward to the day that it is all over and you can try to move on with your life. How did I do?

Thanks again for participating in this study. I appreciate your time and it was really nice to meet you. I have a few more questionnaires for you to fill out. Before you get started on them, do you have any questions for me?

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Appendix C

Educational Intervention Guideline

The goal of the educational intervention is to increase the participant's knowledge about substances and substance use. During the session, the therapist should attempt to discourage self disclosure from the participant. If the participant attempts self-disclosure, the therapist should try to redirect the conversation as quickly as possible to factual information from the PowerPoint.

INTRODUCTION

The purpose of this section is to introduce the therapist to the participant and lay out the goals and expectations of the session.

Hi! My name is XXX. I am a graduate student in clinical psychology at the University of New Mexico. It is nice to meet you.

Thank you for coming in today. I want to start by reminding you that everything you say in this session is completely confidential. That means that this information will not be shared with anyone, including Bonnie or Linda unless you express intent to harm yourself or someone else. Do you have any questions about that?

Great. We have about 50 minutes together today and I want to let you know that the reason I am here is to educate you about drug/alcohol use. I also want to let you know that we are going to record this session to make sure that I am doing my job properly. The audio recording will be kept confidential. So, before we begin, what questions do you have for me?

Ok. We are going to get started. I have a PowerPoint presentation for you to look through. It contains information about drugs and alcohol. Please read through each slide. When you are through, you can press this key to move to the next slide. About half way through, you will come to a slide that asks you to stop and get my attention. Please let me know when you get to that slide. Do you have any questions?

ANSWER QESTIONS ABOUT THE FIRST HALF OF THE PRESENTATION

1. What substances did you read about?
2. What did you learn from the slides?
3. What did you read about that you already knew?
4. Do you have any questions about what you read?

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REVIEW THE SECOND HALF OF THE PRESENTATION

Ok. Are you read to review the second half of this presentation? When you are through, please let me know.

ANSWER QUESTIONS ABOUT THE SECOND HALF OF THE PRESENTATION

1. What substances did you read about?
2. What did you learn from the slides?
3. What did you read about that you already knew?
4. Do you have any questions about what you read?

WRAP UP AND THANKS

You just reviewed a presentation about some common substances that people sometimes use. Slides covered topics like effects of the substances and the implications of their use. Thanks again for participating in this study. I appreciate your time and it was really nice to meet you. I have a few more questionnaires for you to fill out. Before you get started on them, do you have any questions for me?

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Appendix D

Community Treatment Resources

Alcohol and Substance Abuse Referrals

Addictions & Substance Abuse Program (ASAP)
2600 Yale SE
Albuquerque, NM 87106
http://hospitals.unm.edu/bh/asap/overview.shtml
(505) 994-7999
Services: Substance abuse treatment; ambulatory detoxification; opioid replacement (methadone/buprenorphine treatment); some services specifically tailored towards women.

Albuquerque Health Services (formerly Metamorphosis)
112 Monroe Street NE
Albuquerque, NM 87108
(505) 260-9917
Services: Substance abuse treatment, detoxification, methadone maintenance, suboxone program, outpatient, etc.

MATS Detox Program
5901 Zuni Rd SE
Albuquerque, NM 87108
(505) 468-1555
Services: Detoxification only.

New Mexico Solutions
707 Broadway NE, Suite 500
Albuquerque, NM 87102
http://newmexicosolutions.com
(505) 268-0701
Services: Outpatient individual, family, child, and adult; outpatient psychiatric assessment and treatment; outpatient chemical dependency counseling; adult & adolescent intensive outpatient; group therapy, etc.

Pathways
2551 Coors Blvd. NW
Albuquerque, NM 87120
(505) 338-3320
http://www.pathwaysnm.org
Services: Sliding scale fee; substance abuse treatment, outpatient, partial hospitalization/day treatment.

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Relevancy, Inc.
2727 San Pedro NE, Suite 120
Albuquerque, NM 87110
(505) 830-1038 Service/Intake
Services: Coping skills, specialized crack cocaine treatment, group treatment offerings, dual diagnosis treatment, family therapy, couples counseling, adolescent services, random drug screening, etc.

Turquoise Lodge (State of NM Department of Health)
5901 Zuni SE
Albuquerque, NM 87108
http://turquoiselodge.org/
(505) 841-8978 Service/Intake
Services: Medically managed and monitored inpatient chemical dependency detoxification and rehabilitation treatment.

A New Awakening
600 First Street NW #200,
Albuquerque, NM 87106
http://www.anewawakening.com/
505-224-9124
Services: outpatient individual, group and family therapy.

Endorphin Power Company
509 Cardenas SE
Albuquerque, NM 87108
http://www.endorphinpower.org/
505-268-3372
Services: transitional housing

Meetings/12-Step Programs
For each of these programs, check the listed websites for meeting days and times, and locations (throughout the week and throughout Albuquerque).

Adult Children of Alcoholics
Meetings for adults who grew up “in alcoholic or otherwise dysfunctional homes.”
http://www.allone.com/12/aca/

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Al-Anon
Meetings for friends and families of people who drink. Within this group is Alateen, specifically for teenagers who are affected by others' drinking.
http://www.nmal-anon.org/Meetings_Albuquerque.htm
(505) 262-2177

Alcoholics Anonymous
Meetings for people who have a desire to stop drinking.
http://www.albuquerqueaa.org/
(505) 266-1900

Cocaine Anonymous
Meetings for people who a desire to stop using "cocaine and all other mind-altering substances."
(505) 344-9828

Narcotics Anonymous
Meetings where "anyone who feels that they may have a problem with drugs is welcome."
http://riograndena.org/
(866) 885-6562

Other Community Resources

ABQ Shelter for Victims of Domestic Violence (505) 247-4219
Albuquerque Rape Crisis Center (505) 266-7711
Common Bond (505) 891-3647
Gamblers Anonymous (505) 260-7272
Gay & Lesbian Information Line (505) 891-3647
UNM Manzanita Center (505) 277-7311
UNM Women's Resource Center (505) 277-3716

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