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A REVIEW OF THE MATRIX MODEL OF INTENSIVE OUTPATIENT TREATMENT,
SMART RECOVERY PROGRAM, AND ALCOHOLICS ANONYMOUS

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ABSTRACT

Each year in the United States, substance abuse is responsible for over \$400 billion in economic costs and as many as 500,000 deaths (Horgan, Skwara, & Strickler, 2001). With 30% of Americans meeting the DSM-IV-TR criteria for addiction at some point in their lives, the need for effective treatment is vast and pressing. Many people dealing with addiction find the prospect of sustained remission unattainable due to the chronic nature of the condition and the absence of one cure-all treatment method (Kelly & Yeterian, 2011). Although, there is much debate about the best technique for treatment, there do seem to be common therapeutic factors throughout all treatment modalities that correlate with long lasting abstinence. This paper will begin by examining the biopsychosocial risk factors that influence addiction, thus setting the groundwork for effective treatment options. The next portion of the paper will examine the Matrix Model of Intensive Outpatient Treatment in an attempt to point out both its shortcomings and effective qualities. The final portion of this paper compares Alcoholics Anonymous with the SMART Recovery program in an effort to analyze the overlap and disparities between the two types of mutual-help groups. Finally, the discussion interprets the implications of these findings for both mental health professionals and people seeking recovery.

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Chapter 1

Addiction Through a Biopsychosocial Perspective

The Substance Abuse Mental Health Administration (2011) estimates that within the past year, 8% of the American population met the DSM criteria for either substance abuse or dependence (SAMHA, 2011). In order to help people struggling with addiction, it is necessary to understand the circumstances and risk factors that contribute to their use. The biopsychosocial perspective is a holistic conceptualization of the merger among the biological, psychological, and social factors that contribute to addiction. It is important to recognize that these factors do not work independently of one another. Instead, it is the complex interaction of these three factors that contributes to the etiology of an addiction.

It should be noted that a biopsychosocial intake is not a static snapshot of an individual. As a person develops, so do the conditions that effect his/her addiction. Thus, factors that once contributed to initial use may be distinctly different from the factors that influence present use. Common initial use factors can include emotional coping, peer pressure, fulfillment of a spiritual void, defiance, and curiosity (Ford & McHenry, 2009). Exploration of new substances and a shift to dependence caused by continued use are frequently the result of structural and functional changes in the brain, evolving environmental circumstances, and shifts in psychological well-being. In order for clinicians to effectively help their client they must be able to capture the dynamic

nature of such factors.

Biological

A research study examining the hereditary components of addiction examined the likelihood that adopted children would develop alcoholism if both of their biological parents were addicted to alcohol. Despite the fact that the adoptive families were nonalcoholic, 9.1% of girls and 33.3% of boys developed alcoholism later in life (Sigvardsson, Bohman, & Cloninger, 1996). Further research suggests that 40-60% of the vulnerability to alcohol, tobacco, and other addictive drugs can be attributed to genetic factors. Genetic vulnerabilities for dependence do not seem to be specific to certain addictive substances. Results from twin studies on addiction suggest that there is an overlap in genetic predispositions that exists between most types of addictive substances (Uhl & Grow, 2004). Genetic factors become very important in an individual's substance dependence, but have less of a correlation when predicting initial use of a substance (Lerman & Berrentini, 2003).

Although several chromosomal regions have been identified as having a link to addiction, researchers have only been able to pinpoint a few genes that contain alleles shown with the ability to protect or predispose an individual to substance abuse (Uhl & Grow, 2004). Advances in neuroscience indicate that genetic vulnerabilities to addictive substances may be caused by specific neurobiological processes (Goodman, 2007). Over the past 40 years substance abuse disorders have been neurologically studied in both humans and animals to gain a better understanding of the brain's role in the disorder (Nestler, 2004). When a person ingests a drug, the substance takes over the brain's

natural reward circuitry. The mesolimbic dopamine system, which is the most important part of the reward circuitry, is a set of nerve cells that begin near the base of the brain in the ventral tegmental area (VTA). When these nerve cells become excited, they send electrical messages, dopamine projections, through their axons to certain regions in the front of the brain, specifically the nucleus accumbens. Here, dopamine is released from the axon tip into the synaptic cleft. The dopamine neurotransmitters then latch onto receptors in the nucleus accumbens and transmit the signal into the cell (Nestler, 2004).

Normally, dopamine is removed from the synaptic cleft to be repackaged and used at a later time. However, stimulants temporarily disable the transporter protein that returns the neurotransmitter to the VTA, leaving a surplus of dopamine in the nucleus accumbens. This surplus produces the drug induced euphoria. When opiates are being used, they bind to neurons in the VTA that normally shut down the production of dopamine, thus releasing the cellular clamp and allowing dopamine-secreting cells to produce an influx of dopamine. Opiates can also act directly on the nucleus accumbens (Nestler, 2004). This dopamine pathway is critical in addiction, because regardless of the type of illicit drug being used, the nucleus accumbens receives a flood of dopamine. The stimulation of this pathway leads to pleasurable feelings which reinforce the individual's desire to use again. Repeated exposure to dopamine influxes alters the structure and function of the brain's reward circuitry. These changes alter the way in which the brain's reward pathways interact with one another and process information. This process significantly contributes to substance dependence, tolerance, and cravings. (Nestler, 2004).

There are many parts of the brain that work in tandem with the reward circuit to add more information about the experience of using drugs. The amygdala assesses if the experience is pleasurable or aversive and decides whether or not it should be repeated or avoided. The amygdala also connects the experience of using drugs with cues, such as paraphernalia or smells, that are associated with use. The hippocampus records memories about experiences such as with who and where the substance use occurred. The frontal regions of the cerebral cortex process all this information and ultimately decide whether or not the individual will choose to use again. The VTA accumbens pathway tells other brain regions how rewarding an activity is (Nestler, 2004). When the memory of using is more rewarding, there is a higher likelihood that the person will reengage in substance use. fMRI and PET scans have shown that when a person with an addiction is shown a drug or drug paraphernalia, the nucleus accumbens, amygdala, and some areas of the cortex light up because of increased blood flow. This is an important piece of the neuroscience of addiction because it answers the question, “After a person uses once, what biologically guides their decision to use again?” (Nestler, 2004). It is the combination of these brain processes contribute to the biology of addiction.

Social (Environmental)

The social aspect of the biopsychosocial model most closely references environmental factors that trigger addiction. Vulnerability to drug and alcohol use is largely shaped by the people one associates with and the places in which they spend their time. Environmental risk factors related to drug and alcohol abuse are especially prevalent in low income communities. In these communities addictive substances are

widely available. Research has shown that the high availability of drugs and alcohol directly correlates with increased rates of use (LLoyd, 1998). This in itself creates an environment where addiction prevalence rates are high. For children growing up in this environment, drugs and alcohol are understood from a young age to be apart of life. This exposure can be extremely detrimental to a child's development and their later life choices (LLoyd, 1998).

Frequently, areas with a low socioeconomic status (SES) have education systems that lack resources for educating children on the dangers of substance use. Stoil and Hill (1996) point to drug and alcohol education in schools as one of the most important mediators in adolescent substance abuse. When children are not receiving drug and alcohol education in school, it is hard to mandate awareness in a easily influenced population (Stoil & Hill, 1996). In addition, schools in these low income communities are often not providing a quality education that motivates children to better themselves and stay away from negative environmental influences. Research also suggests that children who are doing poorly in school have higher rates of drug and alcohol use (LLoyd, 1998).

Additionally, poor school systems often lack extracurricular activities which can help young people to use their time constructively rather than in ways that could be destructive to their well-being. These activities can also help to prevent boredom and give young people a sense of purpose and motivation to make positive life decisions. Adolescents also face peer pressure to engage in drug and alcohol use. When children see their role models, peers, and family members engage in drug and alcohol use they

may be influenced to follow in their footsteps (LLoyd, 1998) (Koob, Kandel, & Volkow, 2008).

The climate of the family environment also has important implications for adolescent vulnerability to use drugs and alcohol. Within the home, it is important for children to have open channels of communication and form a secure attachment to their primary support giver (LLoyd, 1998). However, this is often not the case. Rates of substance abuse increase dramatically when there is parental abuse and when parents use drugs and alcohol themselves (Koob et al., 2008). Many parents in low income communities work long hours which may leave children unmonitored, uninformed, and left without a reliable and supportive role model. When children do not have positive role models in their life they may be influenced by negative role models in their community or in the media (Koob et al., 2008). Today's media frequently portrays an attractive image of drug and alcohol use. Children may associate substance abuse with money, power, and prestige, and without education they may see substance use as their pathway to acquire this "glamorized" lifestyle. When children cannot rely on their family as a source of support they may not be able to deal with the environmental, psychological, and biological risk factors pushing them towards use. Without effective coping, use is often the end result (Koob et al., 2008) (LLoyd, 1998). Although these factors are most commonly seen in communities with low SES environmental risk factors are present for people of socioeconomic statuses.

Adolescence can be viewed as one of the most critical exposure periods for the development of an addiction. It is during this time that the brain is undergoing

developmental changes that cause adolescents to take risks, seek novelty, and succumb to peer pressure. A changing self-image and the need for acceptance should be viewed as key factors for predicting an adolescents's vulnerabilities to engage in substance abuse. The rewiring of the brain during this period of development leaves young people extremely susceptible to environmental influences. Young people are frequently unable to think independently of other's influence and their environmental situation. Research shows that compared with initial exposure at older ages, initial use in adolescence is correlated with more chronic use, more severe use, and a greater chance for dependency (Koob et al., 2008). This research exemplifies how risk factors may be exacerbated during this stage of life.

Psychological

Another important factor in the development of addiction is a person's psychological state. A person's emotions, thoughts, and beliefs can greatly affect their initial use and desire to continue use to the point where an addiction is formed. A comprehensive review of MMPI scores from prospective, archival, and longitudinal studies found a correlation between certain personality traits and the later development of substance abuse disorders. These traits include depression, extraversion, emphasis on independence, alienation, pessimism, unconventionality or nonconformity, impulsivity, aggressiveness, rejection of societal values, social anxiety, sensation-seeking, and labile or erratic mood. These similar patterns of results for individuals who abuse drugs and alcohol infers a correlation between psychological factors and abusive drug and alcohol using tendencies (Sutker & Archer, 1979). The presence of such psychological states in a

high volume of individuals who struggle with addiction suggests possible causality. However, as the biopsychosocial model denotes, it is the culmination of such psychological states with other environmental and biological factors that influences addiction.

The psychological state of stress may be induced by many different things, and it is stress that is often believed to trigger initial use, continued use, dependence, and relapse. Research has found that stress-responsive neuropeptide corticotropin-releasing factor (CRF) affects the amygdala and the pituitary–adrenal axis in a way that may lead to a desire to abuse substances (Koob et al., 2008). Although stress is a psychological state, the reasons that it may come about, and manner in which it is dealt with, can often be influenced by environmental and biological components. Frequently, an inability to cope with strong negative emotions such as stress, depression, and anxiety leads to drug and/or alcohol use (Koob et al., 2008).

Understanding the way in which psychological states affect addiction requires knowledge of three functional systems at work in the human psyche: motivation-reward, affect regulation, and behavioral inhibition. In comparison to the normal population, individuals with addiction have impaired motivation-reward systems which causes them to experience stronger reinforcement for behaviors that activate their reward system. When an person with an addiction has poor motivation reward functioning they are subjected to strongly negative emotions and perceptions. Because of an inability to regulate affect, addicts seem to be consistently susceptible to psychological pain and unstable emotions (Goodman, 2007).

As a result of this impaired affect regulation, these individuals are more strongly motivated to engage in behaviors that allow them to escape their emotional turmoil. In conjunction, the ability to resist urges to participate in behaviors that provide this avoidance of pain is impaired due to weakened behavioral inhibition. In summary, when a person with addiction has trouble with motivation-reward and affect regulation, they may become highly motivated to use drugs and/or alcohol. Because of impaired behavior regulation, their ability to abstain from behaviors that involve the activation of the reward system are severely hindered (Goodman, 2007). This interaction between debilitated systems helps to explain why addicts so quickly turn to drugs in the face of psychological pain, despite the negative consequences they may face.

Implications for Treatment

In order for clinicians to provide clients with viable treatment options, it is important that professionals understand the initial factors that led clients into addiction as well as the factors that are contributing to current use. Clinicians must broaden their lens to understand clients' prior history and current circumstances in terms of biology, psychology, and environmental factors. Creating this holistic picture of clients will be beneficial in the construction of a dynamic treatment plan that is attentive to all the clients's needs.

Biology is important for understanding medical needs that may be specific to a client. Especially for people with mental illness, medical histories can help to enlighten professionals on the nature of an individual's addiction. Special attention should be paid to mentally ill clients so that both their addiction and mental impairment can be treated.

Family psychiatric histories can also be important in identifying genetic vulnerabilities that leave an individual especially susceptible to addiction.

Knowledge of a person's environmental influences can also help to shape treatment options. Typically people, places, and things are identified as environmental triggers that catalyze relapses. To increase a client's chances of recovery, professionals should be mindful of how these factors interact with the individual's ability to remain sober. For many, restructuring a client's environment by creating a new social environment free of high risk stimuli can reduce chance of relapse. Mutual help groups, which will be highlighted later in the paper, are a great means for creating this new form of positive social support.

Finally, a good clinician must acquire an understanding of the client's past and current psychological experiences. Cognitive perceptions and patterns of thinking have a substantial influence on substance abuse. For clinicians to provide the utmost support they must be able to view the world through their client's eyes. Making use of techniques such as cognitive behavioral therapy can help to alter harmful psychological tendencies that inhibit a client's ability to resist urges to use. The biopsychosocial model can be an important tool in structuring treatment that is individualized to meet each client's unique needs and treatment goals (Ford & McHenry, 2009).

Chapter 2**Analysis of Matrix Model of
Intensive Outpatient Treatment**

The Matrix Model of Intensive Outpatient Treatment is a form of treatment developed in the 1980s to combat the cocaine epidemic in Southern California. The program makes use of several complementing therapeutic strategies chosen from evidence based practices in order to create an integrated treatment program. Clinical research literature, cognitive behavioral therapy techniques, relapse prevention research, motivational interviewing, psychoeducation, and an emphasis on 12-step involvement are central to the program's methods for change. Clinicians and researchers worked closely to create the 16-week program comprised of group, individual, and family modalities. The group sessions address early prevention skills and relapse prevention in a semi-structured setting that promotes a psychoeducational framework. Primary therapists are used as the coordinators of the treatment experiences as well as the facilitators for both individual and group sessions. In addition to an emphasis on client learning, the program also involves the family for a 12-week educational series. Clients are offered social support towards the end of the program and through the encouragement of 12-step meetings both during intensive outpatient (IOP) and as a method of continued care (Rawson & McCann, n.d.).

Empirical Support

Since the birth of the Matrix Model in the 1980s there have been several controlled and clinical trials conducted to measure the efficacy and effectiveness of the program (Rawson & McCann, n.d.). A 1994 study of the Matrix Model found that the

modality of treatment was at least as effective as other psychosocial treatment approaches. Results also suggested that people who actively worked the program for longer periods of time did markedly better than individuals who did not engage in the program activities and only were involved with the program for a short period of time. The final major finding of this study was that the Matrix Model was able to diminish levels of psychological distress (Shoptaw, Rawson, McCann, & Obert, 1995).

After a pilot study and some alterations to the Matrix Model manual, a clinical trial of 100 cocaine dependent participants was conducted. The trial lasted for two years and compared results between Matrix Model participants and a control group that received available community resources as the intervention. Results showed Matrix Model participants had more negative urine results than the treatment group. Additionally, participation in Matrix Model treatment resulted in improved family, employment, and depression scales as measured by the Addiction Severity Index. These findings did not definitively support the efficacy of the Matrix Model, but they did produce positive implications for the model's potentially beneficial methods (Shoptaw et al., 1995)

A "real-world" study by the Center for Substance Abuse Treatment compared the Matrix Model of intensive outpatient treatment with 8 other comparable treatment approaches. Each of the 8 sites randomly assigned half of their clients to the Matrix Model and the other half to the "treatment as usual" (TAU) condition. At the end of the 18-month trial, researchers found results in favor of the Matrix Model's effectiveness. At all sites, except the drug court site where rates were equal, Matrix Model participants

were shown to have lower rates of attrition. Similarly, all sites except the drug court site showed that the Matrix Model clients had more negative urine samples than did clients in the TAU condition. Matrix Model participants also demonstrated abstinence rates that were superior to the other treatment approaches. The study showed that the Matrix Model had significant in-treatment benefits, however measurements at discharge and 6-months post-treatment showed all conditions to be of equal effectiveness. Although the study was limited by the fact that the TAU conditions differed at each of the 8 sites, Matrix Model client's universally showed the most on-site improvement (Rawson et al., 2004).

Structure

The structure of the Matrix Model program appears to be key to its success. The 16-week program makes use of 3-10 individual sessions as a supplement to four types of group sessions: early recovery skills, relapse prevention, family education, and social support. Mondays and Fridays throughout the entire duration of the program include a relapse prevention group. During the first four weeks, an early recovery skills program is given before the Monday and Friday relapse prevention groups. From weeks 1 to 12 on Wednesdays there is a family education group. At week 13 to the end of the program the family education group switches to a social support group. Clients in the program are also administered a urine test, at random, once a week (Rawson et al., 2006).

	Intensive Treatment		Continuing Care
	Weeks 1 through 4*	Weeks 5 through 16†	Weeks 13 through 48
Monday	6:00–6:50 p.m. Early Recovery Skills 7:15–8:45 p.m. Relapse Prevention	7:00–8:30 p.m. Relapse Prevention	
Tuesday	12-Step/mutual-help group meetings		
Wednesday	7:00–8:30 p.m. Family Education	7:00–8:30 p.m. Family Education or 7:00–8:30 p.m. Social Support	7:00–8:30 p.m. Social Support
Thursday	12-Step/mutual-help group meetings		
Friday	6:00–6:50 p.m. Early Recovery Skills 7:15–8:45 p.m. Relapse Prevention	7:00–8:30 p.m. Relapse Prevention	
Saturday and Sunday	12-Step/mutual-help group meetings		
* 1 Individual/Conjoint session at week 1			
† 2 Individual/Conjoint sessions at week 5 or 6 and at week 16			

Table 1. Sample Schedule for Matrix Intensive Outpatient (Rawson et al., 2006, p. 3)

Individual and Group Sessions

Individual counseling sessions are seen as the most important part of treatment because they keep the client motivated to complete the entire 16 weeks of the program. Major emphasis is placed on developing rapport between the counselor and the client to ensure a good therapeutic alliance and prevent attrition. The treatment is intended to be directive, yet client-centered. The content of the meeting is centered on the setting and checking of mutually agreed upon goals so that the client becomes an active participant in their recovery plan. Supplemental meetings may be added to incorporate conjoint sessions or deal with crisis prevention.

The first group which clients attend is the early recovery group. This group occurs early in treatment to introduce clients to cognitive tools for craving reduction, classically conditioned cravings, time management, the need to discontinue secondary substances, and to connect the clients with community support. These groups are kept small, yet structured, so that clients can learn and get individualized attention. If clients exhibit trouble with the concepts mentioned above, they return to the group for reinforcement of these principles (Rawson et al., 2006).

The second type of group, known as the relapse prevention group, occurs twice a week during the entire program to teach clients methods for attaining the goal of sustained sobriety. The group focuses on 32 relapse prevention topics associated with behavior change, changing cognitive/affective orientation, and connecting the client to 12-step meetings as a means of social support. The meetings begin with a status check before the daily relapse topic is introduced. Following this, clients relate the daily topic to their own experiences. At the end of the meeting, clients are asked to share their schedules, plans, and commitment to recovery. Although members are encouraged to share their experiences, cross talk is prohibited and the facilitator controls the flow of the meeting in order to adhere to the group's educational goals. If clients relapse during the program they are given assignments to help identify the issues and events that preceded their relapse. The identification of relapse triggers can be helpful for clients as well as their therapists (Rawson et al., 2006).

The third group session is the family educational group, which occurs during the first 12 weeks of the program. These groups are important because they have been shown

to increase the likelihood that clients complete the entire treatment program. The groups make use of slide presentations, video tapes, panels, and group discussions to introduce educational components of addiction to the clients as well as their family members.

Because the Matrix Model is aligned with the 12-step program it also bolsters the disease model of addiction. The group revolves around four major educational focuses. The first is the biology of addiction, which focuses on neurotransmitters, brain structure, brain function, and tolerance. The next educational focus looks at conditioning as it relates to addiction by showing how the use of drugs and alcohol rewires the brain so that cravings for these substances work in the same way as cravings for water and food. The educational group goes on to exemplify this concept by relating it to Pavlovian conditioning. Families are also taught about the different body systems and the medical effects drugs and alcohol have on them. The final educational component examines how addiction affects family relations (Rawson et al., 2006).

The final type of group used by the Matrix Model is a social support group. Social support groups begin at week 13 and continue even after treatment. This group is less structured than other group sessions because the content is based on the current needs of the group members. In addition to these social support groups, 12-step meetings are an integral part of the program used to promote social support and add a component of continued care after the completion of the program. Frequently, the weekly meetings are held on-site. Meetings are typically not official meetings, but instead, meetings run by clients currently in treatment and graduated members of the Matrix Model program. The meetings are intended to acclimate the members to the 12-step philosophy and meeting

structure so that they become comfortable with the AA program. It is the hope of the Matrix Model that individuals will continue to attend outside meetings and come back to the on-site meetings as alumni after the completion of the program. The primary purpose of these social support groups is to help clients to establish non-drug related friends and activities (Rawson et al., 2006).

Therapeutic Constructs

The Matrix Model is based on three main therapeutic constructs that are in place to optimize treatment goals. The first is an atmosphere of support and collaboration. This is achieved through an emphasis on establishing a positive and collaborative relationship between the client and their counselor. Clients are seen as the expert on themselves and are to be treated with empathy and respect to enhance the therapeutic alliance. Beyond the support given by counselors, the program also encourages peer support. The final three weeks of the program include a weekly social support group where clients can bond over their struggles and triumphs. Additionally, the program advocates for the use of Alcoholics Anonymous, or other 12-step programs, as a system of sober support both in treatment and after the program is completed. It is the belief of the Matrix Model that these types of support must be in place to create a positive climate for recovery (Rawson & McCann, n.d.).

The second therapeutic construct is a commitment to education of both clients and their family members. The program introduces and teaches the application of cognitive behavioral concepts such as self-monitoring, trigger identification, coping skills, and managing immediate problems to help clients build the skills necessary to prevent

relapse. Clients are encouraged to practice these skills in real life settings and discuss their experiences within the relapse prevention groups. Another key component of the program is educating both clients and their family members on the course of recovery so that they gain awareness about past behaviors, treatment, and what to expect in the future. Clinically relevant knowledge that is both understandable and applicable is viewed as a powerful tool for elucidating drug and alcohol induced behaviors that previously seemed inexplicable. Education is seen as central to the program's methods for change because it is knowledge that can help clients and their family to reframe their life perspectives and make positive changes towards recovery (Rawson & McCann, n.d.).

The final therapeutic construct used throughout the program is an adherence to structure and enforced expectations. Group sessions have a clear plan and follow premeditated agendas so that points are covered in a timely and effective manner. Clients are aware of a set of clear expectations such as attendance at scheduled activities and participation in groups. Clients are encouraged to schedule all their time throughout the day to engage in positive new behaviors and steer away from high risk behaviors. The program also uses contingency management to help reinforce expected behavior and praise adherence to program policies. Additionally, clients are given randomized, weekly urinalysis testing. Although they are not punished if they do not have clean urine, this system does create a sense of self-accountability. The enforcement of structural components and expectations is seen as an important component of the program because it allows clients to create a clear roadmap for recovery (Rawson & McCann, n.d.).

Effective Components of the Program

The success of the Matrix Model can be attributed to many factors. The weekly structural design of the program seems to have been made with special attention to the clients' needs throughout the 16-week period. Early recovery skills groups occur on Mondays and Fridays of the first four weeks so that new clients being brought in can learn skills necessary for the early stages of their treatment. Because relapse prevention is key in maintaining sobriety, these groups are held throughout the course of the entire program on Mondays and Fridays. The placement of these groups right before the weekend allows for extra reinforcement before exposure to possible high risk situations. High risk situations are situations in which individuals are faced with temptation to use. In order to prevent relapse, it is necessary that the individuals make use of coping skills learned in group to overcome urges to use drugs and/or alcohol (Marlatt & Donovan, 2005). The additional placement of the relapse prevention group on Mondays provides a forum for clients to discuss their weekend successes, struggles, and failures. Family/education groups occur on Wednesdays from week 1-12, which seems to be an appropriate timing and duration due to the importance of getting clients and families vital information to help them understand their past experiences, treatment, and what to expect in the future. The placement of the social support groups during the last three weeks of treatment is appropriate because assumably client's at this stage of recovery can handle a less structured setting that allows them the opportunity to build new sober relationships with their peers (Rawson & McCann, n.d.).

Although much of the struggle to achieve sobriety is internal, research highly supports the use of group therapy in the treatment of addiction (Yalom, 2005). Unlike individual therapy, group therapy offers the components of interaction and feedback from multiple sources while creating a climate that promotes honesty and genuineness. (Ford & McHenry, 2009). Because group members share similar experiences with substance abuse and its consequences, clients may be more open to sharing and listening to one another than they are with an individual counselor. Groups also help to foster an atmosphere of acceptance which can be viewed as an important catalyst for change. Groups therapy is viewed as beneficial because research attests to the power of social contact for people who have undergone similar life circumstances (Ford & McHenry, 2009).

Social support groups occur on Wednesdays from week 13-16. Social support is important in an intensive outpatient program because it allows client's to self-disclose and possibly for the first time form bonds with others without the use of addictive substances (Fords & McHenry, 2009). Evidence for the effectiveness of social support has been demonstrated by a randomized research study on aftercare for individuals with substance abuse problems. The study compared an aftercare program consisting of weekly professionally led recovery-training sessions and a peer led mutual-help group with a second aftercare option consisting of only a weekend recreational activity. The results of the study showed that in the following 6-month period, individuals in the latter condition were 40% less likely to relapse (McAuliffe, 1990). Peer support can be viewed as a reliable source for open discussion of future plans and encouragement. Placing these

groups towards the end of recovery is effective because by this time clients have learned necessary skills for sobriety and are now preparing to use them while rebuilding their lives (Rawson & McCann, n.d.).

The early introduction to Alcoholics Anonymous is a vital part of the Matrix Model program because it allows clients to get social support and become involved with a modality of treatment that can continue into aftercare. Twelve-step meetings are free and widely available, so incorporating them into continued care ensures the opportunity for support once clients no longer have the structure of the intensive outpatient program. People who regularly attend 12-step meetings after treatment are shown to have substantially higher sobriety rates than individuals who undergo no self-help group after treatment (Humphreys & Moos, 2001). Longitudinal studies have shown that self-help group attendance can improve psychosocial functioning, decrease the expense of health care, and decrease rates of substance abuse (Humphreys et al., 2004). Kaskutas, Bond, and Humphreys (2001) suggests that the type of social support specific to AA is a large mediator in sustained sobriety. These social supports include the availability of experientially based advice, 24-hour support, and the positive effects of have sober role models who have worked and continue to work the AA program (Kaskutas et al., 2001). A client's biopsychosocial intake often indicates that the individual is in need of an environmental change to lower risk of relapse. The incorporation of 12-step meetings into the program and as a recommendation for continued care offers client's the opportunity to become involved with a community of people that a provide a more conducive atmosphere for lasting sobriety.

Another guiding principle of the Matrix Model that has positive effects on treatment results is the focus on a strong therapeutic alliance and the use of motivational interviewing. Research has shown that counselors who exhibit empathy, positive regard, warmth, and genuineness towards their clients see the best outcomes. Creating an environment of acceptance and value can be seen as crucial components in initiating a client's willingness to change their addictive behaviors (Miller & Rollnick, 2002). The Matrix Model mandates that the relationship between the counselor and client be directive, yet client centered and collaborative. Miller and Rollnick (2002) define motivational interviewing (MI) as a "client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence" (p. 25). The ambivalence they are referring to can be identified as the clients' interpretation of the costs and benefits of changing their addictive behavior. It is the central tenant of MI that counselors do not persuade clients to change. Instead, it is the counselor's job to assist clients in gaining new perspectives and identifying their own motivation to change (Markland, Ryan, Tobin, & Rollnick, 2005). A counselor can help spark behavior modification by pointing out discrepancies between client core values and their actions as addicted individuals. Counselors should expect some resistance, but instead of imposing their own beliefs on the client, they should coach clients in an effort to help them gain clarity (Miller & Rollnick, 2002).

Research on motivational interviewing strongly links this strategy of counseling to reductions in client ambivalence as well as increased motivation for behavior change (Morgenstern et al., 2012). Motivation to change behavior can be viewed as an

influential mediator for outcomes related to drug and alcohol abstinence. A discussion on Morgenstern et al.'s research suggests that behavior change emerges from the client's internal desire to change, which is brought about via the counselor's active shaping and reinforcement of such dialogue (Morgenstern et al., 2012). It is the focus of motivational interviewing on helping clients find their own voice and motivation that results in better engagement and attendance efforts. Greater treatment adherence and long-term maintenance of change are thought to be the direct result of autonomous motivations for change. The implementation of these techniques in the Matrix Model helps to initiate the changes in thought and behavior that lead to lasting abstinence (Miller & Rollnick, 2002). Motivational interviewing can be viewed as a crucial part of the Matrix Model program because it emphasizes the importance restructuring the patient's psychological perceptions of themselves, treatment, and future goals.

Another positive aspect of the Matrix model is its highly structured style of treatment. People who seek out intensive outpatient treatment are typically in need of a structured intervention (Brooks & McHenry, 2009). When individuals become heavily involved in an addictive lifestyle they may be so overtaken by the drug that they lack the normal structure of everyday life (Brooks & McHenry, 2009). This is especially true of Matrix Model clients who may be combatting feelings associated with loss of control and excessive energy due to their past stimulant use. It is the view of the program that the focus on high structure is equally as important as the content of the information being discussed (Rawson et al., 2006). Requiring clients to follow a strict schedule brings order to their life and helps to alleviate anxiety and refocus thoughts on achieving goals

associated with sobriety. For many, boredom is a major trigger for relapse, and so the program asks that clients create a 24-hour schedule for themselves. This daily plan enables clients to delegate their free time to productive activities, such as mutual-help groups, that will further their treatment and help them make strides towards rebuilding a new life. It is also a great tool because it allows clients to take an active role in their treatment by making decisions about how to stay sober. This daily plan becomes increasingly important after treatment when clients no longer have the structure provided by the program to structure their days. The plan should be viewed as another attempt to assist individuals in altering their exposure to environmental risk factors that could lead to relapse (Ford & McHenry, 2009).

The next component of the Matrix model that seems to foster good treatment results is the psychoeducational aspect of the program. When lost in addiction, individuals lose sight of how their actions affect them both physically and emotionally. The presentation of empirical research in an understandable and applicable context allows clients to add a cognitive component to their treatment. Education is a major tool in recovery because it empowers clients to gain awareness of their disease, and therefore make more educated decisions about their future use. The information learned in these classes allows clients to give meaning to their past thinking, behavior, relationships, and consequences of continued use. This added clarity may be the thing that helps to make addiction “real” to clients. These groups are also useful to the clients’ family because it helps to elucidate many unanswered questions about addictive behaviors, treatment, and the potential for relapse. The equilibrium of the family system is hugely impacted by

addiction, and this opportunity for education is vital for processing past events and building a new foundation for the future (Brooks & McHenry, 2009). Without family education clients would be losing out on an important opportunity to regain family support that could act as a protective factor against relapse.

The introduction and application of cognitive behavioral components is another unique aspect of the Matrix Model that seems to be quite effective. The skills taught in the program are simple yet effective at redirecting thoughts associated with relapse. A rigorous meta-analysis conducted by Magil and Ray (2009) indicated that in comparison with other treatments, CBT showed a small but statistically significant effect for adults with substance abuse disorders. After the CBT methods are taught, the clients are encouraged to try the skills in real life situations. Allowing the clients to practice the new skills while still in the IOP is highly functional because they have the opportunity to rely on the program's structure and get feedback if their attempts to use the new skills fail. The program also assigns homework which allows clients to process what they learned in class on a deeper, more introspective level. Homework also can act as another way for clients to constructively occupy their time (Rawson & McCann, n.d.).

The use of once weekly urine and breath tests is another unique and important part of the program. The tests add a sense of accountability for one's actions which seems to be important for treatment. Failed tests are also used as a point of discussion rather than as a reason for punishment, which allows for the growth of intrinsic motivation that is important to develop for sustained sobriety (Miller & Rollnick, 2002). A nonjudgmental and supportive reaction to relapse fosters a positive relationship

between the professionals and the clients. It is important that the counselor not punish the client, but instead make a concerted effort to help them learn from their mistake and become reengaged in treatment (Ford & McHenry, 2009).

The final component of the Matrix Model that seems to be effective is its use of contingency management to enforce expected behaviors. A large body of supportive research has shown contingency management to be highly effective in the treatment of addiction. Certificates and rewards of small to large monetary value have been shown to provide incentives for clients to produce clean urine, attend meetings, participate in groups, and the achieve treatment goals. The effects of contingency management can be magnified when coupled with an element of social recognition. The nature of the rewards differs between programs because of resource availability and the specific needs of the program. In a research study (Higgins et al., 2004) aiming to test the effectiveness of contingency management for intensive outpatient addiction treatment, 40 cocaine dependent individuals were randomly split into two groups. The first received a voucher for clean urine samples while the second received no reward for drug free urine. At the end of the 24-week program, completion rates were at 75% for the patients with vouchers but only 40% for the patients without vouchers. Continuous abstinence rates for the contingency management group were 11.7 ± 2 weeks compared to 6.0 ± 1.5 weeks for the group receiving no incentives. The contingency management group also had superior improvement in comparison with the non-contingency management group on both the ASI Psychiatric scale and ASI Drug scale (Higgins et al., 2004).

Possible Shortcomings of the Program

Despite these positive aspects of the Matrix Model, the program also has several shortcomings. Each person trying to overcome addiction is dealing with a unique set of problems that require individualized attention. The program typically incorporates only 3-10 individualized sessions throughout the 16 week period to set and monitor goals.

This indicates that clients are being seen less than once a week to discuss their treatment. Further, if the individual sessions are centered on goal setting, clients may not be getting the help they need to discuss the unique issues that underlie their addiction. Ford and McHenry (2009) point out that a primary goal of addiction treatment is to help clients explore cognitive and emotional perspectives on their use of addictive substances.

Undergoing addiction treatment can be an overwhelming and emotional experience, and without proper support clients may be unable to combat the influx of emotions they are experiencing. It is worrisome that the program focuses so intently on cognitions while diminishing the importance of emotion in the experience of addiction. It is also questionable if this limited number of meetings allotted to each client allows for the rapport that seems to be at the center of the program to be adequately built (Ford & McHenry, 2009).

Another missing component of the program that should be called into question is the absence of case management. Although counselors may do one case management session with the client it is not at the forefront of their treatment plan. In 1990 a study was conducted to compare the results of addiction treatment with a clinical case manager in comparison with treatments that did not have a clinical case manager. The results

showed that clients who had access to case managers were better able to utilize community resources such as legal help, housing, employment services, medical care, and different types of educational classes, thus bettering their treatment outcomes at the six month follow-up (McLellan et al., 1999). Without linking clients to community resources, clients may not be getting the full supportive benefits available to them. Adding a case manager to the staff could greatly improve client outcomes after the completion of the Matrix Model program.

According to the SAMHA 2011 survey on mental illness and substance use, 43.2% of the 18.9 million adults who have a substance use disorder also have a mental illness. This means that nearly half the people dealing with an addiction are also in need of mental health treatment. Medication compliance for people with mental illness has been positively associated with better treatment results (Swartz et al., 1998). When clients are able to stabilize the symptoms of their mental illness they can focus their attention on treating their addiction. Receiving the proper medication can also be important in pain management, which can act as a trigger for many people who are coping with physical pain. The Matrix Model touches on medication compliance and abuse of prescribed medication in its educational groups, however the program seems to be lacking other medical resources. In order to effectively treat clients with medical needs it is important that there is a collaborative relationship between the client's physician and counselor. If the client is displaying symptoms of mental illness, but is not under the care of a medical professional a referral should be made. It would be advisable for the Matrix Model sites to add a psychiatrist to their staff, which is common with

many other intensive outpatient models (Brooks & McHenry, 2009). The missing link between addiction treatment services and medical services could act as a hindrance in the treatment outcomes of Matrix Model clients (Swartz et al., 1998).

Although there is support for the Matrix Model's use of family psychoeducation groups, it seems that the groups only cater to families who themselves are not struggling with addiction. The psychoeducational family manual notes their must be sensitivity to different cultural backgrounds, but says little in regards to treating families who themselves struggle with addiction. This could be an important aspects of modification for the program because family members who themselves abuse addictive substances should be treated quite differently than families who do not have a history of abuse. The group structure has a day scheduled when speakers from mutual-help groups come to talk to client's and their families, however, it should be made explicitly clear that family members who themselves struggle with addiction should become involved with a program to treat their own needs. If other members of the family unit are unable to cope with their own addiction problem it is unlikely that the will be a safe and reliable support for the client in the program. An additional criticism of the family psychoeducation curriculum is its lack of information on family roles. The role of the coaddict or enabler in the family can be one of the most dangerous relapse triggers. If enabling behaviors are not brought to the families's attention, the consequences can be dangerous for both the client and their family (Ford & McHenry, 2009).

Although the implementation of mutual-help groups seems to be an important and effective part of the program, the method through which the clients are exposed is flawed.

Mutual-help groups provide continued support after treatment and are an extremely important resource in the attainment of lasting sobriety. Moos and Moos (2006) found that people who participated in AA during the first three years after entering treatment had markedly better sobriety outcomes than individuals who did not participate in AA at all. The Matrix Model only offers exposure to Alcoholics Anonymous meetings and ignores other 12-step meetings and mutual-help groups. For many, Alcoholics Anonymous is a bad fit. If the 12-step model is forced upon client's and they are unreceptive to it they may leave the program without options for social support. This could severely lower their chance of staying sober. The program should provide information about alternative programs as well as referrals to other resources such as psychiatrists and individual counseling.

A final criticism of the program questions the competency of the Matrix Model counselors. Optimally Matrix Model counselors have several years of prior experience working with both groups and individuals. It is also preferred that counselors have a background in motivational interviewing, cognitive behavioral therapy techniques, and educational components of the neurobiology of addiction, however these requirements do not seem to be mandated. Counselors for the Matrix Model are only required to undergo a 2-day basic training seminar to learn how to deliver treatment. Because the structure of the program is highly manualized, it is thought that counselors will be able to follow the set guidelines to learn the Matrix Model methods without training(Rawson et al., 2006). Further training is necessary to be the site's key supervisor, but this advanced level is only needed from one individual per site (Rawson & McCann, n.d.).

Although the manuals have highly detailed templates for group meetings, it is questionable to think that a counselor with limited experience could effectively teach cognitive behavioral techniques, run psychoeducational classes, and conduct family therapy sessions. The Matrix Model employs the use of highly complex and empirically supported methods for change. If counselors do not undergo intensive training to master these skills, it is not reasonable to think that they are qualified to teach them to individuals in need of quality, professional help. It should be recommended that the advanced key supervisor training be mandated of all program counselor's to ensure a firm grasp on the program methodology.

Chapter 3

Aftercare

In 2007, 9.4% of the population needed treatment for an illicit drug or alcohol use problem, however only 10.4% of these individuals received treatment in a specialized facility (SAMHA, 2011). This trend can most likely be attributed to the stigma associated with treatment, the high cost of professional help, the lengthy duration of many treatments, and a lack of available treatment options (Kelly et al., 2009).

According to the SAMHA 2011 survey, mutual-help groups are the most widely sought out method of treatment for substance abuse and dependence problems. In fact, statistics show that 2.1 million of the of the 38 million people participating in treatment for drug and alcohol abuse received help solely through mutual help groups (SAMSHA, 2011). The importance of self help groups as a form of treatment and/or aftercare is amplified by the fact that the first 90 days of recovery is when relapse is most likely to occur (Ford & McHenry, 2009).

Mutual-help groups are self-help groups in which two or more people who share the same problem come together to lend support to one another (Kelly, & Yeterian, 2011). Typically, groups are not run by professionals, but instead by the members of the group themselves. One major benefit that mutual help groups have over professional help is that they can be used without providing self-identifying information or insurance. Groups are usually free, frequent, and available in many locations so they can be easily attended without constrictions on duration of membership or a mandatory level of

involvement. The ease with which mutual help groups can be found and attended is especially helpful during weekends and evenings when there is a high potential for relapse. Even if a meeting is not available, many groups are based off of a peer support system that offers members the phone numbers of other members so that they can be reached for support at any time. This system creates a highly responsive program for people at risk of relapse. In recent years, online meetings have also gained rise and increased the ease with which one can get access to groups (Kelly, & Yeterian, 2011).

Most groups focus on motivation, coping mechanisms, and self-efficacy as skills that can be learned to achieve sustained abstinence. An analysis of research on mutual-help groups shows a range of documented benefits including decreased substance use, reduction in healthcare costs, increased social support, minimized anxiety and depression, enhanced coping, and increased self-efficacy (Humphreys et al., 2004) These factors are

all important mediators in sustained abstinence.

Estimated U.S. membership of selected addiction-related self-help organizations

	Estimated U.S. Membership
Alcoholics Anonymous	1,160,000
Al-Anon Family Groups	200,000
Narcotics Anonymous	185,000
Adult Children of Alcoholics	40,000
Cocaine Anonymous	15,000
Marijuana Anonymous	10,000
Oxford House	9,000
Nicotine Anonymous	7,500
Secular Org. for Sobriety	3,000
Double Trouble in Recovery	3,000
SMART Recovery	2,000
Women for Sobriety	1,500
Dual Diagnosis Anonymous	700

Table 2. Membership in self-help groups (Humphreys et al., 2004) and (White & Madara, 2002)

Although Alcoholics Anonymous is the most widespread and highly studied mutual help group, many others are emerging and gaining popularity (see table 2). A wide availability of different types of groups that adhere to different philosophies and approaches allows for diversified clients to find a meeting type that is consistent with their backgrounds, needs, and beliefs (Humphreys et al., 2004). The universal commitment to providing free, long-term, easily accessible support is common to all programs and allows for a great deal of self-regulation, and thus success. Because meetings are free they also help to reduce healthcare costs. This promotes the use of

meetings as either an alternative or addendum to professional healthcare (Kelly, & Yeterian, 2011).

Compared with the sizable amount of research done on the effectiveness of Alcoholics Anonymous, there is little empirical evidence on emerging mutual help groups. However, this is not to say that they do not have the same therapeutic power as AA. In fact, although many research studies support the effectiveness of AA research results are often confounded by several variables (Kelly, & Yeterian, 2011). First, because AA is a voluntary program it is unclear whether the results stem from member motivation or AA efficacy. Another problem in collecting data lies in the fact that the group has an anonymity policy. It can also be difficult to identify the distinct effects of AA on an individual because often times one individual is involved in various treatment programs at the same time. This overlap in treatments could potentially cloud the link between AA and any outstanding results (Le, Ingvarson, & Page, 1995). Also, AA was not designed to be statistically examined. The nature of the program makes its components difficult to operationalize. AA's resistance to research mechanisms makes it difficult to conclude what about the program is and is not empirically effective (Kelly et al., 2009). As mentioned before, there are many types of mutual help groups which rely on different philosophies in an attempt to reach one common goal, prolonged restraint from drugs and/or alcohol. In an effort to examine SMART Recovery program, an emerging, non-traditional approach to recovery, I will compare it to the more commonly understood Alcoholics Anonymous program.

Alcoholics Anonymous

Research on Alcoholics Anonymous has produced both praise and criticism regarding the effectiveness of the program. While some view the 12-steps as the only path to recovery, others are skeptical of the program's power in producing change. Despite this, Alcoholics Anonymous is one of the most globally influential mutual help groups. Its reach has spread to 180 countries internationally. With 55,000 meetings occurring at least once a week, Alcoholics Anonymous is the most frequently relied upon method for treating alcohol related problems in the United States (Kelly et al., 2009). The tenants of Alcoholics Anonymous are not specific to alcohol and can be applied to a range of addictions. Meetings are free, frequent, anonymous, and available in almost all locations making it accessible to anyone who has a desire to get help (Le et al., 1995). The intensity with which a member pursues the program and duration of time involved with the program are also up to the individual's discretion (Kelly et al., 2009). This aspect of AA allows the members to use the program as they see fit for their own recovery needs.

It is the belief of AA that addiction is a progressive disease that cannot be cured, but can be managed with adherence to the program's social and emotional elements. The program aims to aide addiction induced isolation through the sharing of experiences, establishment of trust, mutual encouragement, and group support. New members are highly encouraged to obtain a sponsor who acts as a mentor during times of crisis and provides guidance through the program's 12-step method. The program maintains that through the completion of its 12 steps, members of the program experience a spiritual

awakening. Research done to investigate the effectiveness of the spiritual approach used by AA posits that spiritual involvement decreases substance use while increasing levels of AA involvement (Miller, 1998). AA has been widely introduced into professional health care plans as either a foundation for treatment or as a supporting adjunct to other treatment methods (Kelly, & Yeterian, 2011). Its integration into most treatment programs is supported by a large body of research that attests to the program's effectiveness.

Research has consistently shown that people involved with the AA program have greater self-efficacy and motivation than individuals who have no involvement in the program (Kelly & Yeterian, 2011). Correlational studies on Alcoholics Anonymous have come to the general consensus that people who attend AA meetings have better alcohol-related outcomes than individuals who are not involved with AA (Humphreys et al., 2004). Further, participants who are more actively engaged in the program through sponsorship, application of 12-step principles, and reading the program's literature, have higher abstinence rate than individuals who show less involvement (Humphreys et al., 2004).

One study known as Project MATCH assigned participants to either 12-step facilitation therapy, cognitive-behavior therapy, or motivational enhancement therapy over a period of three months. At the one year follow-up, days of abstinence and amount of drinks consumed per day showed no difference between the three treatment approaches. However, individuals who received the 12-step therapy were more likely to attend 12- step meetings and have continuous abstinence. Three years post treatment

individuals who underwent the the 12-step therapy condition had the highest rates of continued abstinence. Additionally, when compared with individuals who had been assigned to the cognitive behavior therapy, the 12-step therapy group had a higher percent of abstinent days. A final analysis of results from all three conditions showed that regardless of initial therapy group, attendance at 12-step meetings yielded better abstinence outcomes (Kadden, Carbonari, Litt, Tonigan, & Zweben, 1998).

Comparison of SMART Recovery with Alcoholics Anonymous

In contrast to AA, the SMART Recovery program is a relatively new mutual help group with a more cognitively based treatment philosophy. SMART was created to provide an alternative to 12-step programs for those who do not subscribe to 12-step philosophies. SMART was derived using scientific knowledge that puts reason and self-empowerment at the forefront of its treatment tactics. Like AA, the SMART Recovery program is free and applicable to all addictive behaviors. The SMART Recovery program aims to use cognitive, behavioral, and educational, methods to enhance self-motivation, self-discipline, and self-responsibility. This is in high contrast to AA which emphasizes a lack of control in the individual and the power of the addictive substance. The SMART program purports that the real challenge in battling addiction comes about when a previously addicted person must learn to live comfortably without the “crutch” of their addiction (SMART Recovery, 2012).

AA is based on a 12-step model that emphasizes loss of personal control and a focus on spirituality, whereas SMART battles addiction using tools and techniques incorporated through a 4 point system. The first of the 4 points emphasizes the creation

and maintenance of motivation to abstain from addictive behavior. Using methods such as cost-benefit analysis, brain storming, and ABC, SMART aims to help clients dispute irrational thoughts and focus on decision making based on reason. SMART also attempts to build motivation by emphasizing the importance of short-term sobriety so that clients can begin working on recovery. In tandem with this idea, SMART asks clients to commit to a certain number of meetings over a certain span of time so that they can become familiar with the program. SMART asserts that if a client complies with this methodology their motivation to abstain from their addiction will increase (SMART Recovery, 2012).

The second point works to teach individuals how to cope with urges to use. AA maintains that urges are all controlling, however SMART teaches that urges are accepted as a controllable part of change. Although urges are uncomfortable SMART says they are resistible, unable to compel you to use, and will go away over time. Through the use of SMART tools, techniques, meetings, and friends SMART members are able to take control of their urges and discomfort (SMART Recovery, 2012).

The third point of SMART emphasizes problem solving through the rational management of thoughts, feelings, and behaviors. The program aims to illuminate the irrationality of addictive behavior, and enforces the notion that frustrations are an important part of recovery. People in SMART Recovery are urged to understand that emotions are not meant to be managed away. Instead, they should be accepted and worked through so that their significance can be clarified and put to good use. The program denotes that experiencing emotions should be seen as a positive experience that allows individuals to feel more alive. Gaining a new perspective on emotion helps

individuals in the program to better understand themselves and begin working towards goal oriented behavior (SMART Recovery, 2012).

The fourth and final point of the program teaches the balance between short term goals and long term pleasure so that individuals can begin to understand their own meaning and purpose for life. Members are coached to choose values and goals that are important to them so that they can begin to rebuild a new, happier, more functional lifestyle. For people who seek out spirituality as a part of their recovery, this fourth step allows for the incorporation of a spiritual component that, unlike AA, is an optional part of the recovery process (SMART Recovery, 2012).

The SMART Recovery program asserts that practicing its cognitively based tools and techniques with persistence and patience is key in the attainment of prolonged recovery. A cornerstone of the program is based on Ellis's Rational Emotive Behavior Therapy and is known as the ABC process. Through this model, clients are taught to rationalize beliefs, thoughts, and feelings in an attempt to cope with urges and emotional upsets. The program teaches that it is one's reaction to people and situations that creates feelings, not the people and situations themselves. This allows individuals to gain control over how they experience the world. The ABC method disputes irrational beliefs by helping the individual to identify the activating event, "A", their beliefs about that event, "B", and finally the consequences of the event, "C." The consequences come in the form of actions and feelings that should be analyzed in order to dispute irrationality and produce new, more rational beliefs that will lead to better outcomes (SMART Recovery, 2012).

Another important tool employed by SMART is cost-benefit analysis. This method helps to increase motivation, develop goals, create coping skills, and build a list of warning signs through the analysis of the positive and negative effects of addictive behavior. For example, individuals are asked to create a list to identify what they liked and did not like about their addiction, and what they would dislike and like about giving it up (SMART Recovery, 2012). Writing these thoughts down helps clients to take a new perspective on their addiction and allows them to weigh out influential life choices they may make.

In AA, when a member relapses they are forced to renounce any clean time they had, thus, putting them back at square one if they use. In SMART, it is believed that too much has been gained in the experience to start back from zero after a relapse. Instead relapse is viewed as a part of the recovery process. AA encourages sharing one's experience with others as a vital part of recovery. SMART emphasizes education over sharing, and although sharing experiences is viewed as an effective method of recovery, there is no pressure to do so in group meetings. The SMART program encourages attendance at meeting for months or years into the recovery process which contrasts with AA which believes in the methodology that the program should be used as a more long-lasting method for treatment. As mentioned earlier, SMART Recovery meetings are run by a facilitator and involve 3-12 members while AA meetings are run by group members and typically have no limit on the number of people at one meeting (SMART Recovery, 2012).

A study by Penn and Brooks (2000) collected information from a comorbid population to gain a greater understanding of their levels of spirituality, sense of control over their addiction, and view on the etiology of their addiction. Participants then became involved with a six-month intensive outpatient treatment/partial hospitalization program where they were either assigned to the SMART Recovery or 12-step group. Questionnaires were administered at 3 months, 6 months (completion of outpatient program), 3 months post completion of program, and 1 year after the completion of the program. Participants were also administered unannounced urinalysis tests at two month intervals and at completion (Penn & Brooks, 2000).

Results showed no statistically significant difference for the two groups on Addiction Severity Index Scale (ASI) or on alcohol, drug, psychiatric, legal, and employment composites. However, the ASI did illustrate that both groups show decreased need for alcohol, drugs, and psychiatric treatment as well as a higher quality of life rating. Results also suggested that regardless of treatment type, participants who were ready for change had better results. At the 12-month follow up, people in the 12-step treatment group showed greater improvement on the alcohol composite of ASI and a lowered need for alcohol treatment. Additionally, the 12-step condition had less substance use at the 3 month checkup. However, this evidence may be confounded by the mandate for sobriety for AA that is not present for SMART (Penn & Brooks, 2000). Although sobriety is an important measure, it is not the only way to gauge improvement. Therefore, no ultimate conclusion can be drawn in support of AA over SMART Recovery.

Chapter 4

Discussion

Addiction is a problem that affects all types of people regardless of their gender, race, age, religion, or sexual orientation. All too commonly, individuals who seek out addiction treatment are prescribed one modality of treatment regardless of their unique background and needs. This lack of attention to diversity often causes resistance to the treatment professionals and in many cases the entire treatment process (Sue, 2012). In order to get the best treatment results it is important to understand that treatment approaches must be individualized in order to best fit the client. What may be an adequate means of treatment for one client might prove to be completely ineffective for another. In order to find a good fit and combat possible ambivalence towards treatment professionals should have sufficient knowledge about treatment costs, locations, methods, and time commitments (Ford & McHenry, 2009).

Because the etiology of addiction is usually caused by the interplay of several factors, it can be helpful to view a client's problems through a biopsychosocial framework. Understanding the relationship between the causal factors related to the individual's biology, environment, and psychological well-being allows for the clinician to gain a holistic picture of the client's needs. With this information, the professional will be able to create a treatment approach that provides adequate resources and effective treatment methods. The biopsychosocial model should be referenced anytime the clinician recommends a treatment option for a client. From detoxification all the way

through continued care, the model can help to guide the clinician to make decisions that provide the client with appropriate support.

For example, this paper analyzed the Matrix Model of Intensive Outpatient Treatment. This model seems appropriate for clients who would benefit from psychoeducation and the integration of family into therapy. The model also emphasizes the use of AA as a mechanism to provide social support and continued care, which could prove to be very effective for a client who values spirituality. However, some clients may come into a program knowing that their beliefs do not align well with AA philosophies. Further, family psychoeducation could be problematic if the client does not have supportive family or if the client has a mental illness that makes learning in the psychoeducational groups difficult. It is biopsychosocial factors such as this that make understanding a client holistically so vital in choosing proper treatment modality.

This notion of individualized treatment is especially important when recommending a mutual help groups to a client working to fight addiction, because mutual help groups are empirically proven to enhance an individual's chances of attaining sustained sobriety (Moos & Moos, 2006). Finding a mutual help group that appeals to a client is especially important for continued care after a structured inpatient or outpatient program, because at this point in treatment a client typically attends meetings based upon their own motivation to do so. If a client is recommended to a meeting that fulfills their needs and aligns with a methodology that they can accept and subscribe to, they will be more willing to participate. Participation rather than just attendance has been identified

as an important mediator in the effectiveness of mutual help groups (Humphreys et al., 2004).

When choosing the proper mutual help group for a client it is important that the clinician refer back to the biopsychosocial information that they have gathered from the individual. Research on addiction treatment thus far has not implied that any one specific mutual help group is vastly superior to any others. Instead, it is viewed that regardless of the mutual-help group being attended, if it is at equal intensity, all groups will yield similar effects on the maintenance of a drug and alcohol free lifestyle. The reasoning behind this assertion is multifaceted. First, mutual help groups work on the basis of a set of common factors which themselves are the catalysts for change (Kelly et al., 2009). If the individual follows the guidelines for treatment put in place by the program, the specific methods, philosophy, and structure of the group seems to have little implication on treatment outcomes. Therefore, when a counselor is referring a client to a mutual help group they need not look at what groups have the most empirical support, but rather which philosophical and structural components of the group will best fit the client's needs (Kelly et al., 2009).

Factors that seem to be common to effective mutual-help groups include increased self-efficacy, recovery motivation, avoidance of high risk situations, commitment to abstinence, and behavioral coping. Although these factors have been mostly studied through the lens of AA, it is suggested that the same therapeutic elements are also at work in most other mutual help groups. (Kelly et al., 2009). Project MATCH pointed to self-efficacy as one of the most influential mediators in sustained recovery. When an

individual believes that they have influence in their own life, they are more likely to have better treatment outcomes (Kelly & Yeterian, 2011). Another aspect of all mutual-help groups which seems to mediate recovery is the provision of social support. Mutual-help groups form from a group of people who come together because they share a common problem and a desire to change that problem (Kelly et al., 2009). A decrease in feelings of isolation and an increase in reliable social supports are important in strengthening commitment to change. Moreover, most meetings are free which makes them accessible to people of all economic backgrounds. Mutual-help groups are available all throughout the day, in many locations, throughout most communities. In more recent years groups are also being held online. The accessibility of the groups is highly appealing and functional because it allows people to get support at almost anytime they need it (Kelly et al., 2009).

Although AA has been seen by many professionals as the automatic recommendation for aftercare, it is important to also consider other self help groups which may cater more specifically to the client's needs. Although AA groups have been supported by research, a client who is atheist or agnostic may have difficulty subscribing to the group's emphasis on spirituality. Additionally, AA groups may be perceived by some to be dominated by middle-aged males. Although the program has proven to be effective for many populations, the perception could deter individuals who feel they do not fit this stereotype (Kelly et al., 2009). In order to get the best benefits from mutual help groups, a counselor must take into account factors such as age, education level, gender, race, spirituality, and presence of a dual diagnosis. For example, AA offers

meetings specifically tailored to youths and Double Trouble in Recovery (DTR) is a mutual help group that aims to aide individuals with a dual diagnosis (Kelly et al., 2009).

An additional concern that counselor's must consider is their role in facilitating participation in mutual help groups (Kelly et al., 2009). Once a counselor and their client have explored options for mutual help groups it is the counselor's responsibility to provide reassurance and all necessary information to client's. The more information that a client is given about the group, the less anxiety and fear they will have about making the commitment to attend the group. Addressing hesitations with motivational interviewing techniques can be a useful tactic for decreasing client ambivalence towards treatment and building the client's intrinsic motivation to engage in recovery (Ford & McHenry, 2009).

REFERENCES

- Brooks, F., & McHenry, B. (2009). *A contemporary approach to substance abuse and addiction counseling a counselor's guide to application and understanding*. Alexandria, VA: American Counseling Association.
- Conversion, D. D. (1998). Management of withdrawal syndromes and relapse prevention in drug and alcohol dependence. *Am Fam Physician*, 58(1), 139-146.
- Goodman, A. (2007). Neurobiology of addiction and integrative review. *Biochemical Pharmacology*, 75, 266-322.
- Higgins, S. T., Budney, A. J., Bickel, W. K., Foerg, F. E., Donham, R., & Badger, G. J. (1994). Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. *Archives of general psychiatry*, 51(7), 568.
- Horgan, C., Skwara, K. C., Strickler, G., Brandeis University, Schneider Institute for Health Policy, & Heller Graduate School. (2001). Substance abuse: The nation's number one health problem, 2001. *Substance Abuse: The Nation's Number One Health Problem*.
- Humphreys, K., & Moos, R. (2001). Can Encouraging Substance Abuse Patients to Participate in Self-Help Groups Reduce Demand for Health Care? A Quasi- Experimental Study. *Alcoholism: Clinical and Experimental Research*, 25(5), 711-716.
- Humphreys, K., Wing, S., McCarty, D., Chappel, J., Gallant, L., Haberle, B., ... & Weiss, R. (2004). Self-help organizations for alcohol and drug problems: Toward evidence-based practice and policy. *Journal of Substance Abuse Treatment*, 26(3), 151-158.
- Kadden, R., Carbonari, J., Litt, M., Tonigan, S., & Zweben, A. (1998). Matching alcoholism treatments to client heterogeneity: Project MATCH three-year drinking outcomes. *Alcoholism: Clinical and Experimental Research*, 22(6), 1300-1311.

- Kaskutas, L. A., Bond, J., & Humphreys, K. (2002). Social networks as mediators of the effect of alcoholics anonymous. *Society for the Study of Addiction to Alcohol and Other Drugs*, 891-900.
- Kelly, J. F., Magil, M., & Stout, R. L. (2009). How do people recover from alcohol dependence? A systematic review of the research mechanisms of behavior change in Alcoholics Anonymous. *Addictions Research and Theory*, 17(3), 236-259.
- Kelly, J. F., & Yeterian, J. D. (2011). The role of mutual-help groups in extending the framework of treatment. *Alcohol Research and Health*, 33(4).
- Koob, G. F., Kandel, D., & Volkow, N. D. (2008). *Psychiatry: Pathophysiology of addiction* (Third ed.). Chichester, UK: John Wiley & Sons, Ltd.
- Le, C., Ingvarson, E. P., & Page, R. C. (1995). Alcoholics anonymous and the counseling profession: Philosophies in conflict. *Journal of Counseling and Development*, 73, 603-609.
- Lerman, C., & Berrettini, W. (2003). Elucidating the role of genetic factors in smoking behavior and nicotine dependence. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, 118(1), 48-54.
- Lloyd, C. (1998). Risk factors for problem drug use: identifying vulnerable groups. *Drugs: Education, Prevention, and Policy*, 5(3), 217-232.
- Magil, M., & Ray, L. A. (2009). Cognitive-behavioral treatment with adult alcohol and illicit drug users: a meta-analysis of randomized controlled trials. *Journal of Studies on Alcohol and Drugs*, 516-527.
- Markland, D., Ryan, R. M., Tobin, V. J., & Rollnick, S. (2005). Motivational interviewing and self-determination theory. *Journal of Social and Clinical Psychology*, 24(6), 811-831.

- Marlatt, G. A., & Donovan, D. M. (2005). *Relapse prevention: maintenance strategies in the treatment of addictive behaviors (Second ed.)*. New York, NY: The Guilford Press.
- McLellan, A. T., Hagan, T. A., Levine, M., Meyers, K., Gould, F., Bencivengo, M., ... & Jaffe, J. (1999). Does clinical case management improve outpatient addiction treatment. *Drug and Alcohol Dependence*, 55(1), 91-103.
- McAuliffe, W. E. (1990). A randomized controlled trial of recovery training and self-help for opioid addicts in New England and Hong Kong. *Journal of Psychoactive Drugs*, 22(2), 197-209.
- Miller, W. R. (1998). Researching the spiritual dimensions of alcohol and other drug problems. *Addiction*, 93(7), 979-990.
- Miller, W. R., & Rollnick, S. P. (2002). *Motivational interviewing: Preparing people for change*. The Guilford Press.
- Moos, R. H., & Moos, B. S. (2006). Participation in treatment and Alcoholics Anonymous: a 16-year follow-up of initially untreated individuals. *National Institute of Health*, 62(6), 735-750.
- Morgenstern, J., Kuerbis, A., Amrhein, P., Hail, L., Lynch, K., & McKay, J. R. (2012). Motivational interviewing: a pilot test of active ingredients and mechanisms of change. *Psychology of Addictive Behaviors*, 26(4), 859-869.
- Obert, J. L., Rawson, R. A., McCann, M. J., & Ling, W. (2006). *Counselor's treatment manual: matrix intensive outpatient treatment for people with stimulant use disorders* [Pamphlet]. Rockville, Md: DHHS Publication.
- Obert, J. L., Rawson, R. A., McCann, M. J., & Ling, W. (2006). *Counselor's family education manual matrix intensive outpatient treatment for people with stimulant use disorders*[Pamphlet]. Rockville, Md: DHHS Publication.
- Penn, P., Brooks, A. (2000). Five years, twelve steps, and REBT in the treatment of dual diagnosis. *Journal of Rational-Emotive Behavior Therapy*, 18(4) 197-208.

- Rawson, R. A., & McCann, M. J. (n.d.). *The matrix model of intensive outpatient treatment a guideline developed for the behavioral health recovery management project* [Pamphlet].
- Rawson, R. A., Marinelli-Casey, P., Anglin, M. D., Dickow, A., Frazier, Y., Gallagher, C., ... & Zweben, J. (2004). A multi-site comparison of psychosocial approaches for the treatment of methamphetamine dependence. *Addiction*, 99(6), 708-717.
- Rawson, R. A., Shoptaw, S. J., Obert, J. L., McCann, M. J., Hasson, A. L., Marinelli-Casey, P. J., ... & Ling, W. (1995). An intensive outpatient approach for cocaine abuse treatment: The Matrix model. *Journal of Substance Abuse Treatment*, 12(2), 117-127.
- Shoptaw, S., Rawson, R. A., McCann, M. J., & Obert, J. (1995). The Matrix model of outpatient stimulant abuse treatment: Evidence of efficacy. *Journal of Addictive Diseases*, 13(4), 129-141.
- Sigvardsson, S., Bohman, M., & Cloninger, C. R. (1996). Replication of the Stockholm Adoption Study of alcoholism: Confirmatory cross-fostering analysis. *Archives of General Psychiatry*, 53(8), 681.
- SMART Recovery: Self-Management and Recovery Training (2012). Retrieved from <http://www.smartrecovery.org/>.
- Stoil, M. J., & Hill, G. (1996). *Preventing substance abuse: interventions that work*. New York, NY: Plenum.
- Sue, D. W. (2012). *Counseling the culturally diverse: Theory and practice*. John Wiley & Sons.
- Sutker, P., & Archer, R. (1979). MMPI characteristics of opiate addicts, alcoholics, and other drug abusers. *MMPI: Clinical and Research Trends*, 105-148.
- Swartz, M. S., Swanson, J. W., Hiday, V. A., Borum, R., Wagner, H. R., & Burns, B. J. (1998). Violence and severe mental illness: the effects of substance abuse and nonadherence to medication. *American Journal of Psychiatry*, 155(2), 226-231.

Uhl, G. R., & Grow, R. W. (2004). The burden of complex genetics in brain disorders. *Arch Gen Psychiatry*, *61*, 223-229.

U.S. Department of Health and Human Services Substance Abuse and Mental Health Services Administration Center for Behavioral Health Statistics and Quality (2011). Results from the 2011 National Survey on Drug Use and Health: Summary of National Findings.

White, B. J., & Madara, E. J. (Eds.). (2002). *The self-help group sourcebook: Your guide to community and online support groups*. Amer Self-Help Group Clearing house.

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Research Interests

I have broad interests in clinical psychology, specifically in the use of cognitive behavioral therapy in the treatment of mental health disorders. Specifically, I am interested in the treatment of alcohol and substance abuse in both outpatient and inpatient settings.