# THE RELATIONSHIP OF VOCATIONAL IDENTITY AND OTHER MITIGATING VARIABLES TO PROGRESS IN SUBSTANCE DEPENDENCE TREATMENT IN A THERAPEUTIC COMMUNITY

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ABSTRACT

THE RELATIONSHIP OF VOCATIONAL IDENTITY AND OTHER MITIGATING VARIABLES TO PROGRESS IN SUBSTANCE DEPENDENCE TREATMENT IN A THERAPEUTIC COMMUNITY

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The relationship of vocational identity and other mitigating variables such as age, education, income, and length of stay in treatment to progress in substance dependence treatment was explored in this study. The study was conducted in a therapeutic community in a southeastern Michigan urban setting with adult male subjects diagnosed with substance dependence. Progress in substance dependence treatment was measured through the Recovery Attitude and Treatment Evaluator-Questionnaire Instrument (RAATE-QI), which measured resistance to treatment planning, resistance to continuing care, biomedical acuity, psychiatric / psychological problems, and social / familial / environmental factors. Vocational identity was measured through the Vocational Identity Scale of the My Vocational Situation (MVS) instrument.

Data were gathered on 102 subjects who were administered a MVS and a RAATE-QI during the first week of treatment and a second RAATE-QI during the fourth to eighth weeks of treatment. Through stepwise regression analysis, the dependent variable progress in substance abuse treatment dimension, biomedical acuity, was found to have a statistically significant relationship with a higher degree of vocational identity; age was found to have a negative correlational relationship with the progress in substance dependence treatment dimension, resistance to continuing care. Additional post hoc

analysis revealed differences between subjects who left treatment before the prescribed discharge date and those who completed the initial questionnaires and the second set 4 to 8 weeks later in the categories of education and biomedical acuity.

The study results showed statistically significant relationships between the dependent variable progress in substance dependence treatment and vocational identity and age, leading to guarded interpretations of the findings. The biomedical acuity dimension might also have been measuring physiological and psychological craving, which may be a factor in treatment retention and treatment progress. In attempting to understand the sources of the unexplained variance, criminality, ethnicity, vocational decidedness, motivation for treatment, drug of choice, learning style, and personality traits may also be determinants of progress in substance dependence treatment. The relationship of variables such as motivation for treatment to vocational identity needs further study as do other issues related to progress in substance dependence treatment, adult education considerations in substance dependence treatment settings, and vocational issues.

This dissertation is dedicated to the memory of

Cas Heilman.

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# CHAPTER ONE

## INTRODUCTION

In the waking hours of an urban community hospital, two boys are born in adjacent birthing rooms. Their names are Robert and William, and although many of their family and life experiences will be similar, the final chapters of their lives will be dramatically different.

Robert, the third child in a family of two older brothers and one younger sister, learns early that his mother is a stable and important force in his life because his father is always away from home either, working or socializing with his friends. He grows up depending on his older brothers as role models due to his father's absence. Occasionally, a teacher impresses him with knowledge about a subject such as science or relates especially well with him. These periodic positive experiences serve as anchors whenever Robert asks himself what he might want to do for a living when he finally grows up--perhaps be a teacher or maybe a scientist.

William is also the third child in a family of two older brothers and a younger sister. His father and his mother both work the day shift for a large furniture manufacturer. His father is a craftsman and shares his skills and knowledge with his children, including them as helpers after school in his secondary carpentry business. William believes he will eventually work for the same furniture company as his parents

do, but because of curiosities and rebelliousness, he goes through several phases of exploration before he finally returns to his original preference-- to be a craftsman.

William and Robert meet at an early age in their neighborhood and share not only their common birthday bond but also similar boyhood adventures in sports and eventually girls. In their early teens, both find other peers who share a curiosity for the effects of alcohol, marijuana, and eventually cocaine. Both William and Robert find profound rewards in the euphoria of drugs their peer group enjoys. They both are "high" achievers in the world of drugs, being able to tolerate large quantities of alcohol and drugs. Most of their discussions and activities revolve around drugs, but even with their preoccupation with drugs, the boys are able to graduate from high school, find jobs at the local furniture manufacturer, maintain employment, and begin to shape their lives with marriage and children.

However, over time, both Robert and William fail to combine their drug-taking lifestyle with family responsibilities. In addition, both find themselves involved in disciplinary procedures at work due to absenteeism and erratic behavior caused by drug dependence. Over time, both become discouraged in their various attempts to quit using drugs and alcohol through outpatient treatment and self-help groups. Finally, they both find themselves in treatment together in a local residential drug abuse program.

Following this treatment experience, the two men's experiences no longer seem to be parallel. Robert continues to struggle with his dependence and suffers repeated relapses. William relapses once but quickly corrects his mistake by resuming attendance at self-help groups and reestablishing contact with his outpatient aftercare program. He begins a healthy and responsible relationship with his family and employer. Like his

father, he also starts an evening furniture repair business assisted by his children and his spouse.

William occasionally visits with Robert at work and encourages him to keep trying to seek help, but Robert progressively worsens and appears to have lost hope. William's concern about Robert's despair escalates into fear for his future. Thirty-five years after their first encounter in the nursery of the maternity ward, William finds himself looking at Robert for the last time, this time in a parlor room of a funeral home. Robert has died after rear-ending a tractor-trailer while under the influence of alcohol and marijuana.[1]

## Statement of the Problem

Success and tragedy commonly are found in the substance abuse treatment process. Much like William and Robert, patients with similar financial, employment, and family resources will differ in their reaction to treatment approaches. Treatment approaches are based on psychological, physiological, and sociological theories, which are not easily tested because of the large number of variables that intermingle before, during, and after treatment. Hubbard et al. (1989) reviewed treatment-effectiveness studies and concluded that changes in employment and psychological well being associated with treatment participation are not well known. Frances and Miller (1991) describe a paradox created when a substance-dependent patient resists treatment because of a fear of addiction to a ***positive*** alternative such as attendance at a self-help group.

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[1] The case description of Robert and William is a composite of several dramatic but factual case histories disguised to protect the confidentiality of the clients.

Consequently, questions continue to be raised about what differentiates one patient from another in the response to treatment.

Even though some investigators have not clearly explained the relationship between employment and substance dependence (Hammer, Ravndal, & Vaglum, 1985) others such as Elliot (1992), Schwab and Dinitto (1993), Emener (1992), Westermeyer (1989) and Hammer et al (1989) have found vocational issues to be important. Hammer et al. indicated that the stability of a vocational plan and subsequent employment are positive outcome indicators of progress in substance abuse treatment. In a survey of recovering alcoholics in Alcoholics Anonymous, Emener found that respondents emphasized the importance of employment and vocational development but reported a lack of opportunities for improvement. Clarity of vocational identity provides a foundation for strengthened self-esteem and self-confidence which should improve the chances for progress in substance abuse treatment. In this study the researcher sought to gain a better understanding of the influence of vocational identity issues as they relate to the response to substance dependence treatment.

## Background of the Problem

In 1993, following its Household Survey, the National Institute of Drug Abuse reported that an estimated 11.7 million Americans used an illicit drug during the month preceding the survey. In addition, more than 23 million Americans were estimated to have used cocaine at some time in their lives; uses in 1994 were estimated at 1.4 million people and frequent users at approximately 800,000 (Facts About Cocaine, 1995). According to the National Institute of Alcohol Abuse and Alcoholism, 1996, about 9% of

adults in the United States meet the diagnostic criteria for alcohol dependence and the less severe medical disorder, alcohol abuse. Of these, more than 500,000 were treated in 1993 in more than 8,000 inpatient and outpatient alcohol treatment programs in the United States. Studies sponsored by the NIAAA have reported relapse rates of more than 50% or more at 2 to 4 years after treatment (NIAAA, 1996).

Numerous efforts have been made to control the epidemic of drug abuse and dependence. These initiatives have had varying degrees of success and failure, with little consensus as to the best overall strategy to manage drug abuse and dependence. Prevention efforts aimed at youths have some effect on use, especially if they are linked with activities in which parents are taught how to approach children about drug abuse. The above mentioned social controls influence use and abuse of illicit drugs, but there are still those who abuse or become dependent on drugs, who need intervention to stop abuse and/or dependence. However, few prevention programs have been found to consistently reduce the number of their subjects who use drugs (Drugs in the 1990's, 1994).

Law enforcement personnel have fought a "war on drugs" championed by each new wave of politicians in state and federal government. Law enforcement officers have inconsistently and ineffectively controlled the flow of illicit drugs into the U.S. In previously untouched communities such as Fargo, North Dakota, the number of Methedrine cases has quadrupled since 1994, and in a northeastern study it was estimated that the teen murder rate had jumped by 320%, an outcome associated with the increase in the sale and abuse of drugs (Bai, 1997). Although there are some signs of progress due to reduction in overall use of cocaine and marijuana since the 1980's, there are new trends

in the use of heroin, methamphetamine, and a new synthetic narcotic called methcathinone (Drugs in the 1990's, 1994).

A majority of jail and state prison inmates report that they were under the influence of drugs or alcohol (or both) at the time of their current offense (Drug use forecasting, 1994). In testimony submitted to the U.S. House of Representatives, Thomas Constantine, Administrator for the Drug Enforcement Administration, stated that the U.S. is spending $20 billion to keep people in jail and another $20 billion for new facilities (Drugs in the 1990's, 1994). Correctional efforts through probation programs, jails, and prisons have resulted in housing those possessing or selling illicit drugs. However, this approach is effective only as a warehousing effort, and most criminals revert to drug use and crime following incarceration. In New York City, it costs $60,000 per year to keep someone in jail. National statistics indicate that 70% of those incarcerated will return within 3 to 5 years of their release (New challenges, 1994).

In the case example of Robert and William, neither apparently benefited from prevention efforts by their school system, nor did they experience incarceration as a consequence of their drug use. It appears that the most significant factors leading to their entry into treatment were family and job motivators.

## Substance Dependence Treatment Approaches

Multiple theories have been formulated to address questions about why people ingest the first drink or drug, why some try drugs and some do not, why some who try drugs do not become addicted and why others immediately become preoccupied with the effects of the drug (Cloninger, Dinwiddie, & Reich, 1989; Frances, 1988; Frances &

Franklin, 1989; Vaillant, 1995). Related issues include the rituals of drug ingestion, the social environment surrounding acquisition of the drug and the effect on the family, other social consequences, genetic predisposition to alcoholism, and biomedical factors (Blum et al., 1992; Cloninger et al., 1989; Frances & Miller, 1991; Frances, Miller & Balanter, 1989; Frances & Strauser, 1988; McGue, Sharma & Benson, 1996;).

Researchers have linked indicators such as genetic predisposition to alcoholism through adoption studies looking at the alcohol use of adopted versus biological children in families with and without alcohol abuse problems (Cloninger et al., 1989; McGue, et al., 1996). Other researchers have focused on biochemical factors; for example, a significant amount of data suggests that drug-seeking behavior results from a series of neurochemical reactions in the brain's reward circuits. Such clear evidence of chemical reactions have led to theories concerning common pathways for all addictive drugs, such as alcohol, cocaine, and opiates (Blum et al., 1992).

Many treatment approaches apparently are effective and continue to be improved, but questions about factors contributing to progress in substance abuse treatment remain as challenges to maximizing treatment outcomes (Project MATCH Research Group, 1997; Vaillant, 1995). The approach to treatment usually is multifaceted, using resources to help the patient understand all dimensions of dependence and dealing with physical withdrawal, physical consequences, and cravings, which can be a combination of profound physical, emotional, and cognitive forces leading to relapse. Drug dependence results in the depletion of resources such as family support, financial assets, work status, and psychological strength. Treatment approaches usually strive to help the patient

replenish these areas by compartmentalizing the drug abuse problem and by refocusing on tasks that can be accomplished in the short-term.

Substance abuse treatment tends to focus on physical factors such as withdrawal or craving management, or on psychological issues such as self-esteem. The physical problems are treated medically or through structured behavioral exercises that help the patient relax or reassociate certain stimuli. These approaches are indigenous in their rewards, and if medication and behavioral exercises are maintained and there are no physical complications, positive treatment outcomes result (Frances & Miller, 1991). Psychological interventions focus on self-esteem by first recognizing the stigma of addiction and disassociating the self from the addiction. If addiction and the associated history of behaviors and outcomes can be separated from the self-concept, then there is a chance to rebuild esteem. Self-esteem may be a causative factor leading to use and abuse, or it may be a dynamic of the consequences of addictive behavior and outcome.

## A Developmental Perspective on Treatment

Emphasis has been placed on understanding substance dependence from a developmental perspective. This point of view influences approaches to treatment, as well, with particular stress on the concept of identity. Primarily through the work of Erik Erickson (1959), identity has become a central focus in developmental psychology. According to this view, psychological growth stems from a ground plan, with different dimensions maturing at different life stages. A key stage of development is in the area of ego identity. Ego identity is defined as a self-awareness that remains consistent when portraying oneself to others (Erikson, 1973).

Marcia, Waterman, Matteson, Archer, and Orlofsky (1993) expanded further on the concept of identity through the establishment of identity statuses. The developmental process was assessed at different points in time to ascertain the current state of identity development. This view assumed that the current status was important in understanding current needs and planning treatment interventions. At any point in development, identity status can change with regard to any number of identity domains. Identity domains include sex role attitudes, religious beliefs, political beliefs, family priorities, career priorities, marital beliefs, the role of the spouse, and vocational plans. Knowledge about the status of identity in any domain should be helpful in understanding certain psychological characteristics (Marcia et al., 1993).

Vocational identity is a crucial part of psychological development and maturity. For those who have not resolved this developmental question or for those involved in the struggle to ascertain their vocational identity, discomfort and preoccupation can affect their abilities to cope or grow in other areas. A clear vocational identity may enhance the potential for more effective substance abuse treatment; conversely, a diffused identity may adversely influence the effects of substance abuse treatment. The first use of alcohol or other drugs commonly occurs during adolescence, which is a very critical time developmentally. Brown, Gleghorn, Schuckit, Myers and Mott (1996) reported that adolescents in substance abuse treatment disclosed that by the age of 11 they had tried alcohol, that by 13 they were using it weekly, and that their initial use of other drugs such as marijuana occurred on average within a year. During this period, most adolescents are engaged in a struggle to establish their identity (Erikson, 1968). One of the most significant factors in this stage that will lead to autonomy and distinction of the ego from

parental association and control is the ability to exist with financial independence. The adolescent is faced with a challenge to find short-term employment to meet immediate gratification for separation. The adolescent also is capable of delaying financial independence if he or she identifies a future vocation that will lead to autonomy; e.g., college financed by parents can serve as an exploratory or achieved stage, even though employment in a job or profession has not yet occurred.

If, during this developmental phase drug abuse interferes with job-seeking behavior or career planning, an important opportunity for fostering self-esteem has been eroded. Finding a job, successfully interacting with fellow workers, accomplishing tasks, and gaining financial rewards combine to help develop positive self-esteem. Vocational identity may also be distorted as a result of negative job experiences, such as disciplinary actions for absenteeism due to drug abuse.

Consequently, the establishment of a vocational identity at an early stage or during any stage of development is a positive event that will fortify self-esteem. Vocational identity is an important contributor to self-esteem, and it is the antecedent to many other aspects of a self-experience that should improve the effectiveness of substance abuse treatment. However, as important as it may be developmentally, vocational identity is not viewed theoretically or by practitioners as a predominant factor to consider during substance abuse treatment. Although vocational identity has been mentioned as a dimension to be considered in substance abuse treatment, it has not been closely examined or extensively discussed in the research literature. The logic that an achieved vocational identity is a significant precursor to positive self-esteem has been established, but its clear association with the acceleration of progress in substance abuse treatment has

not been clearly supported through research (Benshoff, Jankowski, Tariconi & Brenner, 1990). Treatment program clinicians sometimes attempt to reduce criminal activity and increase productivity of the client. These programs are designed to help the client develop specific goals and objectives that may be vocationally oriented. Treatment programs may have special tracks that focus on vocational rehabilitation and help develop job seeking skills. These services are considered ancillary and vary significantly from program to program (Hubbard et al., 1989).

Although treatment often works, employment or vocational issues are often problematic and need attention during substance abuse treatment. These issues have been commonly discussed but not extensively studied through research. In addition, the role of vocational identity development as it relates to drug dependence has not received focused attention in treatment or educational theories or through related research. Other variables that may factor in as important in evaluating the effectiveness of treatment are age, income, education, length of treatment, and type of treatment.

Once Robert and William entered treatment, the difference in their responses to the treatment is unclear. The stability of William's family and his seemingly achieved vocational identity may have provided additional support, which allowed him to concentrate on the fundamentals of treatment. Robert's lack of focus vocationally may have distracted him from attending to the therapy assignments, and not being a craftsman may have differentiated him enough from William to make the difference between rehabilitation and relapse. This research was undertaken to explore the link between vocational identity and the readiness of the drug abuser to progress in treatment. No

answers are provided through these cases, only questions about the effectiveness of treatment and each individual's predisposition and ultimate success or failure.

In the case example of Robert and William, neither appeared to benefit from prevention efforts by their school systems nor did they experience incarceration as a consequence of their drug use. It appears that the most significant factors leading to their entry into treatment were family and job motivators. An assessment of their identity status may have revealed that stability had been established in William's vocational identity, whereas there was instability in Robert's vocational identity. If such a discovery had been made during treatment, a concentrated effort to intervene might have made a difference and could have saved a life.

## Purpose of the Study

The researcher's purpose in this study was to investigate the relationship of vocational identity and other mitigating variables to progress in substance abuse treatment. Treatment progress was measured using the Recovery Assessment of Attitudes Treatment Evaluator-Questionnaire Instrument (RAATE-QI) (Lee, Hoffmann, & Smith, 1992), and vocational identity was measured through the use of My Vocational Situation (Holland, Daiger, & Power, 1980) to determine the degree of achieved vocational identity status.

The residential therapeutic community modality was selected because of its controlled environment as compared to an outpatient program because of the accessibility to clients in treatment for research purposes, and because the length of stay for treatment

was significantly longer than inpatient care, other shortened residential treatment and other modified forms of day treatment.

## Research Question

This researcher explored the relationship of several independent variables to several dependent variables that defined progress in substance dependence treatment. Specifically, the question investigated in this study was: What is the relationship of vocational identity, length of treatment stay, years of education, age and income at time of admission to specific measures of progress in substance dependence treatment? Progress in substance abuse treatment was measured in terms of resistance to treatment planning, resistance to continuing care, biomedical acuity, psychological and psychiatric problems and social/family/environmental factors.

## Implications for Teaching and Learning

De Leon (1994) considered many aspects of treatment in a therapeutic community as primarily a learning process. Consequently, adult learning considerations must be recognized when developing an educational and therapeutic strategy within the treatment environment. The developmental view of the self building on experiences that eventuate in an identity ties both learning theory and developmental theory together. Approaches to learning include behavioristic, cognitive, humanistic and social learning theories (Merriam & Caffarella, 1991).

In a treatment setting, there is potential to use all of these theoretical models. There are significant rewards through the provision of privileges (behavioral reinforcement); conceptualization of the treatment philosophy or the steps of a 12-step

self-help group (cognitive structure); and motivation to learn the lessons of recovery to change leading to self-actualization (humanistic), as well as the compliments of the peer group when a successful step is taken during treatment (social learning). In each learning theory category there are examples of the overlap of learning and therapeutic factors. Maslow (1972), viewed learning as a form of self-actualization, and Merriam and Caffarella (1991) noted that learning contributes to psychological health and is a form of therapy. It is possible to conclude that if learning is a form of self-actualization, it is also possible that self-esteem would improve if learning occurred.

Mezirow (1991) argued that psychology theorists and other research disciplines interested in adult learning become trapped in theoretical models, each with its own frame of reference for interpreting reality. He proposed an integration of thinking to synthesize the ideas of each discipline in relation to adult learning. The common dimension that is missing from each theory is the way adults find meaning in their learning experience. Meanings change structure when the individual becomes dysfunctional, and one must either reestablish the original meaning or develop a new meaning to return to full functioning. Mezirow's transformational learning theory suggests a deep introspection into assumptions about the meaning of experience for adults, leading not only to learning but also to change. Mezirow's construct is easily applied to substance abuse treatment approaches that attempt to reformulate a person's identity from "addict" to "recovering person" through learning a new set of values and assimilating them as a new meaning for day-to-day coping.

Cranton (1992) suggested that the child forms values and a perspective on the world. It is assumed, however, that the adult already has developed values and is in the

process of transforming some of these values before, during, or after the learning process. The context of the social situation will influence the learner's perception of the environment, and the process can be influenced by the people, events, and changes in the surrounding context. These factors can challenge the assumptions of the learner, who will then process the new information and accept or reject that information or the premise upon which it is presented. Cranton emphasized that transformative learning is the process of learning through critical self-reflection. Changes in perspectives and eventually in values will lead to different assumptions that are critical for readiness to learn and actions within the learning process. The developmental process of identity formation and the transformational learning process have parallels through their use of a framework surrounding values and assumptions. The self, in order to be distinguished from others, must develop a set of values and assumptions that are tested and verified early on to develop selfsameness (Erikson, 1967). The self in whatever context it lands will continue to redefine its essential characteristics, or, if challenged frequently enough or dramatically enough, will change assumptions and perhaps a sense of identity.

Adult learning considerations should be used in designing programs for the substance dependent population. This will improve comprehension and retention of treatment concepts, which will lead to improved progress in substance dependence treatment. Factors that influence the general adult population are likely also to be factors for the substance-dependent person in treatment. Instructional settings, which determine the support needed by learners (Merriam & Caffarella, 1991) differentiate between whether instruction should be learner directed or teacher directed. Conclusions about the adult as a self-directed learner can be expanded to the adult substance-dependent self-

directed learner. The principles of the drug culture, learned through social learning, can be replaced with new concepts through self-directed searches of recovery and vocational information. However, it is possible that the substance-dependent population is significantly different from the general adult population and may not have the same capacity to engage in self-directed learning. Knowles (1990) described healthy adult learners as having capability and maturity, as well as the desire for others to perceive their strengths the same. When considering adult learning principles, these assumptions about a healthy adult learner would not generally hold true for the substance abuser. However, the implications Knowles (1990) described seem to maintain their validity in that the substance-dependent person would also appreciate respect and the opportunity to plan and carry out his or her learning experiences. The challenge for clinicians is to present self-directed tasks to those in substance-dependent treatment with the appropriate timing. Special attention to the limitations of the substance dependence population related to learning barriers such as child care or lack of a clear plan may help improve treatment effectiveness.

The view of adults as learners, interrelated with the problem of substance dependence, can be analyzed through the developmental theory popularized by Sheehy (1976), highlighting adult life in a series of predictable crises. Other models such as that of Cross (1981) have tied personal factors such as physiology, aging, sociocultural aspects, life phases, and personal psychology to the situational aspects of an adult's life, which dictate whether education will be pursued full time or part time and whether it is compulsory or voluntary. The same considerations that motivate adults to learn are also those that will help lead a person to treatment for substance dependence (Frankel, 1989).

An example of this interrelationship is occupational motivation, which may be a factor leading to substance treatment and entering into some form of adult education or training. The case example of Robert and William demonstrates that the substance dependence problem might be resolved by combining vocational, educational, and treatment resources. Cross (1981) and Merriam and Caffarella (1991) referred to the work of Miller with force-field analysis, Rubenson's expectancy-valence paradigm, and Boshier's congruence model, among others all of which concerned how adults are motivated to learn. These theories also have been used in the substance-dependence field to help describe the motivation of substance-dependent individuals. Practitioners in the field of substance dependence have applied these models clinically to illustrate human decision-making behavior in substance-dependent people in treatment.

## Significance of the study

Substance dependence is a long-standing problem that has become ubiquitous in American society. Concerns about the rehabilitation of substance-dependent focus not only on their own well being but also on that of their network of family and friends. If the substance abuser is rehabilitated, significant others and the individual's associated environments may improve proportionately. If left untreated, the substance abuser is likely to lose employment or never to become legitimately employed. Other consequences of chronic substance dependence include family disenfranchisement, continued legal entanglements, and medical problems that could be life threatening.

Although the efficacy of substance dependence treatment is generally accepted, it is not completely clear what characteristics of treatment have the least or the most effect.

NIAAA studied alcoholics through an 8 year clinical trial study, in which no significant difference in outcomes was found among therapeutic approaches. Although there was progress in all of the treatment approaches, only one match, between patients with low psychiatric severity and a 12-step self-help group approach, indicated that patients treated with that approach abstained more from drugs and alcohol than those treated with cognitive-behavioral therapy (Project MATCH Research Group, 1997).

Shorter inpatient stays have resulted in part from improved clinical technology, allowing for more efficient treatment in the medical detoxification phase of treatment, and tighter clinical case management, making treatment providers more accountable for treatment plans and recommendations. These tighter controls and shorter lengths of stay, as well as accountability to payers (insurance, governmental funding and employers), have forced substance dependence professionals to evaluate the effectiveness of treatment (Miller, 1992; Oss & Tidgewell, 1994). It is important to explore the significance of the vocational variable, in order to help improve treatment effectiveness. In addition, continued examination of vocational identity will help develop this concept beyond simply a caricature of Erikson's thinking (Vondracek, 1992); that is, psychological theory may be applied in a clinical setting. With a common linkage and more research on the interrelationships of vocational development and substance abuse, it may be found that the vocational and substance abuse disciplines have common linkages to assist clients with multiple problems such as substance dependence and unemployment.

## Limitations and Delimitations

This study was focused on a finite time period during the initial stages of treatment in a residential therapeutic community for substance abuse treatment. Subjects were males who were primarily cocaine dependent, with a secondary alcohol dependency. This narrow population and specialized treatment modality limited the conclusions that could be drawn about the population of drug and alcohol abusers. In addition, the subjects agreed to participate in the study, and only those who successfully participated in treatment were given the full battery of instruments. This self-selection and subsequent screening of successful subjects also limited the conclusions that could be drawn concerning the results.

## Definitions of Terms

The following terms are defined in the context in which they are used in this dissertation.

Ego identity: The young person, to experience wholeness, must feel a progressive continuity between that which he has come to be during the long years of childhood and that which he promises to become in the anticipated future; between that which he conceives himself to be and that which he perceives others to see in him and to expect of him. Individually speaking, identity includes, but is more than, the sum of all the successive identifications of those earlier years when the child wanted to be, and often was forced to become, like the people he depended on. Identity is a unique product, which now meets a crisis to be solved only in new identifications with age mates and with leader figures outside of the family (Erikson, 1968).

Progress in substance dependence treatment: A measure found in the Recovery Attitude and Treatment Evaluator- Initial Questionnaire, showing movement from high scores in five dimensions, which include resistance to treatment, resistance to continuing care, biomedical acuity, psychiatric / psychological acuity, and social / family / environmental factors to progressively lower scores over the course of a treatment episode (Lee, Hoffmann, & Smith, 1992).

Substance dependence: Presence of dysfunction related to a person's alcohol and/or other drug use, despite knowledge of persistent or recurring social, occupational, psychological or physical problems caused by use of the drug. In addition, there can be recurrent use of alcohol and/or drugs in situations in which such use is physically hazardous (American Psychiatric Association, 1994).

Vocational identity: A clear and stable picture of one's goals, interests and talents which is a portion of an individual's overall ego identity. Vocational identity is the clarity of a person's vocational goals and self-perceptions (Holland, Daiger, et al., 1980, page 2).

## Summary

Substance abuse is a long standing social problem that has assumed epidemic proportions in the United States. Although a multitude of approaches have been used to contend with the problem of substance abuse, such as prevention, incarceration, diversion and treatment, there is no singular solution. Despite the attempts that have been made to reduce the incidence of substance abuse, there is still a large population who need treatment. Substance abuse treatment approaches vary, as do etiological theories. Perspectives of treatment focus on the biomedical and the psychosocial aspects of the

substance abuser. In considering psychosocial variables, the developmental model includes identity development which relates to the building of self-esteem, as an important consideration. Self-esteem, or lack thereof, may be a causative variable related to substance use and the consequences of addiction. A significant aspect of identity development is the dimension of vocational identity, but as important as it is theoretically in developmental psychology, it is not a prevalent consideration in research or in theories concerning substance abuse treatment. The treatment process is highly dependent upon learning theory and application for adults both in the area of psychological development and with reference to substance dependence. Research on relationships of progress in substance abuse treatment to vocational identity, while considering the adult education implications, may help in coordinating a more comprehensive and systematic approach resulting in improved outcomes of substance abuse treatment.

# CHAPTER TWO

# LITERATURE REVIEW

The nature of the problem of substance dependence is reviewed in this chapter, and the intervention strategies used to contend with the problem are explored. Further focus is on treatment approaches for substance dependence, with particular emphasis on the therapeutic community (TC) modality. Theories related to substance dependence are examined, with emphasis on ego identity development. Through the examination of these theories, a rationale is presented that provides the basis for scrutinizing of vocational identity as one of the potential variables related to progress in substance dependence treatment.

## Substance Dependence as a Social Problem

The American Psychiatric Association In the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, (DSM-IV), (1994) the American Psychiatric Association defined the criteria for substance dependence as follows:

> A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:
>
> 1. tolerance, as defined by either of the following:
>    a. a need for markedly increased amounts of the substance to achieve intoxication or desired effect

b. markedly diminished effect with continued use of the same amount of the substance

2. withdrawal, as manifested by either of the following:
   a. the characteristic withdrawal syndrome for the substance
   b. the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
3. the substance is often taken in larger amounts or over a longer period than was intended
4. there is a persistent desire or unsuccessful efforts to cut down or control substance use
5. a great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects
6. important social, occupational, or recreational activities are given up or reduced because of substance use
7. the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

The preceding definition is further specified by differentiation between physiological dependence and no physiological dependence, the stage of the course of dependence such as early remission or partial remission, evidence of any type of prescription drug treatment to cause adverse effects if substances were ingested and if in any type of controlled environment such as inpatient treatment (American Psychiatric Association, 1994, page 181).

Substance dependence is a problem because of its disruption of people's lives, the economic costs to both individuals and organizations, and its social impact which manifests itself in the form of violence, crime, and other consequences. Pernanen, (1993) and Stinson, Dufour, Steffens and DeBakey (1993) summarized research and

research methodology linking violence and mortality rates with alcohol dependence as evidence of the disruptive effect it can have on society. The problem of substance dependence exists despite numerous historical and current efforts at prevention, correction, interdiction, and treatment. Because of the dramatic effect of substance dependence on our culture, efforts to contend with the problem warrant ongoing examination, with the goal of improving outcomes (Kleber, 1994).

In remarks made to the Information, Justice, Transportation and Agriculture Subcommittee of the Committee on Government Operations, House of Representatives, 103rd Cong., 2d Sess. 1 (New Challenges, 1994) Chairman and Representative Gary A. Condit stated that the United States spends more than $20 billion annually to combat its drug problem. With only 5% of the world's population, the U.S. consumes two-thirds of the world's supply of cocaine. Although progress is being made in reducing overall drug use, certain drugs such as heroin, marijuana, LSD, PCP, mescaline, and Methedrene are making comebacks. The gains in cocaine use have been primarily with recreational users, and although its use decreased dramatically from 1986 to 1992, cocaine overdoses increased.

In 1993, following its Household Survey, the National Institute of Drug Abuse reported that an estimated 11.7 million Americans used an illicit drug during the month preceding the survey. In addition, more than 23 million Americans were estimated to have used cocaine at some time in their lives; in 1994 users were estimated at 1.4 million people and frequent users at approximately 800,000 (Facts about Cocaine, 1995). Since 1990, Baltimore and New York both have experienced large increases in the number of herion cases appearing in emergency rooms (New Challenges, 1994).

According to the NIAAA about 9% of adults in the United States meet diagnostic criteria for alcohol dependence and the less severe medical disorder, alcohol abuse. Of these, more than 500,000 were treated in 1993 in more than 8,000 inpatient and outpatient alcohol treatment programs in the United States. Studies sponsored by the NIAAA have reported relapse rates 50% or more at 2 to 4 years after treatment (NIAAA, 1996).

As McLellan, Woody, and Metzger (1996) reported, the Robert Wood Johnson Foundation has estimated that alcohol abuse costs society approximately $99 billion annually and that abuse of drugs costs approximately $67 billion annually. According to McLellan, Rice and the Robert Wood Johnson Foundation (1994) reported that one-eighth to one-sixth of all deaths in the U.S. can be traced to alcohol or drug abuse. Also, the Children's Defense Fund reported in 1994 that more than three-fourths of all foster children in this country are the offspring of alcohol- and/or drug-addicted parents (McLellan et al., 1996).

Gerstein and Harwood cited in McLellan et al., 1996, stated that current statistics indicate that as many as 75% of federal prisoners meet diagnostic criteria for substance dependence disorders. In addition, McLellan et al. reported that half of the street crimes against property are committed while the perpetrator is under the influence of alcohol and/or drugs or by someone who intends to use the proceeds of the crime to buy alcohol or drugs.

Saxe, Dougherty, Esty and Fine (1983) reported that federal minimum-security prison cells cost approximately $42,000 per cell to build and $28,000 to $32,000 to maintain each year. In addition, the cost of probation ranges from $9,000 to $14,000 per

year, with recidivism rates from 40 % to 60 % resulting in incarceration due to probation violations.

Cost estimates can be further described by examining the effects of drug use, which also affect the spread of infectious diseases like AIDS, hepatitis and tuberculosis. Due to the bartering of sex for drugs, sexually transmitted diseases are also related to drug dependence. The cost of health care is affected both directly and indirectly by the substance dependent person's accessing care for the treatment of substance dependence and related diseases and injuries. Substance-dependent persons use health care services up to 10 times as often as non addicted persons, and their family members use services up to five times as often as families whose members have no substance dependency (McLellan et al., 1996; Saxe et al., 1983).

## Intervention Strategies to Contend with Substance Dependence

Methods to intervene with substance use, abuse, and dependence have had varied successes and failures; there is little consensus on the best overall approach. It is clear that the complexities of the problem prevent absolute solutions resulting in eradication of substance use, abuse, and dependence, but there continues to be optimism that control or containment of the problem is possible.

### Correctional Approaches

Most criminally active drug abusers are poor candidates for treatment if long-term abstinence is the primary treatment goal, and most prison-based drug treatment programs are not effective in reducing recidivism rates (Gerstein & Harwood, 1990). Such findings imply that, for certain criminals and perhaps due to certain program designs, correctional

intervention and substance abuse treatment are not likely to be effective. On the other hand, a small number of prison-based therapeutic communities have had positive outcomes.

Metzger, Cornish, and Woody (1990) evaluated the effects of naltraxone, a narcotic antagonist for opiate dependence, with federal probationers and two other study groups with standard and enhanced probation experiences. A narcotic antagonist negates the euphoric effect of any narcotic drug; without the psychological reward, the substance-dependent person is less likely to use the drug and can attend more fully to the goals and activities of treatment. Only 23% of the naltraxone group were incarcerated during the 6 months following the study as compared to 55% of the enhanced-probation group. This finding indicated the positive effect of treatment compared to probation with increased supervision and accountability. This study demonstrated the effectiveness of treatment in conjunction with incarceration or probation and illustrated the failure of the corrections system to curtail substance abuse independent of treatment interventions.

## Interdiction

Although there have been several initiatives to curtail trade in illegal drugs and many have been effectual, there are also many examples of ineffective efforts. In August 1994, in testimony before the House of Representatives Subcommittee on Information, Justice, Transportation, and Agriculture, references were made to the heroin trade on both the West and East coasts flourishing at near-record levels. Methamphetamine production is up, with evidence of more than 350 methamphetamine labs being uncovered in 1993 in California alone (New Challenges, 1994).

## Prevention

Sussman and Johnson (1996) suggested that significant progress has been made in the science of prevention in the last 20 years. However, although there has been a steady decline in the use of most drugs, there seems to be a resurgence due to an increase in advertising and a lack of anti-drug messages in the media. Sussman and Johnson also pointed to inadequate application of research findings in the area of science and practice of prevention. This observation was supported by Gottfredson (1997), who criticized high-profile programs such as boot camps and midnight basketball for being ineffective and praised a public school program, the Social Problem Solving curriculum. The researchers' premise was that high-profile programs receive public attention and funding, even though they are not as effective as others. Yet these programs are retained due to inadequate research funding and evaluation methods.

Kleber (1994) indicated that the impact of prevention is difficult to measure but that it appears to have a significant effect in combination with the restriction of drug supply. However, the change in use has been seen primarily with non-addicts use rather than the addicted population. Kleber also stated that, in general, there had been a decline illegal drug users to 11.4 million in 1992, which reflects a dramatic cultural shift (NIDA Notes, 1997). Even with the dramatic decrease in substance abuse and dependence, there are still many problems stemming from substance abuse in our society such as crime, child neglect, family violence, school dropouts, AIDS, health care costs, homelessness, urban decay, and economic costs to employers (Kleber, 1994; Pernanen, 1993).

Control over hours of alcohol sales, location of sales and taxes to increase costs are effective preventive measures. In addition, the mass media and educational programs

send messages to children and young adults to refrain from initial alcohol/drug use or to seek help if occasional use develops into a problem pattern (Frances & Miller, 1991). There is evidence that efforts to prevent, control, and punish illegal acts related to substance dependence have reduced overall substance use, abuse, and dependence. However, laws alone are not enough to curtail the drug abuse epidemic. Rather, laws must be supplemented by socially integrated programs that provide treatment along with effective law enforcement and other societal monitoring (Westermeyer, 1976).

## Substance Dependence Treatment

Substance dependence treatment appears to enhance certain correctional interventions and their subsequent outcomes. The National Institute of Justice reported on initiatives to combine substance dependence treatment with violence-reduction therapy even though the effects and other outcomes of such initiatives warrant further study (Drug Use Forecasting Program, 1994). Treatment appears to have the most immediate effect on those with the problem who have come forth to receive help. The purpose of treatment is to reduce or eliminate drug use among those who seek treatment each year and to lessen criminal activity that supports or surrounds addiction (Hubbard et al., 1989).

As indicated in the preceding examples, treatment is an effective intervention and is an enhancement when used in conjunction with certain criminal populations and correctional approaches. Treatment offers the major source of hope for many people who are substance dependent who may have tried other alternatives, either through their own volition or through the coercion of the criminal justice system. Kleber (1994) recommended the expansion of substance abuse treatment as the most cost-effective

method to decrease the number of hard-core addicts but he also recommended further research to determine which treatments work best with various types of substance dependence.

## Substance Dependence Treatment Settings

The treatment process generally comprises three phases beginning with detoxification from the physiological addiction. Rehabilitation follows, with multiple approaches to educate and provide appropriately timed interventions and therapy. Continued care serves to prevent relapse or to provide immediate intervention to prevent sudden deterioration into substance dependence (Frances & Miller, 1991). The treatment process may occur in several different settings, or it may take place within the same setting, depending on the unique set of circumstances surrounding the community's resources and the needs of the individual.

Treatment settings are highly variable, but they can be categorized into two basic categories: outpatient and protective environments. Although there are other approaches to help substance dependents, such as self-help groups and religious movements, they were not defined as treatment settings for purposes of this study. However, they are in fact treatment supports and can often be found integrated into both outpatient and protective settings.

Outpatient treatment is for individuals who have stabilized medically and no longer experience severe psychological symptoms and craving; such treatment consists primarily of individual and group therapy. In the outpatient modality, the patient is monitored for treatment progress and compliance through self-report instruments, clinical

interviews and urinalysis for drug and alcohol use. Certain narcotic antagonists or maintenance drugs such as methadone can be administered in outpatient treatment (Administrative Rules, 1978). Other outpatient treatments include partial hospitalization (day treatment) and intensive outpatient care. These treatments incorporate variations of the daytime residential schedule but do not include the overnight stay and may not require daily contact.

Protective settings can be in hospitals, where medical assistance for withdrawal symptoms is provided or emergency psychiatric intervention for suicidal and/or homicidal patients is available. Substance dependence treatment units are secured to prevent unauthorized drugs (legal or illegal) from entering the unit. Often visitors are restricted, as are telephone calls to people other than family members. The initial physical examination may include a search of the person's belongings and his or her body for drugs (See Appendix D). These approaches have proven effective in improving the treatment program completion rates and outcomes (Lavelle, Hammersley, & Forsyth, 1991).

Another protective level of care is the residential program. In such a program, the rehabilitative services are delivered by social workers, counselors, and/or psychologists, with medical staff such as nurses and/or physicians providing support. The treatment modalities are primarily group treatment, didactics, recreational activity, family education and individual counseling.

Residential treatment has guidelines pertaining to security and visiting hours, much like inpatient hospital programs. Both of these treatment settings provide protection for substance-dependent persons from outside influences and from their own

tendencies to hide their drug use from their family or friends. Through structured time, both day and night, the substance-dependent individual is less likely to use drugs, thus allowing a successful detoxification process to occur. This allows the substance-dependent person to stabilize both physiologically and psychologically so that the issues that led into admission in treatment can be addressed.

O'Brien, Alterman, Walter, Childress, and McLellan (1990) compared the effectiveness of day-hospital treatment with residential treatment of cocaine-dependent patients and found that the completion rate for residential treatment was twice that for day treatment. Residential programs differ in their intensity of service and length of stay. The residential treatment modality with the most intensive schedule and the longest length of stay is the therapeutic community (TC). The members of a substance dependence residential program are likely to have issues related to vocational identity (DeLeon, 1995). Researchers have found positive outcomes with residential treatment (NIDA Notes, 1997).

The TC was chosen as the setting for this study because it provides a treatment population that is more likely to be experiencing vocational identity issues than outpatient and short-term inpatient treatment population. It is also more likely to make measurable changes due to the longer duration of treatment.

## The Therapeutic Community

DeLeon (1995) described the TC as having unique characteristics as a social-psychological treatment for substance dependence and as distinguishable by its systematic treatment approach and the use of the TC community as the "teacher" and "therapist."

Frankel (1989) referred to the TC as a learning environment that reculturalizes the individual from a deviant identity to a positive identity.

Although there is no consensus about matching treatment with symptoms and what treatment is the most cost effective, most substance-dependence practitioners generally agree that TCs are designed for the more chronic and resource-depleted substance dependents. Bleiberg, Devlin, Croan, and Briscoe, (1994) found that length of stay in a TC was a positive indicator of a successful outcome. One group who stayed in a TC for 1 month was compared with another group who stayed 6 months. The group with the longer stay showed success through negative urinalysis, self-report of drug abstinence, fewer days drinking, and no current legal problems over 1 year following treatment. The longer treatment enabled the 6 month group to attend 72 encounter groups as compared to 8 for the 30-day group and 48 small-group therapy sessions as compared to 12 for the 30-day group. Bleiberg et al. theorized that the longer treatment gave group members more time to practice new skills, more exposure to positive staff role models, and more time to gain insight. In addition, the additional time away from their drug-culture environment, whether it was in the workplace or in their neighborhood, gave members an opportunity to distance themselves psychologically from that environment. The skills learned in therapy could also be learned in self-help groups while in treatment, and there was more time to analyze and practice the concepts before being released from the TC.

De Leon (1995) indicated the need to organize the essential elements of the TC to assist in understanding and researching the methods employed in the TC approach. He indicated that many approaches have been developed using the TC principles, but no structure has been developed that lends itself to a thorough understanding. De Leon

reported that the Therapeutic Communities of America reported an estimated 80,000 admissions yearly into TCs, which provide a range of family, educational, vocational, medical, and mental health services to a widely diverse treatment population. Not only are substance-dependence paraprofessionals and professionals involved in TCs, but other professionals are involved, including those from the mental health, medical, and educational disciplines.

De Leon (1995) credited many authors and researchers, such as Yablonsky (1965), Casriel (1966), and Kooyman (1992), with formulating the basic tenets on which the framework of TC theory has been built. The TC can be portrayed as having distinct concepts, assumptions, philosophy/ideology, program features, and clinical practices that can be described and studied.

The TC perspective in treatment assumes that an artificial social/psychological environment is set up, wherein the residents in treatment not only receive treatment but also teach the therapeutic concepts, policies, and procedures. The TC values certain correct behaviors, which are reinforced, and punishes drug-seeking and related anti-social behavior through personal and program sanctions, including discharge from the TC. De Leon (1995) observed that treatment is not "provided" but is "made available" to the residents in treatment, who may choose to participate in work details to keep the facility in order and clean, may participate in community meetings, and may enter encounter groups and participate in recreational activities. If individuals do not participate, their motivation will be questioned and eventually they might be discharged if they are seen as simply "doing time." The TC is a powerful social force of which the substance-dependent

may become a part, providing an opportunity to trade the street social skills and personal values for the TC's skills and values.

## Developmental Perspectives on Substance Dependence

Practitioners and theorists have looked at substance dependence as a developmental issue (Damon, 1983). Such a view requires an understanding of the perspective of Erikson, who formulated a developmental stage model ( Erikson, 1959). Theory in the area of developmental psychology has focused on Erikson's ego development model, which proposes that development occurs in stages. This conceptualization is referred to as the epigenetic principle. Derived from the growth of organisms "in utero," this principle states that anything that grows has a ground plan, and that out of this ground plan the parts arise, each part having its time of special ascendancy, until all parts have arisen to form a functioning whole. Psychological developmental theory assumes that there is a succession of potentialities for significant interaction with others at a culturally defined rate and sequence, which governs the growth of the personality (Damon, 1983).

According to the developmental substance-dependence theory, individuals tend not to develop beyond the stage of development they are in when the use of a substance or its addiction begins (Pepper, 1992). They are "fixated" in or likely have not successfully completed the developmental tasks of their current stage of development or other subsequent stages. Consequently, practitioners focus on an individual's developmental tasks and refer to a "14-year-old in a 34-year-old body" if the individual became substance dependent at the age of 14 (Napier, 1990).

Kellogg (1993) proposed that recovery from substance dependence be viewed from a multiple identity perspective. He cited the development of theory in the area of substance dependence recovery that has proposed a psychodynamic and social model. In this model, a group affiliation is developed that has its own perspective, its own thought and behavioral norms. The self redefines with each change in membership and may maintain two separate identities simultaneously. This is evidenced by the substance-dependent person's beginning treatment in a drug-free treatment group and returning to the drug-using peer group, which results in a struggle to decide which values to retain and which to reject. Frankel (1989) referred to rites of passage in identity development from an anthropological perspective, whereby the cultural environment defines a substance dependence identity. Depending on the sociocultural context, the identity can be transformed from being an "addict" identity to being a "positive" identity.

Although the focus of this study was on vocational identity and substance dependence, it is essential to review psychological developmental theory, from which vocational identity theory and much of substance dependence theory has evolved. Both of these theories had their origins in Eric Erikson's work in ego psychology, which evolved from Freudian psychology.

## Ego Identity

Erikson (1959) referred to a "personal identity," which is based on two simultaneous observations: (a) the immediate perception of one's selfsameness and its continuity over time and (b) the perception that others recognize this selfsameness and its continuity over time. He further defined ego identity as the awareness that there is a

selfsameness and continuity to the ego's synthesizing methods and that these methods are effective in safeguarding the sameness and continuity of one's meaning for others.

The development of ego identity is a process integrated into an overall developmental model that includes the following sequential stages: trust versus mistrust, autonomy versus shame and/or doubt, initiative versus guilt, industry versus inferiority, identity versus identity confusion, intimacy versus isolation, generativity versus stagnation, and integrity versus disgust and/or despair (Damon, 1983; Erikson, 1968; Marcia et al., 1993).

Development of ego identity begins during adolescence and marks the end of childhood and the beginning of adulthood. Marcia et al. (1993) stated, "Identity formation involves a synthesis of childhood skills, beliefs, and identifications into a more or less coherent, unique whole that provides the young adult with both a sense of continuity with the past and a direction for the future," (p. 3). Marcia et al. viewed identity as having three dimensional aspects: structural, phenomenological, and behavioral. Identity is structural because it fits into the overall psychodynamic developmental process. Theoretically, it is necessary to resolve the identity crisis in order to function more fully in other areas such as intimacy and generativity. The phenomenological aspect refers to either having an identity or not having a sense of identity and its qualitative characteristics. The behavioral aspect refers to what others observe of one's identity. According to Marcia cited in Lapsley and Power (1988), Erikson's most significant contribution in the area of developmental psychology is the structural model of identity.

Since Erikson's theorization, many researchers such as Marcia have reshaped the concepts into segments that can be observed and measured. Much of the interest is in whether a person has achieved an identity. Developmental psychologists using the epigenetic constructs assume that each stage of growth must somehow be resolved before full attention is given to subsequent developmental stages.

This focus on whether the identity has been achieved has resulted in substantial study in the area of identity status. The individual is seen as having reached an achieved status if there has been an exploratory phase resulting in a resolved crisis whereby the individual decides on an identity. The exploratory phase is also referred to as a moratorium stage, in which individuals gather information about themselves and about how others see them and are in the process of deciding what will be their commitment. This exploration and the process leading to a commitment regarding one's identity is considered an identity crisis.

Another identity status is foreclosure which is characterized by the individual's acceptance of an external authority's direction, recommendation or belief system. The external authority is most often a parent, but it could also be a teacher or another professional after the individual reaches adulthood. Often preadolescents are foreclosed because of their dependence on external authorities. The diffusion status is indicative of individuals who are uncertain and confused about their identity even after undergoing a decision-making period (moratorium).

Some have criticized the ego identity formulation as being too global and have proposed more focused study of the domains of identity, which have been categorized in as few as three domains: vocation, ideology, and family (Erikson, 1968). Archer and

Waterman (1983) have observed that as the domains have been considered, several more have emerged; these include vocational plans, religious beliefs, political ideologies, sex-role orientation, values, and family roles.

It is possible for an individual to be in a different identity status for any number of domains. For instance, a person may be foreclosed in religious beliefs and in moratorium for vocational development; i.e., he or she may be highly religious due to strong parental upbringing about religious choice but may be undecided about a career. Consequently, it is helpful to assess a person's identity status in several domains when planning treatment and intervention (Vondracek, 1992).

Erikson acknowledged the importance of vocation in the development of identity, which has led to theory and assessment models in the area of career identity (Holland et al., 1980; Marcia et al., 1993; Vondrasek, 1992). Career identity is defined as a clear and stable picture of one's goals, interests, and talents (Holland et al., 1980). Expanding on this conceptualization, vocational identity is an individual's perception of his or her own vocational aptitude, skills, knowledge, developmental level, and actualization. Awareness of these dimensions depends in part, on feedback from authorities in the individual's environment such as parents, teachers, trainers, employers, customers, and fellow workers. People's awareness of these dimensions will vary, depending on the resources that are available to help measure their strengths and weaknesses and their inherent abilities to function in general.

## Substance Dependence and Identity

Adams (1995) described the process of moving from one stage to another through the metaphor of launching. He explains it as a qualitative process whereby a landing is predetermined by the trajectories of the launch. As an example, those who are diffused tend to stay isolated, which inhibits intimacy. This status may be reflected in behavioral pathology either through borderline personality disorders or substance dependence. Rosanti (1995) categorized subjects enrolled at an eastern university as having a "diffuse avoider" ego identity after reviewing their strategies for problem solving, which were ineffective and maladaptive. These diffuse avoider subjects showed no signs of cognitive planning and scored low in self-efficacy. Collum and Pike (1976) found these same traits to be prevalent in substance-dependent persons who often experienced a weakened sense of identity before dependence and during treatment. These same individuals were considered borderline personalities and during addiction possessed a powerful sense of identity as being an "addict." The premise that there may be multiple identity statuses and even dual identities was reinforced by Dryer (1995) who proposed the existence of a mainstream identity and a subcultural or bicultural identity. His illustration was focused on linguistic cultures, but such a premise also can be applied to the drug culture alluded to by Collum and Pike. Kellogg (1993) also referred to multi-identity theory, whereby a substance-dependent person can have a coexisting recovering identity and a street drug identity.

According to Schumrum and Hartman (1988), many substance abusers are adult children of alcoholics who experience difficulties in the areas of intimacy, trust, self-esteem, addictive behaviors and career decision making. To further validate this

contention, Hartman and Fuqua (1983) found that adult children of alcoholics using services in an urban university counseling center appeared to develop personality traits that paralleled the personality constructs that were like chronic career indecision.

Benshoff et al. (1990) stated that vocational variables have long been associated with substance dependence, either as antecedents to substance dependence or as important supports increasing the probability of continued abstinence. However, the association has been loosely defined, and vocational development dynamics and substance dependence have not been closely examined.

Taking into account the common characteristics of adult children of alcoholics, such as trait anxiety, identity confusion, and externalized locus of control, Schumrum and Hartman (1988) proposed a model demonstrating how growing up in an alcoholic dysfunctional family may lead to chronic career indecision. A child of an alcoholic is at increased risk as a youngster to experience violence, financial difficulties, physical illness, and injuries. This consistent uncertainty continues into adulthood, even though the adult is no longer living in the alcoholic environment. Adult children of alcoholics tend to adopt roles to survive, rather than resolving the crises of development. By avoiding conflict, they sacrifice development of an identity (Schumrum & Hartman, 1988). Galinsky and Fast (1966) found that making a vocational choice is a way to express one's identity, and if there has been only superficial identity development through playing roles, then career choices and vocational identity are likely to be impaired.

## Substance Dependence and Vocational Identity

Even though much of ego identity is developed during the adolescent stage, many issues are still under consideration for years to come. Through life experiences, an identity crisis can occur, resulting in states of diffusion or moratorium. Career development is a dimension that is likely to vary in adults, due to the instability of job markets and rapid technological advances. Add other crises to an adult's life, such as substance dependence and stability of ego identity is threatened.

In the last decade, researchers have associated substance dependence and vocational variables (Benshoff et al., 1990; Hoffman & Miller, 1992; Leal, 1990; Leung & Sakata, 1990; Livingston, Randall, & Wolkstein, 1990; Powers, 1978; Shipley, Taylor, & Falvo, 1990). Groah, Goodall, Kreutner, Sherron, and Wehman (1990) recommended that a thorough assessment of history and patterns of substance dependence be coupled with supportive employment services. Researchers in this area often have recommended improved and more frequent studies of both vocational rehabilitation and substance dependence (Benshoff et al, 1990). Such research may help determine causal factors of substance dependence and the supports necessary for establishing lasting recovery.

Some writers have viewed addiction as a vocation in and of itself because the task of obtaining the drug may totally absorb an individual, much like a full-time job. A street heroin addict has been described as "an active, busy person, preoccupied primarily with the economic necessities of maintaining his real income--heroin" (Pittel, 1974, p. 233). The street culture associated with illicit drug use is not necessarily a counter culture when one considers the economy of obtaining substances. It takes a great deal of resourcefulness to maintain enough income to support an addiction to heroin or cocaine.

These same skills potentially could be applied to more socially acceptable actions, such as legitimate employment or education. If the proper conditions exist, such as individual motivation, community support, and viable options, individuals may find legitimate employment attractive.

There is a need to assess career interests, aptitudes, and values and to identify different phases of career development (Powers, 1978; Super, 1957). It is not clear how much assessment is performed in these areas or how skilled substance dependence and vocational rehabilitation professionals are in identifying this information. Although it is commonly believed that young substance abusers who have jobs or vocational training might be able to reduce their substance dependence, it appears that work alone is not enough to ensure long-term recovery. Hammer et al. (1985) found that additional vocational training was necessary for substance-dependent clients to develop skills that would enable them to find employment in other than unstable unskilled jobs. Such jobs tend not to enhance self-concept, whereas improved self-concept is a likely positive force in preventing substance dependence.

Theoretical models have been proposed to help drug abusers make the transition from illegal activities into legitimate vocational options (Powers, 1978). Ginzberg, Super, and Hershenson (cited in Powers, 1978) and Erikson, Holland, Marcia and Grotevant (cited in Straube, 1990) agreeing that identity development and its subpart, career identity, are developmental processes. During this process certain competencies are developed, such as self-appraisal, knowledge of occupations, selection of goals, planfulness, and problem solving (Crites, 1969, 1973; Powers, 1978). Powers suggested that there is a strong need to expand vocational criteria for success beyond job placement

to include job training, job placement, measures of job performance, and career satisfaction.

## Substance Dependence Treatment and Vocational Services

Clients in treatment often state that their greatest unmet needs are in the area of vocational and educational services and, further, these needs are not adequately addressed in their treatment programs (Livingston, 1981). Part of the reason a program might not attend to such problems is professional's view that vocational issues are addressed by job placement counselors, rehabilitation specialists, and so on. Lack of attention to vocational issues may be associated with the substance dependence treatment program's lack of experts or resources to tackle vocational issues; there is no funding or no staff training to address the issues. Local community resources to help individuals with vocational problems might not be available. The economy might also be a factor in that few jobs are available for those who are helped or it is relatively easy to find unskilled or semi-skilled employment.

Perhaps most important, employers and even personnel in job training programs often have negative attitudes toward individuals with employment and substance dependence problems. Unreliability and social stigmas often prevent the substance abuser's being considered for training or employment. These attitudes also may be shared by substance dependence treatment professionals, many of whom would rather avoid issues related to vocational identity because they are not interested in that dimension of the individual or they believe there is little chance for rehabilitation in the vocation. Another factor may be timing. The client may think that finding a job is a

more immediate need than dealing with other psychological issues. The substance dependence treatment professional may believe the psychological issues must be dealt with first before vocational issues are considered.

However, Livingston et al. (1990) found that when such services were provided, criminality was reduced and there was an increase in employment and earnings. Due to limited funding, Livingston et al. has proposed that an organized work-study program be developed for rehabilitation-specialist students to share the burden of vocational service delivery in the short term. In the long term, the program would develop awareness and a more sophisticated group of rehabilitation counselors dealing specifically with substance dependence.

As an example of such a program, a two-day course was offered to Employment Service staff in the United Kingdom who were working with people with substance dependence problems (Gossop & Birkin, 1994). The course was designed to help staff members identify drug and alcohol problems, assess their severity, and refer clients to specialized agencies when necessary. Six month follow-up on a sample of the trainees showed substantial improvements in staff members' confidence in working with substance abusers and their willingness to intervene with such clients. Although progress in substance dependence treatment was not clearly measured in the study, the improvements in the delivery system were apparent.

Once substance abusers are treated for medical and psychological problems associated with their addiction, treatment is often considered completed. Vocational issues may be seen as an important aftercare problem area, but by the time the substance-dependent person is in aftercare, the treatment supports have dwindled or vanished.

Without these supports, the substance abuser escapes accountability, which often results in underemployment or unemployment. Individuals who never have sought or found permanent employment commonly are found in this group. These "vocational virgins" (Elliot, 1992) have never sought employment, for a variety of reasons. It is possible that if vocational issues were seen as primary and concurrent with substance dependence treatment, a commitment would be made to a productive vocational plan.

## The Need for Further Research

Treatment approaches are based on psychological, physiological, and sociological theories, which are not easily tested because of the large number of variables that intermingle before, during, and after treatment. Consequently, questions continue to be raised about what differentiates one patient from another in their response to treatment. Treatment approaches are apparently effective and continue to be improved, but it is necessary to explore the factors contributing to progress in substance dependence treatment in order to maximize treatment outcomes (Kleber, 1994; McLellan et al., 1996).

Substance dependence results in the depletion of resources such as family support, financial assets, work status, and psychological strength. Treatment approaches usually strive to help the patient replenish these areas by compartmentalizing the drug dependence problem and by refocusing on short-term accomplishable tasks. Often employment or vocational issues are problematic and need attention during substance dependence treatment. These issues are commonly discussed but not extensively studied through research. In addition, the role of career identity development as it relates to drug dependence has not received focused attention in treatment theories or research.

Researchers on substance dependence have referred to vocational development and many treatment modalities that are designed around vocational models (Hammer et al, 1985; Livingston et al, 1990). However, many substance dependence treatment professionals minimize vocational issues because the treatment population is employed or do not see vocational issues as a major concern relative to other treatment issues (Thompson, 1990). Substance dependence treatment providers tend not to use career development tools/models and lack career development training. They may not be connected with community/state vocational rehabilitation resources, which could assist with vocational assessment and intervention strategies (Frohman, 1987).

If individuals are struggling in their ego identity and career identity developmental stage and begin using chemicals or, possibly more significantly, become addicted, it is possible that their psychological development will be affected. Developmental theorists would say these individuals are "fixated" in whatever stage their addiction was manifested and will remain so until they address the substance dependence. To understand vocational identity, it is essential to review psychological developmental theory. In addition, substance dependence treatment theories need further elaboration, with a focus on developmental ideas.

Those without stable vocational goals, a satisfactory job, a clear educational or vocational plan, and reinforcing experiences in the world of work, are likely to have less intellectual and emotional focus on treatment because of their preoccupation with satisfying more basic needs. Many substance abuse treatment approaches eventually explore complex emotional and spiritual issues, but the substance-dependent person's preoccupation with developmental tasks related to career identity development may

detract from the treatment effect. It has been theorized that if one's basic needs have been satisfied and developmental tasks such as establishing a career identity have been accomplished, then the effects of treatment for that person will be more pronounced.

Treatment progress is achieved in small increments and is measured as job-seeking behavior, enrollment in educational pursuits, reestablishment of positive relationships with family members, attendance at self help meetings, completion of assignments issued by treatment professionals, compliance with rules and guidelines of the treatment facility, abstinence from drugs including alcohol, and changes in attitude toward recommended alternatives to substance dependence.

Even though vocational issues have a well-established relationship with substance dependence, it is unclear how they work together; consequently, it is important to explore this relationship further. Continued efforts to measure the variables associated with these two phenomena will help in describing their relationship more precisely.

## Measurement of Vocational Identity

Erikson's theory concerning ego identity is highly philosophical and does not provide clearly measurable constructs. However, a number of researchers have attempted to measure identity. Tan, Kendis, Fine, and Rorac (1977) developed a 12-item Ego Identity scale, and Marcia's identity status construct has been subjected to research using a variety of instruments (Damon, 1983). Particular aspects of identity such as vocational identity have also been examined by a variety of researchers, through both theoretical development and empirical studies (Healy, Tullier & Mourton, 1990; Holland,

Gottfredson & Power, 1980; Lopez, 1989; Munley, 1977; Salomone & Mangicaro, 1991; Savickas, 1985; Tinsley & Bowman, 1989; Vondracek, 1992).

Vocational identity status can be measured through interviews or through objective analysis of subjects' verbalization of their plans for the future (Raskin, 1994). Conducting the interviews and analyzing data from audio tapes often is time consuming; written instruments are available that can provide the pertinent information.

Holland, Gottfredson, et al., (1980) developed an 18-item true-false vocational identity scale, which is part of the My Vocational Situation (MVS) instrument. This has been found to have a high degree of reliability and validity (Tinsley & Bowman, 1989), and because of its ease of administration it is used extensively with a variety of populations. It is possible to categorize vocational identity as being in the category of either achieved or nonachieved states through the use of the scale. Other instruments and methods can be used to measure vocational identity in other status categories such as exploratory, moratorium, foreclosed, or diffused (Marcia et al., 1993). However, the MVS is commonly used to assess the degree of vocational identity that has been developed due to range of scores that is possible with the instrument. Because vocational identity can change, the scale scores can be interpreted as falling into a nominal "yes" or "no" category or on a continuum related to high or low degrees of vocational identity. This flexibility of the instrument reflects the nature of the phenomenon of vocational identity, which can change when crises of adult life intervene.

## Measurement of Progress in Substance Dependence Treatment

Many theorists and practitioners have viewed alcoholism and drug dependence as uniform, often omitting individual differences in personality or cognitive style (L. Miller, 1991). By looking at an individual's unique cognitive and personality traits, practitioners might better understand and perhaps predict a client's substance dependence relapse. Miller found that relapsers do poorly in tests of language, abstract reasoning, planning, and cognitive flexibility.. These functional areas are also important for any individual who needs vocational development. If both substance dependence and vocational rehabilitation issues are addressed with this population, it is likely that improved treatment efficacy will follow.

However, W.R. Miller (1992) found that several approaches have shown measurable differences in outcome, including the community reinforcement approach. In this approach, several strategies, such as a job search and placement, are used to ensure employment. This has proven more effective than traditional residential inpatient treatment and outpatient treatment (Azrin, 1976; Azrin, Sisson, Meyers, & Godley, 1982; Hunt & Azrin, 1973; W.R. Miller, 1992). Such an approach without the traditional substance dependence treatment threatens grounded treatment philosophy and certain types of professionals such as certified addiction counselors, who would likely propose that vocational development is just one dimension of recovery. Another issue that challenges community approaches is funding viability. If the community reinforcement approach is effective, how can it be financed? Currently, there are few, if any, third-party insurers who reimburse for vocational rehabilitation. Much criticism has been leveled against substance dependence treatment approaches; some researchers have concluded

that there is no overall difference in effectiveness among different modalities or even between treatment and no treatment at all (Annis, 1986; Holder, Longabaugh, Miller, & Rubonis, 1991; W.R. Miller, 1992; W.R. Miller & Hester, 1986).

The Project MATCH Research Group (1997) focused on particular treatment methods matched to client attributes and found that substantial treatment had been provided and significant improvements achieved. In attempts to discriminate between methods, only one attribute, psychiatric severity, showed a significant relationship with treatment interaction. In addition, clients who were low in psychiatric severity were abstinent longer after 12-step facilitation treatment than after cognitive behavioral therapy. The Project MATCH Research Group recommended that those assessing substance dependence treatment consider psychiatric severity when matching patients. But, because of the lack of robust results, the research group considered the treatments studied to be equally effective despite their philosophical differences.

A common dynamic in substance dependence treatment is the patient's denial of the severity of the problem. An individual may be on the verge of losing employment, a marriage, friendships, and lifelong possessions and still continue to minimize the role that substance dependence plays in these life disasters. These same dynamics carry over to the person's immediate relationships, which is why it often takes several years for the consequences of substance dependence to catch up with the substance abuser (Gastfriend, Filstead, Reif, Najavits, & Parrella, 1995). Even after entering treatment, the substance abuser resists information and interventions that challenge long-held beliefs that he or she can control the use of alcohol and other drugs. It is this defense that is often the single most difficult hurdle preventing efficacy of the rehabilitation process. The substance

dependence treatment professional often is able to intuitively deduce a patient's level of resistance to treatment. However, reliable measures are helpful not only in detecting the level of resistance, but also in providing evidence of resistance with which to confront the patient about his or her resistance relative to that of others in treatment. Having a valid and reliable measure may also help in treatment planning, with regard to allocation of resources for each objective during and following treatment.

The Recovery Attitude and Treatment Evaluator-Initial Questionnaire (RAATE-QI) is a questionnaire was designed to measure resistance to treatment, continuing care, acuity of biomedical problems, acuity of psychiatric / psychological problems, and the degree to which the psychosocial environment is supportive of or detrimental to recovery (Mee-Lee & Hoffmann, 1987; Smith, Hoffmann, & Nederhoed, 1992). High resistance to treatment might indicate that certain resources should be held back until there are indications that the person is more amenable to treatment. Such an additional resource that might be ill timed at a high stage of resistance is vocational counseling. On the other hand, the attractiveness of vocational development may function as a motivational tool to help reduce resistance to treatment, either as a reward or as an activity that serves a therapeutic function to reduce resistance.

## Implications of Adult Education for the Substance-Dependent Population

Adults have unique needs that must be considered when developing educational plans (Cross, 1983; Knowles, 1990). The measurement of progress in substance dependence treatment and vocational identity, as well as the implications of the findings, implicitly requires that educational issues be considered. The tendency of the TC is to

rely heavily on educational methodology to develop plans for therapeutic intervention and vocational strategies. Both outpatient and protective settings rely on psychoeducational groups to convey information about treatment philosophy, problem solving, medical information, and other pertinent topics. La Salvia (1993) studied the efficacy of psychoeducational groups with clients with an addiction disorder in an outpatient setting. The approach used was a didactic-style group with assigned tasks, much like that of a school classroom. Even though La Salvia did not evaluate adult learning considerations, the didactic groups appeared to better meet the needs of the subjects than traditional psychotherapy. De Leon (1995) emphasized the importance of the patient in the TC *learning* concepts associated with recovery and described this learning as part of the therapeutic process. Frankel (1989) emphasized the process of learning new meanings, beliefs, and definitions in a TC, which will lead to the client's transformation into a recovering identity. It is clear that approaches to substance dependence and vocational development are interwoven into the adult education tapestry.

## Summary

Substance dependence has received a significant amount of attention due to its dramatic consequences for individuals and the society. The strategies to contend with this problem have been examined from several perspectives, including prevention, criminality, interdiction and treatment.

Certain common elements of substance dependence can be extracted from the myriad of issues; these include descriptions of signs and symptoms, theoretical constructs related to etiology, and therapeutic interventions based on research theory.

Developmental theory views the development of ego identity as an important dimension to consider in understanding and treating substance dependence. A part of identity development that seems to be related to substance dependence is vocational identity. Adult vocational identity can change due to technological advances and crises in adult life.

Further understanding of the relationship between vocational identity and substance dependence is important, in order to treat substance dependence most effectively and to provide proper vocational services for the substance-dependent individuals. Progress in substance dependence treatment and vocational identity can be measured and their relationship explored to further improve approaches to both. In addition, it is necessary to keep in mind the implications of adult education for this population because educational methods are used in the delivery of services.

# CHAPTER THREE

# METHODOLOGY

The researcher's purpose of this study was to investigate the relationship of vocational identity and other mitigating variables to progress in substance abuse treatment. This chapter contains the research questions posed in the study, an overview of the research design, a description of the sampling procedure and the instruments used to measure progress in substance abuse treatment and vocational identity, and a discussion of the procedures used in collecting and analyzing the data.

## Research Questions

This researcher sought to determine whether there is a relationship between progress in substance abuse treatment and vocational identity. In the initial design of the study, hypotheses were developed based on the assumption that the subjects would fall into dichotomous groups of either achieved or nonachieved vocational identities. In this design the researcher would test hypotheses related to each RAATE-QI measure of progress in substance abuse treatment in relation to the grouping of the subjects into dichotomous groups as determined by Holland, Daiger, et al.'s (1980) My Vocational Situation (MVS) instrument. The study design was changed to a correlational design after initial field testing.

A post hoc analysis was conducted, comparing the RAATE-T1 only group (N = 94), which left treatment before taking the second RAATE-QI, and the RAATE-T2 group (N = 102), which took the first and second RAATE-QI. The possibility exists that there was a difference between the two groups, and the primary study group was not randomly selected due to the differences between the two groups.

The researcher explored the relationship of several independent variables to several dependent variables that defined progress in substance dependence treatment. Specifically, the question investigated in this study was: What is the relationship of vocational identity, length of treatment stay, years of education, age and income at the time of admission to specific measures of progress in substance dependence treatment? Progress in substance abuse treatment was measured in terms of resistance to treatment planning, resistance to continuing care, biomedical acuity, psychological and psychiatric problems, and social/family/environmental factors.

## Research Design

### The Population

The residential therapeutic community modality was selected because of its controlled environment as compared to an outpatient program, because of the accessibility to clients in treatment for research purposes, and because the length of stay for treatment was significantly longer than inpatient care, more traditional residential treatment, and modified forms of day treatment. A complete description of the philosophy of therapeutic residential treatment programs, the treatment process, and the experience of the researcher is included in Appendix D.

Adult males from an urban area in southeastern Michigan who had been diagnosed as substance dependent and admitted to a long-term residential TC for substance abuse treatment were given information about the study design and were asked to volunteer for the study. This information was presented in the first few days of treatment and included several requirements for participating in the study, which are noted below:

1. Upon admission to the TC, the subject candidate had a diagnosis of substance dependence as defined under the guidelines of the DSM IV (American Psychiatric Association, 1994).
2. Either before or during the stay in treatment, the subject was employed or employable (currently not on long-term disability from work or through governmental designation).
3. The subject showed willingness to participate in the study voluntarily, as evidenced by his signature on the human subject release form.
4. The subject was male and 18 to 55 years of age.

## Sample

The sample was determined through self-selection by the subject candidates and by the program staff, who prescreened the candidates to meet the minimum criteria. This study focused on indicators of progress in treatment while the subjects were in treatment in a residential setting. Initially, the researcher also had intended to survey subjects in halfway houses at multiple locations, but due to poor cooperation by personnel at those treatment facilities, the subjects who completed both the baseline questionnaires (MVS

and RAATE-T1) and the second RAATE-QI (RAATE-T2) originated from only one residential treatment program.

Upon admission to the treatment program, the subjects were initially screened by clinical personnel trained in substance dependence treatment. These clinicians all met minimum credentialing requirements of the State of Michigan Department of Public Health, Center for Substance Dependence Services, as Certified Addiction Counselors or possessed a bachelors or masters degree in a human service field such as nursing, psychology, social work, and/or counseling.

During the intake process, a detailed biological, psychological, and social history assessment was conducted to determine the person's eligibility for the treatment program and to begin to develop short- and long-term treatment needs and goals. During this process, the individual's vocational status was assessed through a series of questions to determine employment status, educational level, and need for additional training and/or education. This contact preceded any by the researcher but established compliance with criteria of the substance dependence diagnostic code(s), as well as the individual's eligibility for the study and interest in participating.

To qualify for admission into residential or halfway-house treatment, a patient not only must meet the criteria for a substance dependency diagnosis but also must have a severity of illness that meets the guidelines for intensity of service. Measurement of the criteria relies on the patient's self-report and possibly an evaluation by a physician or an external independent clinical agency.

This measurement included an assessment of the individual's ability to abstain from the use of mood-altering substances without a protective environment that would

control the availability of such substances and would restrict the person's movement into the environment outside the TC. Previous abstinence in outpatient settings, current cravings, stability of family support and consequences such as incarceration or employment termination if the patient was unsuccessful also were considered. The individuals who qualified for the treatment program in this study met the criteria for residential treatment because they had failed previous outpatient treatment; were unable to stop using substances without significant and prolonged intervention; were in jeopardy of incarceration if they did not successfully complete the residential program; were participants in an employer-sponsored job-jeopardy program, which required their involvement in the treatment program to retain employment; were experiencing profound cravings for their substance of choice; and/or were experiencing significant family problems and may have bankrupted their financial resources to the extent that shelter was not available (see Appendix D).

During this portion of the assessment process, the substance dependence treatment staff gave a brief informational letter and study summary to the subject candidate, explaining the research project (see Appendixes A and B). After reading and discussing the project with the staff person, the subject was asked whether he wished to participate; if he did, he signed the subject release form (see Appendix C).

The intake and assessment process lasted approximately 1 week to orient the patient to the program rules. During this time of orientation, subjects were given the first battery of instruments, usually in a classroom setting. Some subjects who were not given the informational packet at intake were oriented to the study in the classroom setting and were given the questionnaires to complete once they signed the release form.

## Data Collection

Data were collected by treatment program professional staff who were trained to proctor the two questionnaires at admission and after at least 4 weeks of substance dependence treatment. The specifics of the design and the instruments are detailed in the following pages.

## Instrumentation

Two questionnaires, the RAATE-QI (Mee-Lee et al., 1987) and the MVS (Holland, Daiger, et al., 1980), were administered during the first week of admission into a residential program for substance dependence treatment. The MVS instrument was used to measure the strength of vocational identity in relation to other variables such as age, income, education, and length of treatment. The different dimensions of progress in treatment were measured by the RAATE-QI. Between the fourth and eighth weeks of treatment, those who were successfully participating in the treatment program were again administered the RAATE-QI to measure progress in treatment. The group taking the second RAATE-QI was designated as RAATE-T2 to differentiate it from the group that took only the first MVS and the RAATE-QI, hereafter referred to as RAATE-T1.

### The MVS

Vocational identity was measured with the Vocational Inventory Scale of the MVS. This scale was designed to measure the relationship between vocational behavior and personality. Vocational identity can be construed as a developmental variable in that it relates to progress in ego-identity formation and the degree of vocational development (Savickas, 1985). It has been hypothesized that vocational identity relates most to the

developmental task of crystallizing career preferences or identifying what one likes to do. Its developmental nature makes the construct dynamic in that there is an internal process of self-evaluation (or lack of) in which the individual examines vocational issues that lead to choices or preferences regarding a career (Savickas, 1985).

The Vocational Inventory Scale of the MVS is used to measure the degree to which individuals have a clear and stable picture of their goals, interests, personality, and talents. According to Savickas (1985), the scale evolved from research on the correlates of indecision. Respondents are asked to respond either "true" or "false" to 18 items; the score is the number of "false" responses. A high score is indicative of individuals who do not need career guidance because they are well organized, self-confident, and competent to handle life situations (Savickas, 1985). Individuals who score high on the scale are not tense or diffused.

In addition to the Vocational Inventory Scale, the MVS also contains supplemental questions that identify the subject's need for information and the barriers to career development. More flexible than the scale, these questions explore of some of the issues facing the individual, with a more open-ended information-gathering technique. Although data were not compiled from these questions, the researcher checked for internal reliability on a number of "false" responses. For example, if a subject had a large number of false responses, indicating a highly achieved status, but indicated a need for vocational and educational information and other resources, there would have been justification to reexamine whether this person was, in fact, in the achieved status category or was instead in another status category, such as exploratory or diffused crisis status; the converse applies for a low number of false responses. The MVS is quantitatively bent

toward validating vocational achievement and cannot discriminate among the nonachieved statuses (diffused, moratorium or foreclosed) referred to by Marcia et al. (1989). It does add supplemental information to identify a subject's need for information and barriers that, if overcome, could lead to the person's having vocationally achieved status (Holland, Daiger, et al., 1980).

In terms of internal consistency, the scale had reliability coefficients of .86 to .89 for samples of male and female high school students and college students/workers (Holland, Daiger, et al., 1980). A study comparing the Vocational Identity Scale of the MVS with the Ego Identity Scale and the Medical Career Development Inventory indicated that the Vocational Identity Scale related significantly to both of the corresponding scales. The strongest association was with crystallization of a career choice (Savickas, 1985).

The RAATE-QI

The RAATE-QI was designed to assess the individual's attitude toward treatment and continuing care. The questionnaire uses 94 true/false items measuring five key dimensions to produce a clinically relevant and useful severity profile of the patient for making decisions regarding placement, continued stay, discharge, and treatment planning (Smith et al., 1992).

The RAATE-QI was developed in response to the need for more consistent and objective measures of key dimensions critical to treatment planning and placement of patients into appropriate levels of care (Smith, et al. 1992). Few instruments are available to objectively measure the variables necessary to do effective treatment planning. When

data are gathered or measured, the data usually are not uniform either within or among agencies. The RAATE-QI provides an opportunity to measure and compare pertinent variables with similar populations and measures parameters such as denial and interpersonal issues (Smith et al., 1992).

The RAATE-QI was administered during the first week of admission and 4 to 8 weeks later to those subjects who were successfully participating in treatment, to measure changes in the individual's resistance to treatment and continuing care. Treatment refers to the activities that occurred while the individual was in the residential treatment program. Continuing care refers to the set of activities that occurred following treatment to provide support to the individual and reinforce the progress made during treatment. Resistance to treatment and continuing care was a predictor of the potential effectiveness of treatment. Consequently, the researcher thought that treatment progress and resistance to treatment and continuing care would correlate negatively with each other.

The RAATE-QI quantifies five major categories including the above-mentioned resistance to treatment and resistance to continuing care. Acuity of biomedical problems, acuity of psychiatric/psychological problems, and social/family/environmental status are additional categories measuring severity of illness. Once a baseline is established, each indicator can be measured to identify a subject's movement toward either high severity or low severity. If a subject shows an overall movement toward less severity following treatment, this can be considered an indicator of positive treatment progress. If a subject shows no movement toward or away from the level of severity identified at initial testing, this can be considered an indicator of no treatment progress. Finally, if a subject shows movement to higher severity, this would indicate negative treatment progress.

Between 4 to 8 weeks following the administration of the initial questionnaire, the subject was given the RAATE-QI if the clinical staff considered him to be successfully participating in the treatment program. Successful participation was defined as completing tasks related to the agreed-upon treatment plan and complying with the program requirements.

The five dimensions of the RAATE-QI have been found to have the following test/retest internal consistency reliability: Resistance to Treatment, .74 and .85; Resistance to Continuing Care, .78 and .87; Biomedical Acuity, .63 and .80; Psychiatric and Psychological Acuity, .77 and .73 ; and Social/Family and Environmental Status, .75 and .85. The original instrument designers tested subjects 14 days following the first questionnaire; there were no concerns with repeated-measure issues. W. Mehrens (personal communication, May 16, 1997) stated that practice effects are not of concern in attitudinal surveys such as the RAATE-QI.

## Data-Collection Procedure

The administration of the questionnaires was proctored by either a professional counselor or a trainee who had been given an informational packet about the study and an orientation about the study and the administration of the questionnaires. Once the subjects completed questionnaires, the proctor collected them and stored them in a secured file in the treatment facility until the researcher picked them up. The facility staff maintained a confidential log of when the subjects completed the questionnaires to keep track of when subjects should take the next battery. The target date for taking the RAATE-T2 was 30 days from when the initial questionnaires were completed, but

administration of the RAATE-T2 varied due to programmatic changes, staff assignment changes, or schedule problems. When a subject left treatment early due to involuntary discharge or against medical advice, that individual was dropped from the study. A master log was maintained to determine whether the subject was re-admitted to treatment, and no subjects were kept in the study if they were readmitted and had participated in the study earlier.

The RAATE-T2 was either taken again in the classroom with other subjects who had taken the first battery or individually in the same classroom proctored by the staff who had previously administered the questionnaires. These completed questionnaires were secured in a confidential file until the researcher could pick them up. In the original design of the study, the questionnaires were to be given at 30-day intervals and on the final day of treatment. This design proved to be difficult to follow, due to the lack of continuity of the treatment program staff involved with the study the subjects' frequent early departure from treatment. Consequently, after subjects had taken the RAATE-T2, the data collection was complete.

Some subjects' questionnaires did not contain all of the requested demographic information; the researcher contacted a treatment program representative to obtain the missing data. Some subjects did not answer the questionnaire items completely or answered the questions with suspicious patterns, e.g., giving alternating "true" and "false" responses and giving the same response to all of the questions. The RAATE-QI Manual (Mee-Lee et al., 1992) warned test administrators about such patterns, and these subjects were also eliminated from the study.

## Data Analysis

During the preliminary analysis, subjects were separated into two differentiated groups based on the results from the MVS instrument. Subjects with a score of 10 or more false responses on the MVS were designated as having an achieved vocational identity; those giving fewer than 10 false responses were designated in the nonachieved vocational identity group. Microsoft Excel Version 4.0 and SPSS Version 7.5 were used to array data and to conduct statistical tests.

While tabulating the data, it was apparent that many scores were clustering around the cut-off of 10 or more to determine achieved status. Because of the fine line between the score of 10 to determine achieved status and 9 to determine nonachieved status, the variable was treated as a continuous variable rather than a nominal variable. Yen (1997) stated that data are lost when variables are dichotomized. Mehrens and Lehmann (1987) made the same point saying that grouping data into categories causes one to lose information and precision. Thus, even though researchers have used the MVS instrument to group subjects into achieved and nonachieved groups (Ryan-Jones, 1990), this investigator decided that counting the number of false responses on the MVS and viewing that score as a continuous variable would reveal more about the data. Other researchers have used the score on the identity scale of the MVS as a continuous variable and then employed multiple regression statistical analysis to develop vocational development models. For example, Graef, Wells, Hyland and Muchinski (1985) evaluated vocational indecision using the MVS score as a continuous variable.

Consequently, the researcher decided to examine the data using statistical tests in which the number of false responses was treated as a continuous variable, rather than

dividing the group into nominal categories of achieved and nonachieved vocational identity statuses. A one-sample t-test was performed to verify change between the RAATE-T1 and the RAATE-T2. Once change from the baseline to the second test was established, stepwise multiple regression statistical analysis was used to determine how the number of false responses on the MVS and other variables might relate to progress in substance abuse treatment. The qualitative explanation of the results was enhanced by viewing a high number of false responses as a relative measure of vocational identity; i.e., the higher the number of false responses, the more confident one can be that the status is achieved as opposed to nonachieved.

The models for the stepwise regression were developed by choosing variables on which data were collected in the study that were of interest and relevant to predicting progress in substance dependence treatment. These categories were the number of false responses on the MVS, income level, education in years, age, and length of treatment stay between the first and second administrations of the RAATE-QI. A model was developed for each RAATE-QI treatment progress category, and then each model was statistically run on the collection of variables, with treatment progress as the dependent variable. Because the researcher was particularly interested in the MVS variable the model, each model included the number of false responses on the MVS. The regression was run, dropping the least significant variable until only statistically significant predictor variables remained in the model along with the scores on the MVS measure.

After data were collected on all subjects, a post hoc analysis was conducted with the subjects who took only the first battery of the MVS and RAATE-QI (RAATE-T1) and those subjects who took both the first battery and the second RAATE-QI (RAATE-T2).

## Summary

The methods by which data for the study were collected and analyzed were described in this chapter. A total of 244 male residents age 19 to 51 in substance dependence treatment completed the RAATE-T1 questionnaire and the MVS; of that number 102 completed the RAATE-T2. The resulting data, along with information on the 94 subjects who did not complete treatment, was used in the statistical analysis. The results of the data analyses are presented and discussed in Chapter IV.

# CHAPTER FOUR

# RESULTS

This chapter contains the results of the statistical analyses conducted to explore the relationship of vocational identity and other variables to progress in substance dependence treatment. The characteristics of the sample are described first, followed by the results of the data analyses.

## Description of the Sample

Of the 244 male subjects who took the initial battery consisting of the MVS and the RAATE-QI, 48 were eliminated from the study due to various reasons. Twenty-two were eliminated because their questionnaires were incomplete or other information was missing, rendering their results unreliable; 18 were from other treatment programs; and 8 did not fit within the duration-of-treatment guidelines of at least 4 weeks but no more than 8 weeks in treatment. Of the subjects who took the initial battery, 102 completed the RAATE-QI the second time (RAATE-T2 study group), as well. These 102 subjects comprised the study group, whose treatment progress was compared with other independent variables. Ninety-four subjects were eliminated from the second RAATE-QI (RAATE-T2 study group) portion of the study because they were no longer in treatment but information on these subjects was used in the post hoc analysis.

The age range of subjects in the RAATE-T2 group (N = 102) was from 19 to 49 with a mean of 36.34 years (SD = 6.97). The distribution of ages was as follows: ages 19-25, 7.8%; ages 26-30, 15.7%; ages 31-35, 15.7%; ages 36-40, 31.4%; ages 41-45, 20.6%; and ages 46-49, 8.8%. The mean years of education was 12.23 (SD = 1.66), with a range from eighth grade to 4 years post high school. The sample consisted primarily of African Americans; 85.3% of the sample were African American; 11.8% were White, 2% were Native American, and 1% were Hispanic. Forty-five percent of the sample were in the lowest income category of less than $10,000 per year, 16.7% were in the $10,000 to $20,000 category, 14.7% were in the $20,001 to $30,000 category, 11.8% were in the $30,001 to $50,000 category, and 11.8% were in the top category of over $50,001 of income per year before to treatment.

The age range of subjects in the RAATE-T1 group (N = 94) was from 19 to 51, with a mean of 35.46 years (SD = 7.11). The distribution of ages was as follows: ages 19-25, 7.4%; ages 26-30, 16%; ages 31-35, 30.9%; ages 36-40, 20.2%; ages 41-45, 17%; and ages 46-49, 8.5%. The mean years of education was 11.55 (SD = 1.93), with a range from fourth grade to four years post high school. The sample consisted primarily of African Americans; 75.5% of the sample were African American; 22.3% were White, 1.1% were Native American, and 1.1% were Asian. Thirty-one percent of the sample were in the lowest income category of less than $10,000 per year, 16% were in the $10,000 to $20,000 category, 16% were in the $20,001 to $30,000 category, 24.5% were in the $30,001 to $50,000 category, and 12.8% were in the top category of over $50,001 of income per year before treatment.

## Findings

A correlation of all the scores between the RAATE-T1 and the RAATE-T2 was performed. As shown in Table 1, the RAATE-QI scores were positively correlated between the RAATE-T1 and RAATE-T2.

Table 1: Correlation of Raw scores RAATE-T1 and RAATE-T2 (N = 102)

| | RR 1.1 | RR1.2 | RR1.3 | RR1.4 | RR1.5 | RR2.1 | RR2.2 | RR2.3 | RR2.4 | RR2.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| RR1.1 | 1.000 | .612** | 0.038 | -0.017 | -0.102 | .691** | .535** | -0.007 | -0.081 | -0.095 |
| RR1.2 | .612** | 1.000 | 0.114 | 0.077 | -0.056 | .586** | .484** | -0.069 | -0.051 | -0.141 |
| RR1.3 | 0.038 | 0.114 | 1.000 | .398** | .323** | -0.077 | 0.067 | .460** | .370** | .279** |
| RR1.4 | -0.017 | 0.077 | .398** | 1.000 | .359** | -0.014 | -0.044 | .261** | .489** | .213* |
| RR1.5 | -0.102 | -0.056 | .323** | .359** | 1.000 | -0.117 | 0.073 | .252* | .355** | .670** |
| RR2.1 | .691** | .586** | -0.077 | -0.014 | -0.117 | 1.000 | .710** | -0.008 | -0.030 | -0.144 |
| RR2.2 | .535** | .484** | 0.067 | -0.044 | -0.073 | .710** | 1.000 | .219* | 0.087 | -0.005 |
| RR2.3 | -0.007 | -0.069 | .460** | .261** | .252* | -0.008 | .219* | 1.000 | .341** | .298** |
| RR2.4 | -0.081 | -0.051 | .370** | .489** | .355** | -0.030 | 0.087 | .341** | 1.000 | .537** |
| RR2.5 | -0.095 | -0.141 | .279** | .213* | .670** | -0.144 | -0.005 | .298** | .537** | 1.000 |

Note. RR1.1 through RR1.5 = RAATE-T1 resistance to treatment; resistance to continuing care; biomedical acuity; psychiatric/psychological problems; social/environmental/familial problems; RR2.1 through RR2.5 = RAATE-T2 corresponding dimensions of treatment progress.
*p < .05. **p < .01.

To determine whether change occurred in any of the RAATE-QI dimensions of treatment progress, a one-sample t-test was performed on each mean of the difference in scores for each RAATE-QI dimension. As shown in Table 2, all dimensions showed change from RAATE-T1 to RAATE-T2 with the exception of the resistance to treatment planning dimension. Consequently, this dimension was not included in the model because no change occurred. The dimension of psychiatric and psychological problems was not significant with the raw scores, but because it was significant with the scaled scores it was included in the model.

Table 2: The Results one sample t-test to determine differences in scores on each RAATE-QI dimension

| RAATE-QI Dimension | t-test result | df | p value (one-tailed) | Mean difference |
|---|---|---|---|---|
| **Resistance to Treatment Planning** | **0.535** | **101** | **.287** | **.1250** |
| | *1.116* | *101* | *.133* | *.1250* |
| **Resistance to Continuing Care** | **2.672** | **101** | **.004** | **.7396** |
| | *2.401* | *101* | *.009* | *.3229* |
| **Biomedical Acuity** | **3.538** | **101** | **.000** | **.6354** |
| | *2.538* | *101* | *.007* | *.3333* |
| **Psychiatric and Psychological Problems** | **1.172** | **101** | **.122** | **.2813** |
| | *1.763* | *101* | *.040* | *.1771* |
| **Social, Family and Environmental Factors** | **2.194** | **101** | **.015** | **.6563** |
| | *2.939* | *101* | *.002* | *.4583* |

Note. Top **bold** score for each dimension is the raw score and bottom *italicized* score is the scaled score.

A multiple regression model was constructed, with the difference in the RAATE-T1 and RAATE-T2 scores as the dependent variable. The predictors were the number of false responses on the MVS, years of education, income level, age, and duration of treatment. Table 3 shows the standardized $\beta$ coefficients, the $t$-score, and the degree of significance for the four models.

Table 3: Multiple regression models for the differences in raw scores on the first and second RAATE-QI raw scores (N = 102)

| Model | Beta | t-value | p value |
|---|---|---|---|
| ***Dependent Variable (Δ RR2)*** | | | |
| False responses on MVS | .017 | .164 | .870 |
| Years of education | .074 | .706 | .482 |
| Income | -.077 | -.763 | .447 |
| Treatment duration | .168 | 1.692 | .094 |
| Age | -.204 | -1.996 | .049 |
| ***Dependent Variable (Δ RR3)*** | | | |
| False responses on MVS | .236 | 2.303 | .023 |
| Years of education | .027 | .257 | .797 |
| Income | -.022 | -.213 | .832 |
| Treatment duration | -.023 | -.231 | .818 |
| Age | -.008 | -.076 | .940 |
| ***Dependent Variable (Δ RR4)*** | | | |
| False responses on MVS | -.016 | -.157 | .875 |
| Years of education | .042 | .391 | .697 |
| Income | .106 | 1.034 | .304 |
| Treatment duration | .124 | 1.221 | .225 |
| Age | .058 | .558 | .578 |
| ***Dependent Variable (Δ RR5)*** | | | |
| False responses on MVS | -.010 | -.095 | .924 |
| Years of education | .087 | .810 | .420 |
| Income | .097 | .936 | .352 |
| Treatment duration | -.007 | -.072 | .943 |
| Age | .029 | .278 | .781 |

Note. ΔRR2 = Change score in treatment progress dimensions of resistance to continuing care plan; ΔRR3 = Change score in treatment progress dimension of biomedical acuity; ΔRR4 = Change score in treatment progress dimension of psychiatric and psychological problems; ΔRR5 = Change score in treatment progress dimension of social, family, and environmental factors.

Table 4: Summary of multiple regression analysis for each model (N = 102)

| Model | Beta | t-score | p value (two tailed) | $R^2$ |
|---|---|---|---|---|
| ***Dependent Variable (Δ RR2)*** | | | | .042 |
| False Responses on MVS | .015 | .157 | .876 | |
| | *.012* | *.125* | *.901* | |
| Age | -.204 | -2.063 | .042 | |
| | *-.211* | *-2.137* | *.035* | |
| ***Dependent Variable (Δ RR3)*** | | | | .059 |
| False Responses on MVS | .236 | 2.494 | .014 | |
| | *.189* | *1.928* | *.057* | |
| ***Dependent Variable (Δ RR4)*** | | | | .000 |
| False Responses on MVS | -.012 | -.122 | .903 | |
| | *.026* | *.256* | *.799* | |
| ***Dependent Variable (Δ RR5)*** | | | | .000 |
| False Responses on MVS | .013 | .129 | .898 | |
| | .074 | .743 | .459 | |

Note. ΔR = Change score for each dimenson, with scaled scores on bottom; MVS = My Vocational Situation; $R^2$ value is for the entire model and describes the proportion of variance explained by the model.

The first model, testing the significance of the predictors on resistance to continuing care, showed no significant relationship with the number of false responses on the MVS. The negative relationship with age was statistically significant. The $R^2$ value of .042 indicates that 4.2% of the variance was explained by the model.

The second model, testing the significance of the predictors on biomedical acuity in substance dependence treatment progress showed a positive significant relationship with the number of false responses on the MVS. The $R^2$ value of .059 indicates that 5.9% of the variance was explained by the model.

The third model did not show any significant relationship between the predictors

and psychiatric and psychological problems in substance dependence treatment progress, as evidenced by the $R^2$ value of .000.

The fourth model did not show any significant relationship between the predictors and social, environmental and familial factors of substance dependence treatment progress.

These findings indicate that there is a significant amount of the variance could be explained by variables untested by the models brought forth in this study.

## Findings of the Post Hoc Analysis

The RAATE-T1 and RAATE-T2 groups were compared to determine whether were factors other than chance led to early departure from substance dependence treatment. As indicated in Table 5, an independent two-tailed *t*-test showed significant differences between the two groups in the areas of education ($p < .010$) and income ($p < .034$) and on the RAATE-QI dimension of biomedical acuity ($p < .042$). Because of the ordinal characteristics of the income variable, further analysis was done using the chi-square statistic. The findings showed differences in category one and four and are represented in Table 6. The income groupings also are shown in Table 7. The chi-square test further validated the *t*-test given that the same *p*-value was found for both.

In the area of education, the RAATE-T1 group had a lower educational level, with a mean of 11.55 and a standard deviation of 1.93, compared to a mean of 12.22 and a standard deviation of 1.66 for the RAATE-T2 group. The RAATE-T1 group had a higher income level, with a mean of 2.72 (stated in terms of income-level category, not actual income) and a standard deviation of 1.43, compared to the RAATE-T2 group, with a mean of 2.28 and a standard deviation of 1.44. The RAATE-QI dimension of biomedical

acuity showed the RAATE-T1 group with a higher mean of 2.92 and a standard deviation of 1.83, compared to the RAATE-T2 group with a mean of 2.42 and a standard deviation of 1.61.

The variables showing no difference between groups were age, vocational identity, and RAATE-T1 scores for resistance to treatment planning, resistance to continuing care, psychiatric / psychological problems and social / familial / environmental problems.

Although some statistically significant differences were found between the two groups, this difference was not enough to allow one to state conclusively that the RAATE-T2 study group was self-selected by factors other than chance.

Table 5: T-test of the RAATE-T1 and the RAATE-T2 groups[a] (N = 196)

| | t-score | df | p value | mean difference |
|---|---|---|---|---|
| Education | 2.615 | 194 | .010 | .6723 |
| Age | .880 | 194 | .380 | .8857 |
| Income | -2.129 | 194 | .034 | -.4391 |
| MVS falses[b] | 1.140 | 194 | .256 | .7424 |
| R1 | **1.59** | **194** | **.113** | **.5947** |
| | *1.319* | | *.189* | *.2397* |
| R2 | **.327** | **194** | **.744** | **.1325** |
| | *.700* | | *.485* | *.1272* |
| R3 | **-2.047** | **194** | **.042** | **-.5040** |
| | *-1.885* | | *.061* | *-.3048* |
| R4 | **-1.063** | **194** | **.289** | **-.3650** |
| | *-.819* | | *.414* | *-.1141* |
| R5 | **.722** | **194** | **.471** | **.3784** |
| | *1.394* | | *.165* | *.3000* |

Note. R1 = RAATE dimension of resistance to treatment planning; R2 = RAATE dimension of resistance to continuing care; R3 = RAATE dimension of biomedical acuity; R4 = RAATE dimension of psychiatric and psychological problems; R5 = RAATE dimension of social / environmental / familial factors; [a] Comparison of RAATE-QI done on only the RAATE-T1 for each group; [b] MVS = My Vocational Situation false responses; Scaled scores for RAATE dimensions are in the row below the **bold** raw scores and are *italicized.*

Table 6: Income category distribution of subjects in RAATE-T1 and RAATE-T2 (N = 196)

| Income Category | RAATE-T2 | RAATE-T1 |
|---|---|---|
| Less than $10,000 | 46 | 29 |
| $10,001 to $20,000 | 17 | 15 |
| $20,001 to $30,000 | 15 | 15 |
| $30,001 to $50,000 | 12 | 23 |
| Over $50,001 | 12 | 12 |
| | N = 102 | N = 94 |

Table 7: Chi-square test of income variable between RAATE-T1 and RAATE-T2 (N = 196)

| Chi-square value | df | p-value |
|---|---|---|
| 4.453 | 1 | .035 |

Note: Mantel-Haenszel chi-square test.

## Summary

In this chapter a description of the sample was provided, with observations about the sample's significant characteristics. A statistical analysis was performed to explore the relationship between subjects' progress in substance abuse treatment and other variables such as vocational identity, age, years of education, income at the time of admission to treatment and length of stay in treatment.

The multiple regression analysis indicated that two variables in two different models were statistically significant. The model for the dependent variable, continuing care, found older age to be a predictor of positive treatment progress. The model accounted for 4.2% of the variance. In addition, the MVS (number of false responses)

model with the dependent variable, biomedical acuity, described 5.9% of the variance. Although these findings were significant, other unmeasured factors might have the potential to explain the variance.

In addition, in the post hoc analysis, findings indicated differences between two groups, RAATE-T1 and RAATE-T2, but robust differences were not evident. The differences in the categories of education, income, and vocational identity were significant and warrant further discussion.

# CHAPTER 5

# DISCUSSION

In this chapter a discussion of the study findings is presented. Limitations of the study are elucidated, and implications for practice with substance abuse treatment professionals, rehabilitation professionals and educators are explored. Finally, recommendations for future research will be presented.

## Synopsis of the Study

In this study the writer explored the relationship of vocational identity and other variables to progress in substance dependence treatment. The research question was: What is the relationship of vocational identity, length of treatment stay, years of education, age, and income at time of admission to specific measures of progress in substance dependence treatment? These measures of treatment progress were resistance to treatment planning, resistance to continuing care, biomedical acuity, psychiatric and psychological problems, and social / familial / environmental factors as measured by the Recovery Attitude and Treatment Evaluator Questionnaire (RAATE-QI) (Mee-Lee et al., 1992). Vocational identity was measured by the My Vocational Situation (MVS) instrument developed developed by Holland, Daiger et al. (1980).

Data were collected on 196 of the subjects who were administered the RAATE-QI and the MVS during the first week of treatment (RAATE-T1). Of these 196, 102 successfully participated from the fourth week to the eighth week and were administered a second RAATE-QI (RAATE-T2) to measure progress in substance dependence treatment from the first week in treatment.

## Discussion of the Findings

The regression models showed relationships between the substance dependence dependent variables, resistance to continuing care and age, and between the dependent variable, biomedical acuity, and the predictor, high vocational identity. Although significant, the relationships described only 4.2% of the variance for the resistance to continuing care model and 5.9% of the biomedical acuity model. In addition, the comparison of the RAATE-T2 and RAATE-T1 groups revealed some significant differences in individual categories of age, education, income, and biomedical acuity. It appears that the RAATE-T1 group tended to be younger and less educated, had a higher income, and perceived themselves to have more medical problems than did the RAATE-T2 group. The models did not provide an explanation for a significant amount of variance. Analysis of the unexplained variance may provide an understanding of the dynamics of substance dependence.

### Finding 1

Using stepwise regression with the RAATE-T2 study group, it was found that a high number of false responses on the MVS was significantly related to the RAATE-QI dimension, biomedical acuity. In the final regression model, the beta coefficient for the

number of false responses on the MVS in relation to the biomedical acuity score was .242, with a t-score of 2.494 ($p < .014$).

The relationship between the number of false responses on the MVS and biomedical acuity indicated that those with a more developed vocational identity made more progress in the dimension of biomedical acuity (i.e., those with a higher achieved vocational identity perceived themselves as making more progress in resolving biomedical concerns).

Self-perceptions of biomedical acuity can be interpreted in many different ways. The perceptions may be totally unrelated to substance dependence; it is also possible that the perceptions are psychosomatic and have nothing to do with substance dependence: Complaints may be related to symptoms of physical withdrawal from the substance of dependence, or the dependency may have a lasting physical effect on the individual. Finally, the individual could be experiencing physically-induced cravings for the substance of dependence.

Making more progress in this dimension is complex in that a better understanding of the baseline scores needs to occur. If the original score on the RAATE-QI is high, meaning a high level of severity of illness, then the acuity may be such that progress will be slow due to the nature of the illness. For example, withdrawal symptoms are different for different drugs and may be more severe, depending on the amount previously ingested and the duration of substance dependence without detoxification (Hubbard et al., 1989; Vaillant, 1995) As previously observed, the baseline RAATE-QI scores for subjects with lower vocational identity scores were higher than the scores of subjects with higher vocational identity scores in the area of biomedical acuity; this could mean that the

medical problems of the former group were more severe. If more severe medical problems take longer to resolve, it may be possible that these problems are inherently more difficult to resolve. Consequently, the severity of illness at onset of treatment needs to be considered along with the amount of progress. With subjects who had less severe biomedical acuity and a high vocational identity, the progress may have been facilitated by the lesser nature of the biomedical obstacles (Hubbard et al., 1989; Vaillant, 1995).

Another crucial aspect of this relationship is the potential measurement of craving portrayed by the biomedical acuity dimension. Flowers et al. (1993) suggested that health surveys can serve as craving measurements. Therefore, one could conclude that the higher the achieved vocational identity, the more progress had been made in reducing the potential for craving.

The characteristics of an achieved vocational identity that would lead to this concise relationship with craving could be related to how the individual is organized in terms of decision making. Newman, Fuqua, and Seaworth (1989) theorized that anxiety is a factor in career decision making, and Schrumrun and Hartman (1988) found career indecision to be a factor for children of alcoholics. The distraction of more severe biomedical acuity or craving may interfere with vocational decision making, which could result in a less established vocational identity.

This research calls for a review of the sequencing of intervention with substance dependence. The profound craving and consuming aspect of substance dependence seems to overwhelm all other dimensions of identity, which is why most substance dependence professionals profess that, before any other problem can be addressed, including psychiatric ones, the substance dependence issue must be recognized and a

strategy developed to contend with it. This research may be indicating that having a vocational identity can be a precursor to prevention of craving. If so, then sequencing the approach to dependence may need a new look.

## Finding 2

Age was negatively correlated to resistance to continuing care. In the final regression model, the beta coefficient for age in relation to the resistance to continuing care score was -2.04 with a t-score of -2.063 ($p < .014$). The negative relationship between age and resistance to continuing care means that the older the subject, the more likely he was to make more progress in treatment in the area of continuing care. Continuing care requires a commitment to following through on recommendations that are time and energy consuming. It is possible that the older subjects might also have had more relapse experience or treatment failures, whereby the recommendations for continuing care were more meaningful to them than to the younger subjects. It may also be possible that the older substance-dependent person is more receptive to continuing care alternatives due to the nature of the activity; i.e. the 12-step self-help groups in that geographic area might have had an older population.

## Finding 3

There were no other significant relationships between the predictors of age, years of education, and treatment duration and any of the other RAATE-QI dimensions as a dependent variable. In the original design of the study, it was hypothesized that all of the dimensions of progress in substance dependence treatment would have a significant relationship to vocational identity. But there was no reason to expect that only age and

the biomedical acuity dimension would be found significantly different from the other dimensions. It may be that with the type of population found in a TC, which often has residents with long periods of chronic substance dependence, the gains in treatment progress are found after a longer treatment stay. De Leon (1995) indicated that the first 8 weeks of TC experience are viewed as an orientation phase leading into a treatment phase. Even though the therapeutic process was having an effect on the subject during that time, it might not have been integrated into the person's thinking about issues related to continuing care and treatment planning. The delay in understanding treatment concepts or associating them with their own self-reality may show up later for those who have a more developed vocational identity.

## Unexplained Variance

There was a significant amount of unexplained variance in the models tested through multiple regression. Given other research in this area, there are many possible explanations for this result. Lavelle, Hammersley, and Forsyth (1991) attempted to explain substance use through personality traits and found that shrewdness, tough-mindedness, anxiety, experience seeking, and motivation for the future were traits that distinguished the drug addict from a student population and a homeless population. These traits did not match those previously considered, such as anti-social personality, or earlier developmental traits, such as precocity, leadership, and curiosity. This relationship between personality and substance dependence may offer an explanation for some of the variance in the model through the use of a personality profile instrument.

Other vocational variables such as vocational maturity and career decidedness may have defined the vocational traits of the subjects more precisely. Graef, Wells, Hyland, and Muchinsky (1985) found that vocational identity and vocational maturity were subcomponents of vocational decidedness, and all of them were positively correlated.

A more precise or different measurement of the identity variables may have provided another perspective with the model. Jones, Hartmann, Grochowski, and Glider (1989) found differences between adolescent substance abusers in treatment and students in school using the objective measure of ego identity status. Their findings showed that the students in treatment were psychologically less mature than those students in the school sample.

Other variables that could have contributed to the unexplained variance include, job classification of the subjects, ethnicity, educational performance, criminality, motivation for treatment, learning styles, coping skills and aptitude.

## Post Hoc Findings

Because 94 subjects did not complete the second RAATE-QI questionnaire, additional post hoc analysis was done to compare the two groups, RAATE-T1 ($N = 94$) and RAATE-T2 ($N = 102$). The two groups were analyzed to determine whether there were differences that might offer an explanation for the RAATE-T2 group results. An independent two-tailed $t$-test was used to compare the RAATE-T1 group to the RAATE-T2 group, to see if there were any overall differences between the groups. This statistical

analysis was done to determine whether there was a difference between the two groups before their departure from treatment.

## Post Hoc Finding 1

There was a significant difference ($p < .01$) between the groups in the area of education, the RAATE-T1 group had showing a lower mean of 11.55 (SD 1.93) as compared to the RAATE-T2 group, with a mean of 12.22 (SD 1.66). A possible explanation for this difference could be the attraction of the TC's philosophical approach, which encourages contemplation of ideas and rewards introspection, both of which are aspects of education and characteristics of those who have an affinity for more education (Cross, 1983; Knowles, 1990). Knowing the educational development needs of each group would be helpful in analyzing this data to determine adult education strategies. Perhaps the material presented to the group was at an inappropriate reading level and caused frustration, or the subject might have missed certain important cognitive data that could have helped in the prevention of relapse.

## Post Hoc Finding 2

Biomedical acuity was the second category on which the two groups differed significantly ($p < .042$). The mean for the RAATE-T1 group was 2.92 (SD 1.83), and the mean for the RAATE-T2 group was 2.42 (SD 1.61). This difference indicates that the RAATE-T1 group perceived themselves as having more medical problems and physical complaints than did the RAATE-T2 group. In the previous analysis of biomedical acuity, the ways in which physical problems or the perceptions of physical problems can be

interpreted were discussed. If any of the factors related to physical concerns were valid, then it is logical to assume that the physical condition or at least the perception of the physical condition might have been a factor influencing the RAATE-T1 group to leave treatment before their planned date of discharge. Dusoe as cited in Blieberg (1994) found that subjects who left substance dependence treatment against medical advice often reported less employed time at the time of admission and that those who were identified as employment stable stayed in treatment longer. Contrary to the findings in this study with regard to biomedical acuity, Dusoe also found that there was no difference between groups in terms of medical complaints. However, the level of treatment was intensive inpatient, and the substance of choice of the subjects in that study was not matched to the substance of choice for this study's population.

Flowers et al. (1993) indicated that craving is a primary cause of relapse and can be measured through health ratings. Because craving due to health concerns was a possibility in this situation, the individual questions were reviewed in the post hoc analysis to determine whether any related directly to physical craving. In reviewing the questions on the RAATE-QI that were used to categorize the biomedical dimension, two questions were found that related indirectly to the possibility of craving, but no questions asked a question about craving directly. Of the questions that measured the other dimensions of treatment progress, none related directly to craving or even coping with craving.

It might be argued that craving is not a sign of negative treatment progress and that *decision making* as it relates to the craving is the more important measure of progress. The RAATE-QI does not appear to measure this, on face value, and there have

been no corroborating studies comparing the RAATE-QI to other instruments measuring desire to use substances. Even though there is no direct connection between the RAATE-QI and other instruments, findings such as those of Flowers et al. (1993) help retain the possibility that craving could be a factor in this circumstance.

## Summary of the Findings

When considering all of the variables on which the RAATE-T1 and RAATE-T2 groups were compared, there appeared to be no *substantial* overall difference between the two groups. When combined with other research such as that by Condelli (1994); Dusoe in Bleiberg et al. (1994); McLellan et al. (1996), who described differences between groups of patients who stayed in treatment and those who did not, the results from this study supplemented other findings, which will help in theoretical development.

## Implications for Practice

Overall, this study has raised a number of important questions. For example, questions remain about why subjects left before their prescribed discharge, whether there were unmeasured variables that differentiated the two groups, whether there are measures other than the RAATE-QI that might have detected treatment progress and what observable signs and symptoms about the substance abuse treatment biomedical acuity progress dimension are related to achieved vocational identity? All of these questions are important theoretically and lead to discussion about important considerations for practice.

Substance dependence professionals may benefit from having objective standardized information about vocational identity and treatment progress. The data

gathered in this study met such criteria, and yet the clinical staff at the treatment program did not request any of the information gathered on their clients. This response might have been a result of many factors, such as poor communication with the staff about the study's value, the workload of the staff, forestalling their inquiry about any supplemental information, or the staff's apathy about the data. This lack of response from professional staff was from the treatment program that was the ***most cooperative*** and supplied the 196 subjects used in the final analysis. As noted in the methodology section, three other programs failed to comply with their agreement to participate in the study citing staff workload as the reason for discontinuing involvement in the study. Substance dependence clinical staff spend a significant portion of their time on paperwork to meet a variety of regulatory requirements, so being presented with more forms and data is not a popular suggestion. However, if these forms contained valuable information, were filled out mainly by the client, and were easily scored either by computer or a trained volunteer, could the quality of treatment be improved?

Knowledge of the importance of biomedical acuity should alert practitioners in the field that a variable or set of variables may predict eventual treatment compliance, progress, and outcome. The measure of biomedical acuity and vocational identity needs to be operationalized through assessment methodology and treatment approaches. Practitioners need a clear set of signs and symptoms to identify progress in treatment that are standardized to predict craving and other signs of relapse. An additional measure of progress or readiness to progress, such as the MVS, might provide a more complete view of the substance-dependent person.

Another professional affected by these findings is the rehabilitation counselor, who must handle cases in which substance dependence is either a primary or a secondary disability. If vocational identity is a significant factor in treatment progress, then the rehabilitation counselor is a key component in the overall recovery of the substance-dependent client. The rehabilitation counselor is an important supplement to a substance dependence treatment program as an outside resource, as is the case with many treatment programs today. The rehabilitation counselor could also serve as an internal consultant to help fortify a vocational-identity-building program if this is seen as a significant factor leading to progress in substance dependence treatment.

Educational professionals are a key factor in understanding the importance of vocational identity in predicting treatment progress, and possibly in preventing substance dependence, as well. The majority of prevention has occurred in schools, which will continue to be the primary vehicle for formal programs in the near future, according to Donaldson et al. (1996); educators are the primary professionals assigned to carry this out. This may also mean using educators as consultants in treatment settings to assist with educational programming for vocationally oriented activities.

The findings from this study have focused on the biomedical acuity dimension. Thus, medical involvement by both physicians and nurses is key to monitoring the physical condition of patients, as well as in prescribing possible remedies to prevent craving if it is anticipated.

## Recommendations for Future Research

Several questions about certain variables were not answered with the instruments used in the study. The methodology of using questionnaires to gather information about both the vocational identity and treatment progress indicators did not provide an opportunity for clinical evaluation and exploration of certain ambiguous information. The potential would exist to gather more clinical information if a researcher were to use the clinical interview format of the RAATE, referred to as the RAATE-CI. It would also be helpful to use other treatment progress instruments and vocational measures to further validate the instruments with the substance-dependent population. If repeated, the study should include other independent variables such as marital status, criminal incidences with current legal status verified by outside source, current job classification if employed, previous treatment experiences with type of treatment and length of stay, psychiatric diagnosis if applicable and medications.

This study concerned progress in treatment, but questions about the impact of the therapeutic setting at different intervals surfaced during the course of the study. Whether treatment itself has a direct and timely effect on progress in treatment and vocational identity is a question raised by this research. Because the study was conducted with a closed TC, a variety of intracommunity issues could have affected the progress not only of individuals but also of the group. Correlations of progress indicators with changes in the community and administration of the RAATE could have revealed data about how the TC affects the progress of the individual. For example, at one point in the data-collection phase, the subjects were under a "house-ban," which restricted their privileges (see

Appendix D); this would have been likely to influence their attitudes about certain dimensions measured by the RAATE-QI.

In the original study design, more than one treatment facility was identified in which to gather data. The question still remains about differences in treatment program approaches, either within the same level of care or between levels of care. A larger sample size with different treatment locations would be helpful in comparing treatment approaches.

In addition, a second measurement of the vocational identity status, which might have changed over the course of treatment, would help in evaluating the degree of change experienced by the subject in relation to vocational issues. Such an assessment could help in program evaluation if a vocational development component were available.

Kleber (1994) recommended that the federal government allocate more research dollars to improve treatment and prevention of substance abuse and dependence. As examples of existing valuable efforts, he referred to research in process related to brain chemistry, new medications, behavioral interventions, and even an anti-cocaine vaccine. He also recommended studies that evaluate individualized treatment or match the treatment with the type of substance dependence problem to determine the most cost-effective approach. The findings from this study support his recommendations, especially as they relate to exploration of medical interventions that may diminish the physical craving for substances.

In addition, researchers need to continue to strive to find a specific craving inventory or intervention tool to prevent craving leading to relapse, or that can predict a potential relapse. As a result of this research, questions have surfaced regarding whether

there is a measure of craving or biomedical acuity that predicts progress in treatment, likelihood of relapse or long-term outcome. Physical manifestations can also be a result of stress-induced disorders, and certain stress inventories may be correlated with the RAATE or other inventories. Research is needed that correlates these instruments or consolidates them into one more efficient instrument.

This study was designed to examine a substance-dependent population independent of ethnicity as a contributing variable. Of the 196 subjects in the study, 81% were African American. According to Dent, Sussman, Ellickson, Brown, and Richardson (1996), cultural sensitivity is necessary in prevention efforts, but there also is a need to develop a more consistent definition of ethnicity. The same can be said for treatment approaches, especially with African American males. In this regard, Wade (1994) recommended a biopsychosocial approach supplemented by special cultural considerations. Of interest to this study, Wade also stated that African American males differ from the general population in terms of higher unemployment rates and low self-esteem due to other environmental factors. Lauver and Jones (1991) found that ethnic groups differed with regard to gender in relation to self-efficacy and interest in relation to occupational choice. There is a need to focus on ethnic groups both with regard to both substance dependence and vocational variables.

Because there was a difference in the educational level of the RAATE-T1 group, there are questions about the educational and vocational needs of the subjects. This is a factor from both a programmatic and an individual perspective. The substance-dependent individual needs to be seen as an adult learner as well as a patient in treatment, to determine barriers to learning the treatment concepts. The adult learner is also concerned

about developing a vocational identity; thus, an individualized plan that helps accomplish career goals is also necessary. Research that considers whether and how substance dependence treatment programs evaluate the adult learner and how programmatic designs take into account the adult learning principles that help in developing standards to improve instruction and treatment.

The attitude of substance dependence professionals concerning the nature of substance dependence and the status of patients under their care should also be investigated. The instruments employed in this study could also be used to compare clinical staffs' impressions for congruency and for validation of treatment strategies.

## Limitations

This study resulted in modest findings about the differences in subjects leading to varying degrees of progress in substance dependence treatment. The findings themselves limit the conclusions that can be drawn about vocational identity and substance dependence. These findings provide an opportunity to think about what was not found that might have been expected, and to examine the design of the study so as to improve the methodology for future studies.

This study was restricted to the therapeutic experience and treatment progress while in a substance dependence TC. The study focused on males who were chronic relapsers who had lost many of their social supports. The TC is seen as one of the last stops before incarceration, and due to managed care and insurance limitations, referrals to just self-help supports may be the next and only alternative to treatment. Consequently,

one cannot draw conclusions about the general substance-dependent population from the results of this study.

The focus on the treatment experience itself limited the conclusions that could be drawn about overall outcome. The findings in this study are specific to only the treatment period in a TC. The TC is a protective environment, and the overall outcome for each of the subjects is not known beyond the study period. Welte, Hynes, Sokolow, and Lyons (1981) found that, when studying treatment outcome, one of the most common errors is using short follow-up time periods. Even though this study was not about treatment outcome but about progress in treatment, there is value in knowing whether short-term interventions have long-term effects.

A significant number of subjects ($N = 94$) did not complete treatment as prescribed and left before to taking the second RAATE-QI. Because of the RAATE-T1 group's departure from the study, a significant amount of information was lost that could have been revealing about the relationship between vocational identity and the dimensions of treatment progress or posttreatment experience. It is not clear whether these subjects relapsed to pretreatment baseline levels of substance dependence or whether other significant events occurred. In addition to the outcome of the RAATE-T1 group, the causative variables leading to departure from treatment were not available; these might have shown a relationship with the variables examined in this research.

The approach of using the MVS as a measure of vocational identity limited the options related to identity status to only a gradient achieved and nonachieved in the vocational category. It did not examine processes such as decision making, which from a treatment perspective would be helpful in developing interventions. Raskin (1989) stated

that identity status is a frame of reference that must be matched with the decision-making process in order to understand willingness to take action on vocational tasks.

Vocational identity was chosen as a focus for this research, but a more comprehensive evaluation of identity would have enriched the findings. Vocational identity is just one dimension of identity and provides a limited view of the individual. Other dimensions of identity in areas of religion, moral values, and family would have revealed a more comprehensive picture of the substance-dependent individual than just vocational identity. Using Marcia's et al. (1993) approach in identifying status categories, richer data might have been provided if other instruments had been used to differentiate among achieved, moratorium, diffused, and foreclosed statuses in a variety of dimensions.

It takes a substantial amount of time for one to develop an identity and a status evaluation at one point in time does not take into account the developmental dynamics, which provide a wealth of information. The TC attempts to dramatically change coping techniques and other factors to prevent relapse, but implicit in this process is a change in identity.

This researcher looked only at males in substance dependence treatment. Waterman (1985) stated that several studies on identity in adolescents have shown more similarities than differences between males and females. There is a significant population of females who seek treatment for substance dependence, and they might have potential vocational identity issues. Pruitt (1992) studied Hispanic reentry female community college students with regard to career indecision and vocational identity. His findings revealed that level of education and paid work experience were related to higher

vocational identity and career indecision. Research comparing females to males in terms of identity, progress in substance dependence treatment, and different treatment interventions would be beneficial.

Predominantly African-American males were represented in this study. Wade (1994) indicated that there are cultural variables that influence the design of treatment programs for African Americans. Ethnic comparisons related to identity, vocational choice, and progress in treatment could provide insight into the sociocultural and ethnic variables that are important to consider in treatment design, educational planning, and vocational development. Pruitt (1989) found that Hispanic females tied ethnicity closely to vocational choice, and Leal (1990) found correlations between substance abuse and vocational issues for Hispanics. Dryer (1995) also indicated that there are important cultural considerations to keep in mind in analyzing identity statuses.

The MVS and other identity instruments have been used with college student populations, but they have not been used extensively with substance-dependent populations. As Holland, Daiger, et al. (1980) recommended, it would be valuable to use the instrument more to establish norms with this population.

The RAATE-QI is designed to measure substance dependence in general, but an items review indicated that the term "alcohol" is used most often followed by other drug references. In addition, reference in the questionnaire to self-help meetings is exclusively to Alcoholics Anonymous, as opposed to other drug-oriented self-help groups, such as Cocaine Anonymous or Narcotics Anonymous. After interacting with the treatment program staff and the subjects, it was clear to the researcher that the focus of the TC was primarily on those with a cocaine dependence, with alcohol as a secondary disorder. In

reviewing the RAATE-QI, it was evident that the questions were designed for an alcohol-oriented population. This is often the case with much of the substance abuse literature and in the designs of treatment programs, due to the diversity of drugs of choice. Research and clinical approaches have evolved from a focus on one drug such as alcohol or heroin, to a comprehensive approach that encompasses all drugs with terminology such as chemical dependence or substance dependence. Although such terminology may be convenient, efficient, and logical, subjects might not identify with questions that do not mention their drug of choice. Consequently, questions might have different weights for different subjects, and the data could be skewed accordingly. Closer scrutiny of the use of the RAATE with populations that abuse substances other than alcohol as the primary disorder need to be designed with the entire population in mind or focused on the particular population's street drug language or frame of reference.

The RAATE has not been used extensively in the field of substance dependence treatment, and few researchers have used the instrument since 1995. More studies designed to objectively measure treatment progress in all levels of care would help determine the value of the instrument for future research or for practice application.

Because the setting of this study was in a heavily industrialized area related to the automobile industry, the majority of the subjects who were employed in the study held positions in that industry. The effect of the subjects' current occupations on their identity was not measured, nor were the cultural and environmental effects of the manufacturing environment. In casual conversations with the researcher, the subjects and the staff of the treatment program, regularly commented about the factors in the work environment that led to use of substances and treatment failure often being caused by peer pressure upon

return to work. Many of the workers had started their careers immediately following high school in a manufacturing plant that paid higher wages than most jobs for college graduates in the local area. Although the wages and benefits were relatively good, job dissatisfaction was often an issue, which could lead to an identity of being a "shoprat"-- a prisoner of the economic benefits but a lifetime of frustration through by never pursuing the career one fantasized about in adolescence. This employment situation may be the foundation for use, abuse and eventual dependence on substances and certainly warrants more study.

Vocational identity was reviewed from a status perspective, but its qualitative aspects were not examined. The subject's type of profession, level of advancement. and other dynamics of professionalism are variables of interest, which might also make a difference in the rate of progress in treatment and in the actual treatment design. A comparison of different treatment populations defined by vocational choice may yield data about identity development but also about treatment progress. The data would be enriched by identifying the status of vocational identity and the professional status.

A few of the subjects had less than an eighth-grade education, and although the treatment staff indicated they had not observed reading problems in the subjects, there was no objective measurement of reading comprehension to validate the treatment staff's clinical judgment. To provide confidence in the data, more information on subjects' reading comprehension and other aptitudes would be helpful.

In this study, the researcher did not look closely at identity after the initial measurement of status was done. It was assumed that identity changes slowly and that changes would have been minimal over the short duration of the study. Measurement of

the quality and status of identity and measurement of the changes tied to the progress in treatment could be analyzed. Transformational learning concepts could also be studied, examining of the meaning adults attach to learning new ways of coping with life issues and possibly to changing identity while in treatment.

## Conclusions

As a result of this exploratory study, additional information has been gleaned about the relationship of vocational identity and other mitigating variables to progress in substance dependence treatment. The study has raised questions about the relationship of the biomedical acuity dimension of progress in substance dependence treatment to vocational identity. The possibility exists that a substance-dependent person with a high degree of vocational identity might make more progress in the area of biomedical acuity during the course of early treatment in a TC environment. This is significant in terms of substance dependence treatment because of the implications for craving, which may lead to relapse. This study has illustrated several relationships regarding progress in substance dependence treatment, vocational identity and educational issues with adults that warrant further research.

# APPENDICES

# APPENDIX A

## APPENDIX A

## PARTICIPANT LETTER

Dear _____:

The following describes the design of the research and your involvement in the project:

**Step One:** Review the requirements of the study described in the Study Summary (see attached sheet),

**Step Two:** If you wish to participate, sign the release to participate in the study.

**Step Three:** During your individual treatment session you will be given two forms to fill out with the assistance of your therapist.

**Step Four:** Upon successful completion of the program and prior to your discharge, you will fill out one of the forms you filled out at the beginning of your treatment.

The total time you will spend filling out forms will be no longer than approximately 60 minutes.

Thank you for your interest in the study and your willingness to participate.

Sincerely,

Gary Hankinson
Doctoral Candidate
Michigan State University

# APPENDIX B

## APPENDIX B

## STUDY SUMMARY

The vocational identity and substance dependence study is designed to explore the relationship between substance dependence treatment progress and vocational identity.

If you are employed or employable and are a patient in the residential treatment program, you are a potential participant in this project. This study will ask you questions about your progress in treatment and your views about your vocational experiences and plans.

This study will require you to be available for two sessions to fill out two questionnaires, one occurring early in your treatment and the second one in the later part of your treatment prior to successful completion of the program. There will be questions asked about how you see yourself, how you feel about treatment, how you feel about continuing care, and how you are progressing in treatment in accomplishing your treatment objectives.

If at any time you wish to no longer participate in the study you may decline to continue. You will be required to sign a release of information to participate in the study so that the researcher may discuss your case with your therapist. All information will be kept confidential and no information about individual participants will be revealed in the study summary.

Further questions about the study may be answered by your therapist. Thank you for your interest and future cooperation.

# APPENDIX C

## APPENDIX C

## CLIENT RELEASE TO ENGAGE IN RESEARCH AND FOLLOW-UP

I, _____ hereby authorize Gary L. Hankinson, Michigan State University doctoral candidate, to administer questionnaires to determine my status re: drug and /or alcohol use, career development and satisfaction with my life.

The purpose and need for such disclosure is to assess my career development and the effectiveness of my recovery plan. This information will be used in cumulative fashion or in case study write-ups which will insure the confidentiality of the discussions with the researcher.

This consent is subject to revocation at any time except in those circumstances in which the program or the researcher has taken certain actions on the understanding that the consent will continue unrevoked until the purpose for which the consent was given shall have been accomplished. However, any consent given Subpart C, Federal Register, Volume 40-number 127, July 1, 1975, shall have a duration no longer than that reasonably necessary to effectuate the purpose for which it is given.

Without the expressed revocation this consent expires for the following specified reason:

Date:

Event two years after termination date:

Condition:

Client's Signature:
Date:

Witnessed by:
Date:

# APPENDIX D

# APPENDIX D

## THERAPEUTIC COMMUNITY PROGRAM DESCRIPTION

### Setting

The facility was tucked away in an urban business/residential neighborhood with schools, laundromats, apartment buildings, houses and party stores. After dark this was not considered a safe area, and special precautions were taken to watch vehicles parked in the lot or on the street. The facility itself was a 100-year-old converted apartment building that now was able to hold approximately 110 substance-dependent residents in semi-private rooms. The grounds were well manicured, with flowers and trimmed bushes, and residents in treatment kept the facility clean and orderly. The age of the building was obvious; updates had taken the form of a new paint job, but not remodeling.

As one approached the entrance, a resident in treatment who wore a name tag including only his first name approached, sometimes in the parking lot but always at the front entrance. After hours this entrance was locked, and entry to the facility was granted only if a visitor had an authorized contact in the facility. On more than one occasion this was a painful procedure, which resulted in waiting in the winter cold for 20 minutes for the staff member to be reached to authorize entry.

## Population

The population in the facility included male (80%) and female (20%) residents. Approximately 80% of the residents were African American, and approximately 60% were unemployed or underemployed. The primary drug of choice for more than 80% of the residents was cocaine; alcohol was the second choice most of the time. Other drugs of choice included heroin and marijuana. Approximately 50% of the residents had an existing legal problem that needed resolution, and almost all of those who were employed indicated that they had job performance or status issues.

## Schedule of Activities

Each day the residents awoke at 6 a.m. and participated in physical exercise at 6:30 a.m. Between 7 a.m. and 9 a.m. breakfast was prepared and served while the residents attended to other personal needs, and senior residents performed inspections of the living quarters. At 9 a.m. all of the residents gathered for a morning meeting, at which issues surrounding the atmosphere of the therapeutic community (TC) were discussed. Residents brought up specific issues; usually paid staff were not present unless they wanted to sit in or had something important to say relevant to the topic of the day. This meeting was held to help plan the day and could serve as a motivational base for positive thoughts, with expressions about coping with life. There was often singing by the group or by individuals to help energize the group.

Didactics started at 10 a.m. with a structured group presentation and discussion of a topic relevant to substance dependence, such as AIDS or parenting. The quality and content of these didactics were highly variable due to the training and preparedness of the

presenters. Residents who did not participate in didactics during the 10 a.m. time slot were scheduled at 1 p.m. instead. During these alternative times, the residents who were not in the didactics were on work detail, cleaning the house or preparing food for the scheduled noon lunch.

At 2 p.m. there are different types of meetings and specialty groups; most of the residents could spend this time until 3 p.m. in reflection. At 3 p.m., each resident attended a 1-to 2-hour group therapy session, facilitated by their assigned counselor, until the dinner hour from 5 p.m. to 6 p.m. The evening schedule was highly variable and could consist of family visits, group therapy, specialty groups (gender specific as an example), recreational activities, Narcotics Anonymous meetings, or other self-help groups. Usually at 9:30 p.m. there was an evening meeting of all of the residents to recap the day and "de-charge" the group from the strain of the day. At 10 p.m., free time was available, and at 11 p.m. the residents were confined to their rooms for the night.

## Program Rules

The program had primarily two categories of rules: procedural rules and cardinal rules. The procedural rules governed the day-to-day operations of how to perform a particular function, such as requesting a pass. The cardinal rules were related to the core substance-free philosophy of the TC; without them, it would have been difficult to provide an orderly and effective environment. The cardinal rules were as follows: No drugs or alcohol, no physical acts or threats of violence, no stealing, and no sexual contact. Violation of any of the cardinal rules, or even knowing of someone else's violation without exposing the infraction, was grounds for termination as a resident.

## Philosophy of Treatment

The program philosophy statement was written in first person so that the residents could more easily internalize the concepts. The statement read:

> I am able to change the lemon of my life into lemonade. I came here out of darkness in order to stop running from myself. As an individual, I avoided confronting myself and being confronted by others. Thus, I was alone searching for a happiness that was only within myself. Nowhere else but here at the Program will I begin to face reality.
>
> Only by being honest with myself and others, by being responsible for my actions, and being here when someone turns to me, will I begin to grow. Only by facing myself and others and by changing will I at last change my life.
>
> In this house with my brothers and sisters I will at last take root and grow into a human being endowed with honesty, dignity and pride.

In further discussion about the philosophy of treatment, a counselor at the facility stated that the program was not a building with walls, but an idea, a community, a way of life, an attitude, a behavior, and a level of attention and awareness. He proposed a metaphor of the "91st day of Treatment" which builds its premise around carrying the learning and awareness of treatment beyond the treatment setting into real life experiences (B. Bracco, personal communication, 1996).

## Therapeutic Community Treatment Activities

There were different types of groups and/or activities that occurred regularly within the TC, that when viewed as a whole, composed up the essence of the TC. These activities were as follows:

1. Therapy groups: 4 times weekly, residents met with their primary therapist and other group members to discuss issues related to their treatment plans. Residents were encouraged to share feelings and to provide observations about each other in terms of their progress in treatment.

2. Encounter groups: 2 times weekly, the residents were encouraged to express their feelings through the use of methods not always socially acceptable, such as through the use of profanity. The staff attended the group and might be confronted by the resident. The goal of the group was to resolve situations so that the parties involved understood the reasons for the conflict and had the opportunity to fully express their feelings. Prior to the group, the resident wrote a "slip" that described the circumstances which led to their need to express their feelings. In the slip, the person(s) involved in the situation were identified and were requested to be present at the encounter group. The group served to resolve conflict within the community and might surface treatment issues for certain people due to the nature of the conflict. Some staff members viewed the encounter group as a measurement of the condition of the TC and explained that the quantity and quality of the encounters represented the degree to which feelings were expressed. The more feelings expressed directly about situations and conflicts the more likely the residents were honestly coping with their own problems as individuals and collectively as a community.

3. Marathons: These groups rarely occurred, but when they were scheduled, their purpose was to wear down the defenses of the group members to help

surface more underlying feelings not normally recognized during day-to-day living. In duration for 24 to 72 hours, the entire TC community might have participated or a subgroup such as the senior residents might have been involved.

4. Men and women's groups: These groups helped the resident contend with the problems unique to each gender and were created on an ad hoc basis. Sexist or abusive comments by males in the community or seductive mannerisms by females might prompt the clinical staff to consider the creation of a gender specific group to analyze the origins of such behavior.
5. Special interest groups: As in the gender specific group, special interest groups were defined by the profile of the population in the TC at any time. Veterans groups and parenting groups were frequently formed during the course of the study to help certain residents gather specific information about parenting or in the case of the veterans group, to have a peer group that might understand previous trauma and its impact on the individual.
6. Didactic groups: Each day an educational presentation was provided for 1 and one-half hours about topics such as AIDS, parenting, the effects of alcohol and drugs on the body and many other topics designed to motivate the resident to change or to provide needed information meant to prevent mistakes following release from treatment.
7. Occupational therapy: The resident was assigned job responsibilities to help the TC stay self-sufficient and to help the resident to learn to accept responsibilities. Job responsibility was determined based upon the

resident's ability to perform functions and their need for certain treatment challenges. Responsibilities were given to each individual which exploited their talents. For example, the procurement of donations was often assigned to those with the ability to sell and communicate. Job tasks were assigned to help the resident learn about themselves and to develop skills necessary for independent living.

8. Educational therapy: Although referred to as therapy, this activity was mandatory for those with less than a highschool education and consisted of structured classroom activity with a tutor and teacher to prepare for the GED.

9. Individual counseling: After the initial assessment and the development of a treatment plan, the resident was seen by a therapist as necessary and no less than once per week to help maintain accountability related to meet treatment goals.

10. Family therapy: Family members were encouraged to be involved with the program through structured activities usually on the weekends. When special issues surfaced with certain residents, the family was asked to participate in group sessions. These treatment sessions were designed to resolve family conflicts which might cause relapse.

11. Recreation therapy: Alternative forms of activity that did not include use of substances was provided through excursions into the community to play basketball or enjoy simple activities such as utilizing park facilities.

12. Positive peer culture: The residents were taught that in order to help themselves they must help others. The culture of the recovering substance-dependent provides an environment that inspires residents to want recovery for themselves. An expression, "In order to keep it, you must give it away," helped the residents understand that the sharing process was necessary and that self-centered thinking would only lead back to the use of substances.

13. Learning experience: This was a consequence of a rule violation and requires the resident to perform a task or to lose a privilege for a certain time period. The TC was highly dependent upon discipline to maintain order and to remind the residents of deviant behavior. This was evident by the long list of different learning experience types which are named but not defined in the following: ghoul squad, G.I., house ban, privilege ban, contract ban, communications ban, personal relating ban, coffee ban, pool ban, essay, pinochio report, count to ten, baby bottle, and pacifier.

## Therapeutic Jargon and Techniques

There were a variety of focused techniques which are described with the TC's own language. Some of the techniques are described below:

1. Contract: A contract was a type of learning experience which was imposed for a major rule violation such as leaving the TC against the advice of staff. The contract was usually punitive with consequences consisting of menial tasks such as washing dishes, walls or floors. A contract might be

very dramatic in that a rule violation might have occurred with no admission of guilt. As an example, illegal drugs might have been found on the premises. If no one admits to the rule violation, the entire resident population of the TC could be subject to suffer the consequences of the violation. The concept of "my brother's keeper," was discussed with the TC residents and all of the names of the residents were put into a hat with one resident's name drawn who paid the consequences for the entire community. This experience was atypical of the rules of society whereby most rule violations do not have consequences. If a resident can be punished for someone else's action, the vigilance level increased to prevent such violations. Other examples of contracts are named but not defined in the following list: dish tank, think room, pay-me-no-mind, walls and floor, bum squad, spare parts, tidy bowl, talk ban, awareness, relating, relating table, and after 5 contract.

2. Haircut: A verbal reprimand was used by staff to explain to a resident how their behavior was inappropriate. This usually resulted in the resident standing at attention so that they at least appeared to listen to each word of the reprimand. Examples of haircuts are named but not described in the following list: stern confrontation, reflection, karom shot, disappointment, ridicule, smoker, positive stroke, and round robin.

3. The bench: The resident was asked to sit on a bench to reflect on a disciplinary action related to inappropriate behavior. The bench was used as a cooling off period following a haircut or preceding a haircut.

4. Limbo: This was a motivational tool to inspire those who appeared to have stagnated in their treatment progress. The resident had no responsibilities and no privileges and was used to determine the resident's motivation for continued treatment.

## Adult Education Issues

The residents were provided information verbally and through the use of written handouts. In addition, video and audio media were used to communicate treatment concepts and factual information about problems associated with substance dependence.

The residents were asked about their reading skills and for some, their inability to read or comprehend was clearly evident. However, a thorough assessment of the residents' reading level and other comprehension did not occur. Consequently, the residents with learning deficits were not given special attention or accommodations to improve retention of the treatment concepts. The design of the groups and didactic presentations was not altered to attend to individualized instructional requirements nor did it consider the special barriers and needs of adult learners.

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