THE EFFECTIVENESS OF SAY IT STRAIGHT COMMUNICATIONS
TRAINING WITH ADULTS IN OUTPATIENT CHEMICAL
DEPENDENCY TREATMENT
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Chemical dependency research has focused extensively on comparing treatment types (in-patient vs. out-patient), and upon matching client characteristics to treatment type. Results of studies demonstrate that treatment is generally effective, but the knowledge base of the actual mechanism of successful treatment outcomes has been studied less often, due to the barriers in conducting chemical dependency studies. While setting effects are mentioned repeatedly in the literature, little research has focused on the core processes underlying recovery and the effect of a specific mediator on treatment outcomes. The purpose of the study was to examine the effectiveness of Say It Straight (SIS) communications training in enhancing the treatment and recovery process of adults in out-patient chemical dependency treatment.

The study compared an experimental group (n=26) who participated in weekly SIS sessions as an adjunct to existing treatment protocols for a period of 6-8 weeks, to a control group (n=14) who matriculated in treatment without the addition of SIS training for a period of 6-8 weeks. Subjects completed a battery of questionnaires at the beginning of the measurement period and at the end of the measurement period. The SASSI-2, The McMaster Family Assessment Device (FAD), and the Rotter Internal-External Locus of Control Scale were used to measure groups on recovery related variables at Pre-Test and Post-Test.

Results demonstrated a consistent pattern of improvement over the time measure. The results of the interaction of group and time demonstrated a pattern of gains which did not reach statistical significance, partially as an artifact of the small sample size. An
investigation of effect sizes was conducted to detect the effect of SIS training. The training was found to have a moderate effect size, which was consistent with other research using SIS training. Some areas for possible future research were addressed.
THE EFFECTIVENESS OF SAY IT STRAIGHT COMMUNICATIONS TRAINING WITH ADULTS IN OUTPATIENT CHEMICAL DEPENDENCY TREATMENT

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fullfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas

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CHAPTER I

INTRODUCTION

The search for effective treatment solutions for alcohol and drug abuse, dependence and addiction is the subject of continued concern in the world today. Alcohol and drug dependence are known to be devastating to individuals and families, and to be of enormous cost to societies worldwide, both in human and economic loss. Addiction is an issue which has challenged researchers and practitioners for as long as human beings have used and abused mood altering substances (Schuckit, 1998, MacDonald & Maynard, 1985; McGinnis & Foege, 1993; Room, 1977; NIAAA, 1972).

Chemical dependence (CD) is known to be a condition which is biopsychosocial in nature. In this complex condition, there is involvement of the individual's biology and genetics, emotional and psychological self, and involvement of the social and environmental elements of the person (Barnett, 1992). Although chemical dependence is a phenomenon which is holistic in origin and in the hold it gains on the individual, most CD treatment protocols include interventions which have not been researched as to their effects on the recovery process of the individual (Grissom, 1997; Hoffman & Miller, 1992).

Addiction reflects a collection of symptoms and behaviors that constitute as many different faces of addiction as there are afflicted individuals (Schuckit, Daeppen, Tipp, Hesselbrock & Bucholz, 1998; Vaillant, 1995). It is important to broaden our
understanding of how individuals actually recover from the terrible debilitating condition of chemical dependency through research. Ongoing research needs to address both the nature of dependency, and the importance of seeing the value of each individual affected by addiction in order to understand how best to access that individual's unique potential to recover.

Research into the literature of medicine and mental health suggests that while new methods and interventions often seem promising, the number of individuals who recover from chemical dependency remains low. However, treatment has shown to be effective, particularly in the period immediately following treatment (McLellan, Woody, & O'Brien, 1982). It is apparent that interventions which can enhance and strengthen the treatment and recovery process are needed and are a pertinent topic for research.

One intervention which has shown promising results in enhancing the skills needed by CD clients to achieve a quality recovery is Say It Straight (SIS) communications training. SIS is a method of straightforward communication which contains components that aid individuals in learning better communications, gaining knowledge of self with relevance to improved health, and acquiring skills necessary to implement new learning into practice. SIS is based on the theory of Virginia Satir, who was well-known for her positive approach to families, human relationships and behaviors. It was Satir's view that human problems are not an indication of inadequacy in an individual, but are only a reflection of what a person has experienced and learned to that point (Satir, 1977, p.ix). Satir was concerned with connecting people with their deepest
desires and resources, and was not concerned with attaching labels to her clients (Englander-Golden & Golden, 1996). SIS has been chosen as the intervention for this study because it has been effective with several populations in reducing destructive behaviors, and it is hypothesized that SIS can be a useful adjunct to treatment for adults who are participating in chemical dependency treatment. Virginia Satir made the following statement about the Say It Straight program (Englander-Golden, 1984, p.i):

The concept is deceptively simple. Make your "yes" real and make your "no" real. It is so difficult to put into practice because we are taught from babyhood on that we are not supposed to hurt other people's feelings. Better to hurt ourselves. I have called this "psychological lying", an international disease. It is usually done to preserve love and thereby avoid rejection or to protect ourselves from destruction in one form or another. Don't say what you think and feel to people you care about, for they will drop dead or they will be so angry you will drop dead. We believe that psychological truth kills, so that it is better to be liars. In reality, the opposite happens. Someone dies when we go against ourselves.

While it is generally agreed that several different philosophical treatment approaches are equally effective with chemically dependent individuals, there is little understanding of specific ways to engage an individual's personal potential
to recover. In concluding their exhaustive review of addiction programs, Baekeland, Lundwall, and Kissen wrote: "Over and over we were impressed with the dominant role of the patient, as opposed to the treatment used on him, played in his persistence in treatment and his eventual outcome" (1975, p.305). Research can provide answers to pertinent questions regarding recovery from chemical dependency. How do treatment interventions or techniques impact an individual's functioning? Are there interventions which empower individuals who suffer from addiction to find their own unique and personally meaningful approach to recovery?

Statement of the Problem

Chemical dependency research has focused extensively on comparing treatment types (in-patient vs. out-patient) and upon matching client characteristics to treatment type. Results of studies demonstrate that treatment is generally effective, but the knowledge base of the actual mechanism of successful treatment outcomes has been neglected due to the many barriers in conducting chemical dependency studies. While setting effects are mentioned repeatedly in the literature, little research has focused on the impact of specific interventions on the core processes underlying recovery and the effect of a specific mediator on treatment outcomes.
Purpose of the Study

The purpose of this study was to test the efficacy of SIS Communications Training (Englander-Golden & Satir, 1990) as an empowering adjunct to current chemical dependency treatment options. As was previously stated, SIS is based on the theory of Virginia Satir, and is a program for the prevention of destructive compulsive behaviors and for the promotion of wellness. SIS has been used in diverse settings with a wide age range in participants (Englander-Golden & Golden, 1996). This study tested the efficacy of SIS communications training with chemically dependent individuals by examining the effectiveness of SIS in increasing the quality of recovery in clients who were in chemical dependency treatment. The study examined the effects of SIS training on selected personality variables to determine whether the training enhances the chemical dependency treatment process with regard to: (a) severity of chemical dependency symptoms as measured by the SASSI 2; (b) locus of control as measured by the Rotter Internal-External Locus of Control Scale and; (c) functioning and communication within the family as measured by the Family Assessment Device (FAD) and SASSI 2.

Review of Related Literature

Addictions Treatment

Due to the complex nature of chemical dependency, the subject of why people use, abuse, and become dependent upon alcohol and other chemicals has been debated in the literature for many years. The complexity of chemical dependence is reflected in the
literature from the earliest views of addiction to the present. Dr. Benjamin Rush wrote in 1790 that he considered drunkenness to be an odious disease, and he described the progressive symptoms of this disease (Rush, 1790). In 1804 Thomas Trotter wrote "I consider drunkenness...to be a disease produced by a remote cause in giving birth to actions and movements in a living body that disorder the functions of health" (Trotter, 1804). In 1882, J.E. Todd wrote a pamphlet expressing an opposite view which was entitled "Drunkenness a Vice, Not a Disease", in which he wrote "Every human soul is worth saving; but what I mean to say is, that if a choice is to be made, drunkards are about the last class to be taken hold of."

There were two schools of thought which emerged about alcoholism from the 17th century to the late 19th century which laid the foundations of modern addiction treatment and gave direction to research questions from that time to this. The first idea was the concept of intemperance as an illness, and the second was that this illness differed from insanity and ought to be treated in a different setting from the insane (Brent, 1996). The debate continued between the legal/moral dilemma or addiction as a medical condition until the mid 20th century when the medical profession took a renewed interest in the issue of alcoholism and treatment (Yalisove, 1998). Alcoholics Anonymous (AA) was founded in 1935, and helped to provide new understanding of chemical dependency by defining alcoholism as a disease instead of as a weakness in the character of the individuals who suffered from alcoholism (Alcoholics Anonymous, 1976). To date, AA is considered by many to be the most successful avenue of recovery
for the largest number of individuals (Vaillant, p.244). In the view of this researcher, this success is due to the fact that AA uses an approach which, from it's beginning, has taken into account the multidimensional nature of chemical addiction.

The World Health Organization (WHO) decreed in 1951 that certain forms of alcoholism constitute a disease process (Vaillant, 1995). Yet almost a century and a half after alcoholism was first considered as a disease, McGoldrick (1954, p. 3) wrote "Alcoholism is no more a disease than thieving or lynching. Like these, it is the product of a distortion of outlook, a way of life bred of ignorance and frustration." In 1956 the American Medical Association (AMA) officially stated that alcoholism was a disease due to the chronic, progressive, and predictable course of alcohol dependence; however, there are those authors who vehemently dispute this view of addiction as a disease (Szasz, 1972).

Because addiction is one of the most difficult conditions to understand and to treat, there is active debate in the literature about the nature of chemical dependency and current studies attempt to clarify the best treatment for Chemical Dependency (Finney, Hahn & Moos, 1996). Despite a body of scientific biological evidence (Gelerneter, Goldman, & Risch, 1993; Merikangas & Gelernter, 1985) which describes the actual changes which occur in the brain during the process of addiction, many professionals remain reluctant to subscribe to the disease concept, and many find it difficult to feel compassion for those who are afflicted with chemical dependency (Szasz, 1972, p.84; Peterson, 1977; ).
Research adds to increased scientific understanding of the neurochemical brain pathways involved in addiction (Parsons, 1987); yet addiction treatment remains a domain where professionals may disagree, not only on the best course of treatment, but upon the etiology of this disturbance in clients. In the view of some, the disease label is seen as means of giving those suffering from addiction a vehicle for avoiding responsibility (Peele, 1990). Some have viewed the medical model as labeling these individuals as chronic victims of a condition with a poor prognosis which may move them away from personal responsibility in recovery (Peele, 1990; Roman & Trice, 1968). The dilemma of how to best understand addiction and to provide effective treatment for those suffering from addiction is considered worthy of continuing and more specific research focus. Jellinek, who designed the progression of alcoholism chart which is widely used to explain the course of addiction, warns "the idea that presents itself to the omnivorous reader of the alcohol literature is usually that alcoholism is either an economic, a psychological, a physiological, or a sociological problem to the exclusion of other aspects" (1960, p. 13). This warning is further articulated by Vaillant (1995, p.7) "What is needed is not an argument that one or another factor is the most important cause in the development of alcoholism, but rather an effort to understand the relative etiological contributions of each variable to the total clinical picture."

Recently, a well-funded study was implemented by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The study was titled Matching Alcoholism Treatments to Client Heterogeneity-Project MATCH (PROJECT MATCH RESEARCH
GROUP, 1997). Project MATCH examined the "matching" hypothesis of chemical dependency treatment. The "matching" hypothesis has been examined in addiction studies for years. Matching is based on the assumption that prescribing specific treatments based on individual characteristics and needs of clients will improve treatment outcomes (Bowman & Jellinek, 1941, Beutler, 1979); as opposed to the traditional approach of offering the same treatment to all individuals with a diagnosis of chemical addiction (Donovan & Mattson, 1994).

Project MATCH is important to addiction treatment research because this study attempts to apply careful scientific methods to evaluate addiction treatment. By thoroughly describing investigation techniques, and by designing a study which is long enough in scope and duration, this NIAAA study has been able to provide results which further illuminate understanding of important clinical components in the treatment of addiction. Although the results of Project MATCH did not support the idea of patient matching, studies such as this one will be able to use these results as components in further research into questions relating to addiction treatment (Schuckit, 1997).

The above NIAAA study set out to follow over 1700 alcoholic clients in a study of their outcome following chemical dependency treatment. The subjects were clients at 5 treatment facilities who were randomly assigned to one of 3 treatment protocols. Client outcomes in treatment were studied for correlations between personality variables and positive results by type of treatment. The methods of treatment selected for study were: Cognitive Behavioral Coping Skills Training (CBT), Motivational Enhancement Therapy
(MET), and Twelve-Step Facilitation Therapy (TSF). Clients were randomly assigned to one of the three treatments for a 12 week course of treatment; manual-guided and individually delivered. The primary outcome measures studied were percent days abstinent and number of drinks per drinking day during the year following treatment. Results were obtained for 90% of the subjects who were still alive at the 1 year mark (PROJECT MATCH Research Group, 1997).

In results of the study, the only attribute which was demonstrated to be a significant attribute by treatment interaction was psychiatric severity. Clients low in psychiatric severity had more abstinent days after 12-step Facilitation Treatment than after Cognitive Behavioral Therapy. None of the treatments was clearly more effective for clients with higher levels of psychiatric severity. Two other attributes showed time-dependent matching effects: motivation among the out-patient clients, and meaning-seeking among the aftercare clients. Attributes of motivational readiness, network support for drinking, alcohol involvement, gender, psychiatric severity, and sociopathy were prognostic of drinking outcomes over time (PROJECT MATCH GROUP, 1997, p.7-29).

Contrary to the "common-sense" hypothesis that matching clients to treatments by client characteristics should be easy to do and should improve treatment outcome; in the results of the NIAAA study, there was little difference in outcome by type of treatment (Schukit, 1997).

The overall implication of this study is that each of the three treatments selected for the PROJECT MATCH study can be used with confidence when implemented as
suggested in the study. The findings of this study suggest that aside from considering psychiatric severity, lack of other robust matching effects provides evidence that providers need not take client characteristics into account when admitting clients into any one of the three treatment approaches. They are all effective with clients in spite of the differences in the treatment philosophy of the approaches.

An important result for the purpose this study is that significant and sustained improvements in drinking outcomes were achieved by clients who were assigned to each of these protocols. It is the view of this study using SIS training as an adjunct to CD treatment that SIS embodies and utilizes elements which are present in all 3 of the interventions used in the PROJECT MATCH study and may improve treatment outcomes. Although it is beyond the scope of the SIS study to follow subjects in a longitudinal study, it is hypothesized that SIS skills training will augment sustained and significant changes in drinking patterns by affecting variables such as: severity of CD symptoms, locus of control, family relationships, communication skills, and quality of life in the treatment group and family.

Following is an explanation of the 3 Project MATCH treatments and their relationship to SIS training:

Motivational Enhancement Therapy (MET) is a motivational psychology-based therapy done in four sessions over a period of 12 weeks. MET is designed to produce rapid change which is internally motivated. MET does not use therapy to guide or instruct the client through recovery, but instead employs motivational strategies to mobilize the
individual's own resources for change (Miller, Zweben, DiClemente, & Rychtarik, 1992). This approach begins with the assumption that the responsibility and capability for change are already present in the client. The task of the therapy (via the therapist) is to mobilize the client's inner resources as well as the resources in the client's helping relationships.

There are five principles which comprise the basis for the MET approach to change: 1) express empathy; 2) develop discrepancy; 3) avoid argumentation; 4) roll with resistance and; 5) support self-efficacy (Miller & Brown, 1991). SIS is based on the same principles as they are extrapolated from Virginia Satir's theories of human nature and the human change process. Satir considered empathy to be a requisite tool for therapy, and her concept of empathy includes sympathy and compassion as components of therapeutic empathy (Braverman, 1986). Empathy is facilitated through active listening, or being totally engaged with a person (Satir et al 1975, p. 157). Facilitators in SIS encourage participants to explore their own affective kinesthetic experience, and in this atmosphere of acceptance, clients can see their choices from a perspective of their own unique ability to make those choices (Englander-Golden & Satir, 1990; Englander-Golden, 1992, 1993a, 1993b). This approach is quite similar to the MET philosophy of listening rather than telling, and the non-confrontive techniques in MET. In both MET and SIS training the assumption is always that change is up to the client (Miller et al 1992; Englander-Golden & Satir, 1990).
Say It Straight also facilitates empathy among group members by the switching of roles in the experiential role play format of the movies, which are made using the various communications learned in the training. By being both the sender and receiver of specific communications, individuals are able to explore actions, thoughts, and feelings from different vantage points in the movies of SIS (Englander-Golden & Golden, 1996). One of the unique contributions of Satir was her emphasis on the experiential rather than the intellectual component in therapy. For her, empathic experiencing was much more important than intellectual understanding (Braverman, 1986); and SIS is based upon facilitating participants to tap-in to another level of their own ability to experience through their bodily sensations (Englander-Golden & Golden, 1996).

Another similarity between SIS training and MET is in the nonjudgmental approach which both advocate in working with the client. SIS does not include factual lectures or discussions of drugs and alcohol (Englander-Golden et al. 1989). Participants in SIS learn to express their deepest yearnings, and by playing the part of both participants in a communication, they are aware of others' points of view without being pressured to see them (Englander-Golden & Golden, 1992).

Discrepancies are developed in SIS in much the same philosophical approach as MET, through openly allowing the client to explore ambivalence. In MET and SIS sessions the client is allowed the freedom to express any feelings and thoughts; the client's realities are reflected, and his or her freedom of choice is affirmed. The client's perspective is not disputed in either approach. Some studies have indicated that direct
confrontation not only does not encourage change and sobriety, but may even be a predictor of future drinking behavior (Miller, 1985; Miller, Benefield, & Tonigan, in press).

The second treatment approach examined in the PROJECT MATCH study was Cognitive-Behavioral Coping Skills Training (CBT). CBT is based on the tenets of social learning theory, which views drinking as functionally related to the major problems in a person's life (Bandura, 1977; Kadden, Carroll, Donovan, Cooney, Monti, Abrams, Litt, & Hester, 1995). In the view of CBT, it is more effective to address chemical dependency from the perspective of addressing a broad spectrum of problems, rather than focusing only on the drinking or drugging problem. SIS is like CBT in taking the social learning view which assumes that chemical dependence is only one aspect of a human being which is related to other aspects of the person's life and problems. The focus of SIS is also on seeing destructive compulsive behavior as one part of a larger whole of an individual's total functioning. Specific exercises are designed to achieve the goal of empowering an individual to address problem areas by using internal resources (Englander-Golden & Satir, 1990).

In CBT, emphasis is placed on skills deficits and upon improving a client's ability to cope in difficult situations (Kadden et al 1995). The CBT treatment consists of 12 sessions which focus on increasing the CD client's ability to cope by using coping methods other than drinking alcohol or using drugs. New skills to deal with high-risk situations which could lead to relapse are taught in CBT. These skills focus on both
difficult interpersonal situations of clients, and on intrapersonal discomfort, such as anger and depression.

SIS has a similar focus on new skills and new methods of coping through the learning of straightforward communication. Just as CBT includes role play to practice new skills, SIS adds to the depth of cognitive learning by adding the affective kinesthetic skills practice of the sculptures and movies (Englander-Golden & Golden, 1996). The skills learned in both CBT and SIS replace maladaptive and disempowering coping, and provide a means of obtaining the social support necessary for the maintenance of long-term sobriety through improved relationships.

CBT involves the client in active participation in the therapy, and in active responsibility for the quality of his or her subsequent recovery. Healthy behaviors regulated by cognitive processes are the goal of CBT (Kadden et al 1995). These are also important goals in SIS, but SIS adds the further component of affective awareness; gained in SIS training by the understanding of the signals given by one's body when one is engaged in unhealthy, disempowering communication (Englander-Golden et al 1989). In CBT improved self-efficacy and long-lasting positive change is thought to be maintained through active participation, modeling, and practice with positive feedback. SIS training contains these elements of CBT, and helps activate a person's ability to be responsible for the quality of his or her own life.

The last treatment approach included in the PROJECT MATCH investigation is 12-Step Facilitation Therapy (TSF). The TSF approach was designed to be consistent
with active involvement in Alcoholics Anonymous, and the overall goal of the therapy is to facilitate active participation in the fellowship of AA. The treatment adheres to the concepts set forth in the "Twelve Steps and Twelve Traditions" of Alcoholics Anonymous (Alcoholics Anonymous, 1985). The philosophical assumption of TSF is that addiction is a chronic, progressive illness that affects the mind, body, and spirit of the individual, and that abstinence from alcohol is essential to recovery from chemical dependency (Nowinski, Baker, & Carroll, 1995).

Alcoholics Anonymous is not a treatment method per se, and does not involve itself with a particular causal model of addiction. AA is a peer fellowship which is guided by the 12 Steps and traditions of AA, and focuses on the loss of control and denial aspects of addiction. TSF is based upon the tenets of AA. Two themes are important in Alcoholics Anonymous: Spirituality: belief in a higher power; and Pragmatism: belief in doing "whatever works" for the individual to achieve and maintain sobriety (Nowinski et al 1995).

TSF has two major goals of treatment: 1) Acceptance and 2) Surrender. These goals are achieved in TSF by the stated objectives in 5 domains: 1) Cognitive 2) Emotional 3) Behavioral 4) Social 5) Spiritual. TSF therapy is conducted in 12-14 sessions with each client which are offered in a period of 12 weeks. The family of the patient is involved in 2 of the sessions (conjoint sessions); designed to educate and involve the family in the recovery process (Nowinski et al 1995).
As was discussed in comparing the similarities of SIS to the first two treatment approaches, SIS incorporates the cognitive, emotional, behavioral, and social domains also present in TSF therapy. It is interesting to note that these elements appear to be universal components in delivering effective treatment in all three approaches and in SIS. SIS complements TSF (as well as MET and CBT) as a treatment adjunct because of its solid foundation in these treatment domains which are accepted as necessary to effective CD treatment (Englander & Golden, 1996).

The spiritual element of TSF is unique to TSF among the three treatment modalities of Project MATCH. The domain of spirituality and meaning-seeking has been identified as the means by which human beings transcend many kinds of problems and afflictions (Vash, 1994). The ability to attach personal meaning to adversity and to feel hope in a higher power often contains the resources necessary for a client to mobilize his or her individual ability to grow and change (Alcoholics Anonymous, 1976).

The spiritual construct in TSF (as taken from AA) contains the seemingly ironic contradiction of surrendering, or letting go to win, and of accepting powerlessness to become powerful over adversity. In the view of TSF a person must connect to a source of strength and inspiration larger than oneself to gain enough hope to address their addiction problem; this is defined as spirituality in TSF. The development of SIS was also theoretically grounded in the spiritual principles of AA and Al-Anon (personal communication with Englander-Golden, June 1997).
In SIS training, the experiential exercises facilitate awareness of the universality of the deepest yearnings of human beings (i.e. to be loved and valued, and to be able to love and value). Becoming aware of the universality of yearnings provides people a transpersonal experience which often leads them to discover their spirituality. Glasser identified these same universal human needs as the theoretical basis for Reality therapy (Glasser, 1985). The need of human beings to belong, to have power in life, to have enjoyment and freedom, and to survive were identified by Glasser as being internal to all human beings. He recognized that these basic truths transcend race and culture. Glasser's goal of satisfying these universal needs was similar to SIS in acknowledging the healing when people to find a sense of personal power and fulfillment while not diminishing the power and rights of other individuals (Glasser & Wubbolding, 1995).

The disempowering communications explored in SIS training are considered ways people manipulate to get their needs met, instead of meeting needs by connecting to their personal resources and their own ability for appropriate control of self (Englander-Golden & Satir, 1990). Manipulation leads to feelings of helplessness, hopelessness, anger, resentment, self pity, depression, and despair. Through the experiential exercises in SIS training people are facilitated in the process of letting go of manipulation and becoming appropriately in charge of their own behaviors. SIS focuses on empowering people by providing opportunities for connecting to individual resources, universal connectedness with other people, and possibilities for a spiritual connectedness. (Englander-Golden & Golden, 1996). The chart included on the following page (p. 15) illustrates the experience
of connecting to resources and the transformation facilitated by SIS training (Englander-Golden, 1984, p.125).

Although spirituality is a construct which remains difficult to define, there is evidence that, for many addicts, spirituality may add the meaning needed to transcend addiction. SIS and TSF are interventions which include the concept of human beings having an ability to transcend difficulties. Both interventions recognize that adding spiritual resources to the client's own internal resources may provide an effective foundation on which the client can build a plan of responsible personal recovery (Nowinski et al 1995; Englander-Golden & Satir, 1990, p. 285).
Illustration 1.

The following schematic from the Say It Straight materials illustrates the process of transformation which takes place for individuals in the training.

**CONNECTING TO MY RESOURCES**

- Sad
- Angry
- Resentful
- Self-Pitying
- Fearful
- Shamed
- Helpless
- Manipulations (Placate, Blame, etc.)

**WHAT I NEED TO TRANSFORM**

- Yearning To Be Loved and Valued
- To Love and Value
The work of Virginia Satir, which provides much of the philosophical basis for SIS training, was applied world-wide due to Satir's understanding of the universal concepts of hope, and the human need to be loved and valued, and to love and value others (Englander-Golden & Golden, 1996). There has been the same reported success of the 12-step approach of Alcoholics Anonymous when taken to addicts who suffer in countries all over the world (Room & Greenfield, 1993). SIS has demonstrated the same effectiveness to help people in many countries (Englander-Golden & Golden, 1996).

In the Project MATCH study, clients with low psychiatric severity were reported to have better outcomes in the TSF group, as were clients who were high in meaning seeking (PROJECT MATCH, 1997). These subjects represent a large segment of clients in the study, and this result is meaningful, since many addicts who do not demonstrate other pathology, and who do not receive CD treatment, may investigate AA in their search for solutions for their addiction. The implication of this result from the study appears to be that alcoholics/addicts without other psychiatric diagnoses have a good chance of getting better in a 12-step program (Nowinski et al 1995).

All the interventions in the Project MATCH study were effective for clients. The additional dimension of a spiritual resource is included in TSF; providing hope and meaning to clients in conjunction with the cognitive, behavioral, emotional, and social domains of recovery. For the client who identifies this spiritual domain as important to
the quality of recovery, it is has been reported that the client achieves a depth of recovery which has been described as important by thousands of alcoholics and addicts around the world (Alcoholics Anonymous, 1985, p. 18).

Although Project MATCH provides very current results supporting the effectiveness of treatment for chemical dependency, the study points to a paradigm shift in CD treatment research. Project MATCH provided little support for the matching of client to treatment modalities by client characteristics and provides rationale for the investigation of interventions to improve treatment outcomes.

The National Institute of Drug Abuse (NIDA) has conducted three large studies to evaluate drug abuse treatment over the past 3 decades. Between 1969 and 1973 the Drug Abuse Reporting Program (DARP) collected data from some 44,000 clients in federally funded drug abuse treatment programs (Fletcher, Tims & Brown, 1997). DARP results demonstrated the feasibility for methodological research in the addictions field and the importance of evaluating addictions treatment programs. The effectiveness of treatment programs in reducing drug abuse was reported. TOPS or the Treatment Outcome Prospective Study was designed to build on the methodology of the DARP researchers. This study supplied more information on client attributes, treatment services, and program elements by a longitudinal design. TOPS researchers found similar results as the DARP study, that treatment was effective in reducing drug use and the study also reported reductions in criminal activity due to treatment. Cost-benefit and cost-effectiveness analyses on TOPS studies showed that treatment was cost-effective and that
the cost of treatment was recouped in lowered post treatment costs resulting from reductions in drug use (Fletcher et al, 1997).

Another result of the TOPS study was the reported shift from single drug abuse to poly-substance abuse. The changes in drug abuse patterns, the appearance of AIDS, and changes in the structure of the existing treatment structure made questionable the applicability of the older studies to today's treatment setting. The DATOS study which was initiated by the National Institute on Drug Abuse in 1989 was designed to further augment the body of knowledge on drug abuse, to develop programs of ongoing research, and to make data available to the public in a systematic form. The themes of the DATOS study were to give attention to health services research, retention and engagement in treatment, life course of treated addicts, and development of drug abuse treatment policy (Fletcher et al, 1997).

Several research initiatives have grown from DATOS results, including relapse prevention, vocational rehabilitation programs, and focus on treatment retention, motivation, and program moderators (Siegel, Rapp, Fisher, Cole & Wagner, 1997). The national treatment outcome studies illuminate areas for research possibilities such as this study of SIS as an intervention to augment treatment.

There have been past studies which have reported treatment for addiction to be no more effective than giving brief sensible advice (Orford & Edwards, 1977), or than allowing the disease to follow a natural course (Emrick, 1975; Hill & Blane, 1967). A review of these studies showed roughly similar outcomes at the end of two years between
treated and untreated alcoholics, indicating that treatment was not able to significantly alter the natural course of alcohol/drug addiction (Costello, 1975), but the preponderance of more current studies do not agree with findings that treatment for chemical addiction is not effective (Finney et al, 1996; Miller & Hoffman, 1995; DeLeon, 1993).

In this study, I am in agreement with the view of George Vaillant (1995), who provides one of the best overviews of addiction; substantiated by his landmark longitudinal study of alcoholics and its recent revision. Vaillant addresses all views of addiction and states that the fact that we cannot easily alter the course of chemical dependence is not reason to give up on the search for effective treatment for those who suffer. Most studies after treatment have shown alcoholics to be better off for several months following treatment than they were before (Miller, 1988). There is strong indication that while treatment does not always cure, it is very effective in reducing mortality and suffering (Vaillant, 1995).

A randomized study in 1991 puts the negative findings about addiction treatment into question (Walsh, 1991). In a well-designed study, 227 alcohol/drug dependent workers were offered a choice of treatment options including: hospitalization with AA as aftercare, AA alone as treatment, or free choice of treatment modality. The clients who reported the best results were the hospital-treated clients (followed by AA), with the clients who received other CD treatment second. Treatment has been shown to be effective, and this study has used careful design and a large sample to take a more current look at inpatient treatment. Inpatient treatment was very effective in this study, and was
of particular benefit to individuals who had addiction to more than one substance, such as alcohol and cocaine (Walsh, 1991).

Other studies which support the success of treatment for addiction have been done by studying the reductions of health problems and healthcare costs for chemically dependent clients (Holder & Shachtman, 1987; Holder & Hallen, 1986). These studies showed health-care savings of $2,500 per person in the third year after treatment attributable to the patient having undergone addictions treatment. Another finding was that healthcare costs for alcoholic and nonalcoholic family members dropped after treatment to a level one-sixth the cost before the treatment for alcoholism. It can be safely assumed that these improvements in the health of families also represents improvement in other areas of the lives of these individuals.

Outcomes measurement has long been a feature of chemical dependency research with respect to discussing the question of the effectiveness of treatment. Studies such as this one are useful because of the changes in the availability of services for the treatment of substance abuse. Managed care limits the amount of treatment available to the substance abuse client and there are fewer facilities providing substance abuse treatment (DeLeon, 1993). There is much discussion in the literature of the need for accountability and standardization of practice guidelines in the clinical treatment of addictions (Walker, Howard, Walker, Lambert & Suchinsky, 1995; Hoffman & Miller, 1992; Grissom, 1997).

This research can be useful in addressing questions regarding how outcomes might actually be improved by the addition of certain innovations to existing protocols of
treatment. To date there is little standardization or systemization of clinical practice in the field of chemical dependency.

This research subsumes the view that treatment works and that treatment is an important part of the long-term recovery process of chemically dependent individuals.

Satir's Communications Model

Virginia Satir's theories evolved from her years of diverse practical experience with families (Green & Kolevson, 1984). Satir work reflects an understanding of the universal nature of the person, and her therapy treats clients from a point of view which is both holistic and extremely hopeful in its view of the human potential for change (Satir, 1982). Satir's first characteristic of the healthy family was communication. She considered breathing (Englander-Golden & Satir, 1990). Communication among family members modifies and is modified by the communication of other family members (Satir, 1982). Virginia Satir also emphasized the dimension of affect to assess healthy family functioning in her communication model of family therapy (Green & Kolevzon, 1984). She involved clients in techniques which employed the physical, the affective, the rational, and the spiritual nature of the person in the therapy. Her contribution of the family sculpture as a means to show internal processes in an external representation of family rules, emotions, and themes was extremely important to family therapists in understanding family process (Banmen, 1986)
One of the chief goals of family therapy according to Satir was to increase the self-esteem of the individuals in the family. In order to achieve the goal of increased self-esteem Satir put the therapeutic focus on the process among family members. According to Bandler, Grinder, and Satir (1977), and Satir and Baldwin (1983), the process is the key to understanding and transforming human interactions. Interaction in families is based upon survival, and dysfunction arises as family members learn to survive from a position of low self worth. Satir described the coping communications which individuals learn to use as "brave attempts to survive when you do not believe you can" (Satir, Stachowiak, & Taschman, 1975, p.48).

The communications which Satir used to describe survival stances are: placating, blaming, super-reasonable, irrelevant, passive-aggressive, and congruent:

In placating, a person disregards one's own needs and feelings and agrees to what one is asked to do; even when it is one's deepest desire to say no. Placators act as if they are here to relieve the problems of other people, and they totally disregard self in this communication (Satir et al 1975). Placating is a result of believing such rules as: I must never get angry; I can never put myself first; I must always make everyone happy; or I must not state my own needs.

In blaming a person takes care of his or her own feelings and needs at the expense of the other person. This communication involves nagging, accusing, ridiculing, and protecting oneself by angry projection of blame onto another person. The other person is discounted in this communication, and the one who blames may believe such rules as: I
must always be right; I must never lose; or I must be better then everyone (Englander-Golden & Satir, 1990).

By being super-reasonable an individual looks and sounds more like a computer than a person (Englander-Golden & Golden, 1996). This communication style is so rigid that only facts matter, and no human responsibility is claimed. The super-reasonable stance denies the feelings of the person and other people, and a person may appear inhumanly objective (Banmen, 1986). The rules for the super-reasonable communication may be: I must always be in control; I must never cry; I must always be self-reliant; or I must always have all the answers.

Irrelevant communication is characterized by distracting from the real people and issues at hand. The irrelevant person may use humor, getting in trouble, or changing the subject to divert from intimacy and congruence. The use of chemical substances is a common way of being irrelevant and blocking out feelings and relationships. Rules underlying being irrelevant might be: I must always make everyone laugh; I must never take anything seriously; I must never commit myself to anything.

Being passive-aggressive is the disempowering communication where a person may look as if they are placating or pleasing, but inside there is a resentment at giving up one's own needs and deepest yearnings. The decision to get even is a hidden agenda and there is no real communication between individuals. Both people are likely to pay a high price in this communication stance, and there is no intimacy or congruence present (Englander-
Golden & Satir, 1990). The following rules might lead to being passive-aggressive: I must get even; I should make you pay for this; I must exact revenge.

The Say It Straight program is based on what Satir described as congruent communication. In congruence the feelings are real and the facts are realistically taken into account (Satir et al 1975). A person who is congruent (Saying It Straight) is using their resources to communicate their honest needs, feelings, and desires form a position which respects self and others (England-Golden & Satir, 1990).

Addictions in Group Settings

The various interventions in the Project MATCH study were reported to have been effective in effecting significant changes in the drinking patterns of the participants, as I have previously discussed. All Project MATCH interventions were done in individual therapy sessions. For the purposes of the proposed study, I shall posit the view that one of the additional benefits of SIS training is that SIS is implemented in a therapeutic group setting.

Groups are pervasive in addiction treatment, and this is due to several aspects of group therapy which contribute to therapeutic factors in addictions recovery (Reugel, 1991). Carl Rogers (1959) identified the conditions of unconditional positive regard, empathy and genuineness as the necessary conditions for an environment for change. Yalom (1985) made the link between Rogerian conditions and group therapy by recognizing that group cohesion functions in the same way as the elements described by Rogers. It has
been identified that group acceptance is even more important than therapist acceptance in the group process (Gurman & Gustavson, 1976; Dies, 1983). Group acceptance is a crucial factor in the treatment of drug/alcohol addiction.

Rogers also suggested that throughout a person's life, one is exposed to conditions of worth resulting in some emotional experiences being labeled as "bad". In order to maintain a sense of acceptance by other people, one may deny certain experiences to awareness. This allows a person to feel acceptable rather than unacceptable. These rejected aspects of self are usually not available in conscious awareness of the individual, and may result in dysfunction (Rogers, 1959).

Reugel (1991) states that the disowned aspects of an addict's problems with substances constitute what is known in addiction treatment as denial. Since society and the individual's own value system devalue drug addiction, the addict cannot allow the reality of his or her addiction into awareness without experiencing the pain of feeling unacceptable and devalued. The addict splits off these offending aspects of self through the process of denial.

Group acceptance is a crucial aspect of many group therapies. Acceptance has been shown to increase the self-esteem of alcoholics who are accepted by their group in treatment (Paige, Richmond, & DeLaSelerna, 1987). Group acceptance can replace societal rejection in a cohesive group, and according to Yalom (1985), the atmosphere which has been created becomes the subsequent foundation for the changes in self-acceptance on which an individual can build a solid recovery from chemical addiction.
Reugel and Barry (1990) found that group therapy reduced denial in DWI offenders, and that there were also increased levels of self-acceptance following group. Studies have shown that subjects in groups where there was a high level of perceived acceptance experienced the greatest decreases in denial (Griffin, 1988; Lefkowits & Reugel, 1990).

SIS training has the benefit to participants of being a group intervention. The conditions of empathy, positive regard, and genuineness have been discussed earlier as essential components of SIS training. SIS is designed around the elements of sameness, differences, and uniqueness; elements which can be safely explored in the accepting environment of a cohesive group (Englander-Golden & Satir, 1990).

The role of the group leader in the development of an accepting group atmosphere has been identified as very important (Dies, 1983; Yalom & Miles, 1973). Lefkowitz and Reugel (1991) found that the level of the therapist's unconditional positive regard is associated with perceived cohesion and acceptance in groups. In a review of the importance of therapist characteristics, it appears that acceptance and empathy are perhaps more important in the treatment of addictive disorders than in the treatment of other emotional disorders, since no studies were found showing these variables to have negative impact in addictions groups (Reugel, 1991).

Imitation and self-disclosure are important factors in addiction group therapy. Members who engage in these processes not only receive positive regard from the group, but become role models for other group members (Reugel & Barry, 1990; Kohlberg, 1969). Oei and Jackson (1982) found that the addition of cognitive skills practice to
addiction therapy groups enhanced the effectiveness of the groups over groups receiving no skills intervention. SIS is structured to include this important element, as was previously stated in the section on CBT therapy.

Factors which are unique to group therapy play a crucial role in the recovery process. Group acceptance, identification, self-disclosure, group norms, group composition, and therapist qualities enhance the effectiveness of chemical dependency treatment. The enhancement of recovery from addiction has been demonstrated by numerous studies of group factors in the treatment of addiction (Miller, 1988). These studies further support the hypothesis that SIS will enhance CD treatment due the fact that Say It Straight is designed to be implemented in groups (Englander-Golden, 1982).

**SAY IT STRAIGHT Communications Training**

SAY IT STRAIGHT (SIS) training was originally developed in 1982 by Englander-Goldento give students the skills needed to take care of themselves in difficult interpersonal situations (Englander-Golden & Golden, 1996). SIS is based on the communications work of Virginia Satir (1988), and combines Satir's theories with action oriented skills practice (Englander-Golden & Satir, 1990), modeling theory (Bandura, 1977), reactance theory (Bem, 1967; Brehm, 1966), development of empathy (Feshbach, 1983), moral development (Kohlberg, 1964), and inoculation theory (McGuire, 1964).

SIS helps people to connect with their own internal resources and their deepest yearnings, and to become aware of the universal nature of these deepest yearnings. The
participant in SIS learns skills to give expression to his or her deepest desires in ways which enhance self-esteem and improve relationships. The three components of SIS (resources, yearnings, and skills practice) are interwoven in ways which reinforce each other throughout the training process (Englander-Golden & Golden, 1996).

Satir stated that the deepest yearnings of individuals are to be loved and valued, and to be able to love and value others (Satir, 1988). In line with this hypothesis, SIS helps people to connect with their internal resources and gives participants the awareness that the potential for change is already within themselves. The awareness that one's deepest yearnings are shared by others fosters hope that change is possible. SIS decreases the need for pretense and increases the trainee's willingness to be real (Englander-Golden & Golden, 1996).

It is the universal element of SIS which makes the training applicable to many different populations and situations, and makes it particularly well-suited as an intervention to be used with chemically dependent individuals. The sharing and feedback in SIS give participants the opportunity to understand how their communication affects them and others and, in the case of the chemically dependent client, to understand the connection of disempowering communications to their substance problems (Englander-Golden, Jackson, Crane, Schwarzkopf, & Lyle, 1989).

SIS straightforward communication is equivalent to Satir's leveling or congruent communication (Satir, 1967). The importance of congruence and the need to be one's authentic self has been cited as an important construct for personal mental health and
growth in several major theories of human change, (Rogers, 1957; Mosak, 1967; Satir, 1988).

SIS teaches straightforward communication skills and positive peer support techniques which enhance self-esteem. SIS communications training has been studied for 14 years with different populations. Studies have yielded results which support the effectiveness of SIS as an intervention for clients of varying ages, races, and backgrounds who are in high risk of, or actively involved in, destructive behaviors (Englander-Golden et al., 1996).

The original studies using the training in school settings showed SIS to be effective in reducing substance abuse in trained students (Englander-Golden, Elconin, & Miller, 1985; Englander-Golden, Elconin, Miller, & Swarzkopf, 1986; Englander-Golden, Elconin, & Satir, 1986). A study in which an experimental middle school was chosen at random and compared to two other middle schools in the same city (chosen at random and used as controls) showed no subsequent alcohol/drug related suspensions or referrals among students who had received the training. Analysis yielded results showing the experimental school to have significantly lower drug/alcohol suspensions than the control schools in the academic year of the training. A follow-up of drug/alcohol suspensions during the next school year found no new "users" among the students who had been trained the previous year. One of the schools involved reported the remarkable result of no drug/alcohol related suspensions during the school year when an almost totally trained student population was attained in the first month of that school year.
There were also highly significant increases among the trained students in intentions to implement constructive decisions in difficult situations, and to feel at ease in doing so. No such significant increases were observed in the control groups who had received the standard information-centered substance abuse curriculum (Englander-Golden, Elconin, & Miller, 1985).

Further, in these studies of the effectiveness of SIS with middle school populations, a drop in vandalism repair bills and situations was reported by school counselors; indicating a relationship between SIS training and a diminishing of other destructive behaviors among trained students. It was decided to further measure the effects of the training by observing juvenile police offenses among high school students.

Another study then subsequently monitored juvenile criminal police offenses (burglaries, assaults, vandalism, runaways) among 9-12 grade students for a period of 19 months after SIS training. Violations were lower by a factor of 4.5 compared to violations among untrained students, and the number of offenders was significantly lower in the trained group. The group was followed for a period of 1 1/2 years (Englander-Golden et al 1989). This group of trained students also demonstrated significant increases in their behavioral intentions to make constructive decisions and to feel at ease in doing so.

In line with the thinking that schools can become valuable community resources for the prevention of destructive behaviors and the promotion of wellness, teachers, counselors, nurses, other school professionals, parents, and community volunteers are often trained to work with students in addressing critical community issues (Bernard,
The viability of using SIS training as an intervention to be implemented by such a trained community force was tested by a study of SIS with students in grades 3-12. Adults were trained in 4-6 day workshops to implement SIS in classrooms and student support groups. These ninety-six adults (teachers, nurses, counselors, school personnel, and some adult volunteers) trained 2781 students, 227 parents, and some other adults living in high risk situations. There is indication from the results of this study that involving school personnel in SIS training had significant positive effects on students, parents, and their community (Englander-Golden, Golden, Brookshire, Snow, Haag, & Chang, 1995).

Effective prevention programs should be designed to increase protective factors and to reduce risk factors in multiple domains (individual, peer group, family, school, community, and societal) (Hawkins et al 1992, Benard, 1993). In this study SIS also significantly increased student willingness to implement constructive decisions in difficult situations and to feel more at ease while doing so. When analysis was done by gender, significant results in reducing risk factors across the domains were also maintained in all grades, except 3rd grade where the sample size was small and separating by gender, coupled with the young age of subjects may have accounted for difficulty in obtaining significant results in this group (Englander-Golden et al 1996).

Trainer reports from this study also cited reduced racial conflicts (such as name calling and fights) after SIS training (Edwards & Maxon, 1994, Craig, J., personal communication to the SIS Foundation, 1994). The students' significant increases in
willingness to implement constructive decisions in difficult situations related to sexual behavior and their comfort in doing so, are evidenced by a reduction in reported incidents of precocious sexual behavior among high school students (Morton, D., personal communication to the SIS Foundation, 1990).

Results for the trained parent and community groups were significant for increases in effective communication skills, quality of life in the group and in the family, and highly significant in decreases in ineffective communications related to low self-esteem and conflict which can lead to violence (Englander-Golden et al 1996).

Of note in this particular study is the fact that these results were obtained by trainers doing SIS for the first time. The ease and expediency of training trainers and of implementing SIS into a given milieu, enhances the attractiveness of SIS as an intervention for many settings and domains. SIS training impacted individual, peer, school, family, and community domains through improved communication skills, self-efficacy, and interpersonal relationships with peers, family, and community. Only the societal domain was outside the scope of the study, and would require implementation of SIS on a much larger scale through marketing and mass media to study societal impact of SIS.

The school studies provide evidence of the effectiveness of SIS with school populations by analysis of results of the training with several thousand subjects of school age (Englander-Golden et al 1989). The observation of the impact of SIS training on a variety of human problems and the hypothesized applicability of SIS to a wide variety
destructive behaviors outside the school environment prompted research using SIS with other subjects in various settings in addition to schools (Englander-Golden et al 1996).

Results from small groups of juvenile offenders and juveniles in chemical dependency treatment included in previous studies provided indications for further research into the use of SIS training with adult criminal justice populations and adults in chemical dependency treatment (Englander-Golden et al 1996). Some preliminary work with prison populations has revealed the need for effective communication training for individuals in this setting, and it is hypothesized that future research will reveal SIS to be useful in prisons and with adjudicated clients (Englander-Golden, Golden & Craig, 1995).

In a recent study using SIS training with chemically dependent women in a long-term residential treatment setting significant results were reported in the use of SIS as an adjunct to the CD treatment process of the subjects (Englander-Golden, Gitchel, & Golden, 1997). The subjects were indigent female clients with children in a residential facility where the average stay was 8 months. They were receiving intensive therapy (individual and group), and training in parenting skills, living skills, vocational adjustment skills, as well as job quest and placement assistance.

Although this study used a small sample size of 21 women, the results are promising regarding the effectiveness of SIS as a component of chemical dependency treatment and there is evidence that further research is needed. For analysis, the subjects were divided into two groups based upon the length of time in treatment. One group had
an average 40 days in treatment and the longer-stay group had an average 140 days in treatment. On the Post-test questionnaires the women who had been in treatment longer reported lower scores on all the disempowering communications measures, with their composite and passive-aggressive scores being significantly different. Additionally, the Post-test scores of the 140 day group on straightforward communications was higher than the 40 day group by a level which was almost significant (Englander-Golden et al 1997).

There were no significant differences between the two groups in post training scores in any communications category. This result is noteworthy, because the women who were trained in SIS scored the same on the Post-test regardless of their length of time in treatment, despite differences before training. The implication of this finding for future CD treatment is that SIS training appears to accelerate the treatment process. Both groups reported significant decreases in disempowering communications and both reported increases in straightforward communications (significant in the 40 day group) after SIS training (Englander-Golden et al 1997).

There were no significant differences between the groups on post-test measures of the quality of life in group and family. Both groups reported improved quality of life in the group and in the family after the training. The positive shift on the quality of life in the peer group was significantly higher in the 140 day treatment group (Englander-Golden et al 1997).

Comments on the subjective feedback questionnaire in this study reflected that subjects perceived positive effects of SIS training in several areas of their lives. Some of
the subject responses are as follows (without grammatical corrections): "I can trust some of my peers and they can trust me." "I am learning to say it straight to my Mom and son. This is increasing my self-esteem. I am allowing myself to feel and express my feelings." "I can speak for the heart how I truly feel. I can say no to my family and not feel bad." "I always had a trust issue with myself so now I'm working with that issue but I must say SIS broke the ice and trained me trust myself without fear. But to continue to work on my trust issues - I have to practice SIS principles daily." "Now I have found out there are ways I can talk to others without me getting hurt or feeling stepped on, but also without hurting others." The women who completed the subjective questionnaires reported that the quality of their family life had improved, and also reported improved quality of their interactions with their peers while at the residential treatment facility (Englander-Golden et al 1997).

This study extends the research on SIS training to include adults in CD treatment. Although more studies are needed, the results were promising for this population, as SIS appears to augment and perhaps to accelerate the treatment process. This could prove to be an important finding at a time when CD treatment is less available and length of stay in treatment is shrinking due to cost cutting measures by facilities and third party payers (Englander-Golden et al 1997).

There are recent applications of SIS which have used the training in a variety of other settings. Some of these applications are cooperative learning teams (Daniels, personal communication, 1995); and team building in organizations (Englander-Golden,
Golden, & McCoy, 1996). The extension of SIS to these environments further demonstrates the value of this intervention as a tool for wellness with subjects of all ages and backgrounds. As the world becomes more multicultural through the ease of travel and technology, there is more need for interventions which transcend racial, gender, and cultural differences. There is increasing evidence from research using SIS that the training is useful in multicultural settings. Anecdotal reports and subjective feedback from participants in SIS in other countries are enthusiastically positive regarding the benefits of SIS. Trainees have reported both personal benefit and an ability to better empathize with others following SIS training (personal communication with Paula Englander-Golden, June 1997).
CHAPTER II

METHODS AND PROCEDURES

This section presents the methods, hypotheses, and definitions of this study. It also includes a description of: (a) subjects; (b) the instruments and treatments to be used; (c) procedures for collection and analysis of data; (d) statistical procedures.

Hypotheses

1) There will be an increase in the reported level of healthy functioning behaviors for the individual subjects as measured by the dimensions of the FAD and SASSI-2 after SIS training.

2) There will be improvement in the level of healthy functioning reported within the family after SIS training.

3) There will be an increase in reported healthy communications which acknowledge the self, other people and individual feelings after SIS training, as measured by the communications dimension of the FAD.

4) There will be a reported shift in locus of control after SIS training as measured by the Rotter Internal-External Locus of Control Scale.
5) There will be change in the reported severity of chemical dependency symptoms after SIS training as measured by the SASSI.

6) The control group will change in the same direction as the experimental group after treatment, but the experimental group will report greater change due to the effects of SIS training.

Description of Subjects

The subjects for the proposed study were male and female adult clients at 4 outpatient Chemical Dependency treatment agencies. Criteria for inclusion in the study included:

1) The subject were identified as having problems due to substance abuse.

2) No subject was excluded from the study due to age, gender, ethnicity, or physical ability.

3) The subjects were willing to complete a battery of 3 questionnaires which took approximately 1 hour to complete on 2 separate occasions (at beginning and at completion of training).

4) The subjects received an explanation of SIS training; the proposed study; the possible risks and benefits of SIS training; the procedures and limits of confidentiality, and clarification of the informed consent form.

5) The subjects signed the informed consent to participate in research form.
6) The experimental group subjects participated in weekly 3 hour SIS training sessions for a period of approximately 6-8 weeks.

This study used a Pre-test/Post-test control group design. The subjects were clients receiving services for chemical dependence at 4 out-patient treatment agencies. Three agencies were located in suburban communities outlying a large Southwestern metropolitan city of approximately 1 million population. The fourth agency was located in a large Southwestern city of approximately 2 million population. The programs require clients to attend a daily evening treatment protocol for a period of approximately 12-16 weeks. Some of the clients at the agencies are referred as a condition of probation for drug and alcohol related offenses such as DWI: county or state funding was involved in the payment for service of some of the clients. Some of the clients are self-referred for out-patient services and were private pay or third party-payer clients. All clients were responsible for at least a portion of the cost of their treatment. Clients in the primary phase of treatment were subjects of the study. A control group for the study was comprised of a group receiving similar out-patient treatment at the agencies, who participated in the normal treatment regimen and did not receive SIS training. The control group completed the battery of questionnaires during treatment and at 5-6 weeks later into the treatment process.

Before training, subjects of the experimental group received an oral description of the proposed study, expectations for participation, purpose of the research, procedures for protection of confidentiality of results, and information about the SIS training sessions.
Possible risks of the study were discussed with the subjects. As with any psychotherapeutic intervention, the subjects were advised that there could be a temporary worsening of emotional pain.

It has been determined by review of the University of North Texas Human Subjects Committee (APPENDIX A) that SIS training is not considered to put subjects at any unusual risk, and that the benefits gained from SIS training are expected to be greater than any anticipated risk to subjects.

Confidentiality of subjects result will be maintained in accordance with the guidelines of the American Psychological Association (APA), the University of North Texas Human Subjects Committee, and the participating agencies. All results are reported using aggregate data, and the identity of the subjects is known only to the researcher.

Procedures for Collection of Data

Approval of the study was obtained from the University of North Texas Human Subjects Committee prior to proposal of the study (APPENDIX A). Agreement was obtained from each agency (APPENDIX B) before any research was begun at that agency. The researcher was assigned to groups by the agency in order to implement SIS training with those groups. Clients within the experimental group were asked for their participation in the training, and their consent for the subsequent reporting of their results for research purposes. Clients at the agencies had the opportunity to decline participation at the beginning of SIS training, to decide not to participate in a particular phase of SIS,
or to choose not to have their individual results used in the study. The control group was asked to sign the informed consent to participate in the study, and to complete the battery of questionnaires at the beginning of treatment, and again after 5-6 weeks of CD treatment.

The experimental group and control group subjects were asked to read and sign the informed consent form before participation in the study (APPENDIX C). The experimental group subjects completed a battery of 3 questionnaires prior to SIS training and the same questionnaires following SIS training. The control group completed questionnaires and did not receive SIS training. They attended the regular treatment program at the agency and were measured at similar points in treatment as the experimental group. Control group subjects were offered the choice of participating in SIS training at a later time if desired.

Training Sessions

Say It Straight training consists of 7 sessions which were adapted over a period 7-8 weeks within the existing treatment center structure for the clients in the groups. The groups were trained within the existing group structure at the treatment centers. The sessions were done in either one weekly session of 3 hours or two weekly 1½ hour sessions.

The 7 SIS sessions contain the following basic structure:

Session 1 Introduction of SIS Placating and Straightforward Communications

Session 2 Blaming and Passive-Aggressive Communications
Session 3 Rules and Rule Transformation

Session 4 Super-Reasonable and Irrelevant Communications

Session 5 System Exercises and Positive Support Movies

Session 6 The Pull and the Dance of Inclusion

Session 7 Wrap-Up Session for SIS Training

Say It Straight training is designed to provide flexibility on the part of the trainer to attend to the particular needs of the group, by allowing the trainer to adapt the training to the time constraints such as those imposed by the structure of a treatment facility.

Posters depicting the communications were used as a part of the training and were used as visual aids to the training. Subjects also received the SIS workbook for use in and out of group to record their responses to the training, and to report their observations of their communications between training sessions.

Each session followed the outline for SIS sessions and materials suggested in the SIS trainer's manual (Englander-Golden & Golden, 1993). Session included elements of SIS training: sculpting communications; processing individual responses to the sculptures; making movies (role play) with the sculptures; transforming to Saying It Straight; processing and reviewing the movies. The final session provided a format for debriefing the subjects through processing the individuals' perceptions of SIS training. The subjects completed the Post-test questionnaires and could choose to schedule a session to review their individual results.
Instruments

Substance Abuse Subtle Screening Inventory-2 (SASSI-2)

The SASSI-2 (Miller, 1985/1994) consists of 88 items combined from two separate questionnaires. The front page of the SASSI-2 contains an updated version of the original SASSI, which is a one-page, 62 dichotomous item, paper and pencil test consisting of 7 sub-scales. There is a degree of homogeneity among the sub-scales, in that some questions are present in different sub-scales. There are both adolescent and adult (over 18) versions of the SASSI-2. For the proposed study, the adult form was administered. There has not been research on the newest version of the SASSI addressing reliability/validity, but SASSI-3 demonstrates enough similarity to SASSI in its original form to make the studies done on the SASSI applicable to the updated form. The SASSI has proven effective in identifying individuals who abuse alcohol and other chemicals regardless of their age, sex, or socioeconomic status (Miller, 1985). The SASSI-2 can be administered in either individual or group settings. Administration takes approximately 10-15 minutes, and the instrument can be hand scored in 5-10 minutes. The test is intended to be readable at the fifth grade level and can also be administered orally.

For purposes of this research, the scores were be evaluated for changes in SASSI 2 global scores, as well as changes on the sub-scales. Although no version of the SASSI has been evaluated in terms of its ability to measure the recovery process, the sub-scales assess areas which are highly associated with the recovery process in substance abusing
individuals. According to Miller (1985), the primary purpose of the SASSI-2 is to serve as an objective screening tool to differentiate substance abusers from non-abusers. The SASSI-2 consists of 9 sub-scales which provide clinically useful information on each subject regarding the level of denial, attitude toward assessment, emotional pain, ability to acknowledge problems and risk of legal problems. The nine sub-scales are discussed below, with a description of the function of the scale, the number of items, and significant scores on each scale.

The Obvious Attributes (OAT) Scale is designed to measure the openness of the subject to admit to symptoms and problems related to substance abuse. The OAT consists of 17 items, 11 of which are keyed true, and the remaining 6 false. An elevated score of 12 or above on the OAT reflects similarities between the subject's response and the candid responses given by criterion groups of addicted individuals. A raw score of 12 is sufficient to contribute to the classification of an individual as a substance abuser.

The Subtle Attribute (SAT) Scale was designed to identify individuals attempting to mask their chemical addiction. It consists of 11 items, 8 of which are keyed true. According to Vacc (1994), the SAT is intended to differentiate substance abusers from non-abusers regardless of the degree of honesty. A SAT score of at least 2 standard deviations above the mean (a raw score of 6 or above) would contribute to a substance abuse identification.

The Defensiveness (DEF) Scale was designed to discriminate between criterion groups composed of candid abusers, and defensive abusers. The DEF is composed of 14
items, nine of which are keyed false. A large number of items keyed false indicates the
defensive approach of this Sub-Scale. A high score on the DEF scale, 11 or greater for
males and 12 or greater for females, yields evidence of defensiveness, and suggests that
the subject is denying aspects of their substance abuse and, consequently, the SASSI-2
would not be valid. A low score on the DEF suggests possible feelings of worthlessness
and deficiency (Kerr, 1993).

The Supplement Addiction Measure (SAM) Scale consists of 15 items, 9 of which
are keyed true. SAM is intended to differentiate substance abusers with high DEF scores
from non-abusers with elevated DEF scores. SAM is not typically interpreted for all
assessment profiles. Its utility is most beneficial when a subject scores 2 standard
deviations above the mean on the DEF Scale, and 1 or more standard deviations above
the mean on either the OAT or SAT sub-scales. The SAM assists in identifying defensive
abusers when cross-validated with the DEF Sub-Scale. According to Miller (1985), the
SAM Sub-Scale is assumed to have no meaning for those subjects without elevated DEF
scores.

The Correctional (COR) Scale is a measure of relative risk of criminality. It
consists of 16 items, 7 of which are keyed true. The COR is intended to be useful in
making decisions regarding referral for appropriate treatment and supervision. Individuals
who score above 11 demonstrate scores consistent with individuals who have extensive
criminal histories.
The Family (FAM) scale is intended to be a preliminary measure of codependency. It consists of 14 items, 10 of which are keyed false. The utility of using the FAM Sub-Scale to identify individuals who have an issue with someone who is currently abusing chemicals needs cross-validation. To date the FAM Sub-Scale has not been able to differentiate between current involvement with a substance abuser and adult children of alcoholics (Miller, 1985, chap. 4, p. 32).

The Random Answering Pattern (RAP) Scale identifies subjects who have responded to the SASSI-2 in a non-meaningful pattern (e.g., a person who randomly marks true or false without reading the questions). The RAP Scale consists of 6 items, 3 of which are keyed true and 3 of which are keyed false. The questions are such that all individuals giving a meaningful response would answer in a like manner. A score of zero or one on the RAP scale represents a subject who is responding in a meaningful manner. A score of 2 suggests non-meaningful responding. According to Vacc (1994), scores of 2, 3, or 4 suggest a random response pattern. No subjects were excluded from the study because of non-meaningful responding.

The final 2 sub-scales are classified under one title: Face Valid Scales (FVS) (Miller, 1985/1994). Both the Face Valid Alcohol (FVA) and the Face Valid Other Drug (FVOD) Scale are Likert-like response scales. The FVA consists of twelve 4-point items targeted specifically for assessing difficulties experienced due to alcohol use/abuse in the past 3 months. A score of 10 or greater on the FVA is considered indicative of an alcohol abuser. The FVOD consists of fourteen 4-point items targeted specifically for assessing
difficulties experienced by the subject due to chemical use other than alcohol within the past three months. Like the FVA, a score of 10 or greater on the FVOD is indicative of substance abuse other than alcohol.

In addressing the validity of the SASSI, Miller (1985) reported that the accuracy rate of the SASSI in discriminating substance abusers from non-abusers to be between 89 and 97 percent, with a miss rate of 5 to 10 percent. This means that the SASSI is incorrect in identifying a non-abuser as an abuser, or incorrectly identifying an abuser as a non-abuser only 5 to 10 percent of the time. According to Miller (1985), the combination of the SASSI and the Face Valid Scale (FVS) enhanced the validity of the SASSI with all populations. In combination, the SASSI and the FVS identified 90 percent of a residential sample, 80 percent of defensive early stage abusers in a family-oriented intensive outpatient program, and 90 percent of non-abusers who were also codependents. In addition, Cooper & Robinson (1987) reported that the SASSI has a concurrent validity of .62 with the MacAndrew Alcoholism Scale (MacAndrew, 1965).

Reliability has received little attention in terms of research on the original SASSI. Indications point to the SASSI being reliable in consistent identification of substance abusers according to Miller (1985). However, according to Kerr (1993), the internal consistency of most of the sub-scales of the SASSI is quite low. "Because of the discriminant analysis method of construction, each sub-scale, excluding the FVA and FVOD, is made of heterogeneous items related to a unitary construct" (Kerr, 1993, p.6). Only one study was found of test-retest reliability performed on the SASSI, which was
performed without the FVS. A study by Kilkunas on reliability tested 24 subjects on a 4-6 week interval and found good test-retest reliability (In Kerr 1993). The reliability coefficients were reported as: OAT, .87; SAT, .91; DEF, .86; SAM, .91; FAM, .76.

The SASSI Institute has recently addressed the criterion validity of the SASSI in research. For the research, various treatment settings ranging from a Family Addictions Program to an in-patient hospital were utilized. With N=690, the SASSI correctly classified 607 (88%) as either chemically dependent or non-chemically dependent, with 8% of cases resulting in a false negative (i.e., results indicated no chemical addiction when it was present), and 4% of the subjects had positive scores which proved to be false (Vacc, 1994).

The SASSI Institute also addressed test-retest reliability in an additional study. Using N=40 subjects, the 6 sub-scales were evaluated for test-retest reliability. The results were: OAT, .97; SAT, .96; DEF, .97; SAM, .97; FVA, .99 (N=33); FVOD, .99 (N=33). Based on this research, the SASSI (and SASSI-2) has proven to reliably identify characteristics associated with chemical dependency.

Problems which have recently been noted with the use of the SASSI-2 for research purposes. During the data collection for this study, a new version of the SASSI was introduced, which is titled the SASSI-3. Makers of the SASSI-3 suggest that the only valid analysis of SASSI results, to measure the function of an intervention, is to test for movement toward the mean of the normative population. This is the kind of analysis which is presented in Table 2, A through H in the results section of this paper. Creators of
the SASSI-2 and SASSI-3 discourage the use of the SASSI-2 or SASSI-3 for research purposes. There appears to be a tendency for subjects to respond consistently on the SASSI, regardless of time in recovery. This stability in responding makes the usefulness of the SASSI in research questionable (Miller in personal telephone communication to P. Englander-Golden, March 1999). The results of the SASSI-2 analysis in Table 2, A through H, need to be interpreted cautiously with this new information in mind for the reader.

**Rotter Internal-External Locus of Control Scale**

The Rotter Internal-External Locus of Control Scale (APPENDIX D) is a 29-item, forced-choice test including 6 filler items which serve the purpose of making the scale somewhat more ambiguous (Rotter, 1966). The raw score is determined by the number of external responses given by the subject. Hence, the score range for an external classification are from 12 to a possible 23. The score range for an internal classification is from a possible zero to 11. According to Rotter (1966) the items of the Internal-External Locus of Control Scale (I-E) deal "exclusively with the client's belief about the nature of the world" (p.10). The items address the subject's expectations, attitudes, cognitions, and beliefs about the value of internal vs. external control. Gonzali & Sloan (1971) consider that locus of control, whether internal or external, describes a person along the dimension of personal responsibility for the outcome of their behaviors. Locus of control involves the attitudes and beliefs one holds about one's ability to control one's life.
Locus of control has been related to several types of emotional problems. Smoking and addiction have been the most frequently studied. Most studies have yielded consistent relationships between smoking and locus of control with smokers being more external than nonsmokers (Penny & Robinson, 1986; MacPherson & Holmes, 1982). Mlott and Mlott (1975) and Rosenbaum and Argon (1979) reported that smokers who were successful in stopping smoking were more internal than those who were unable to stop.

The concept of locus of control is less clearly differentiated when dealing with chemically dependent individuals. Results regarding locus of control in alcoholics have been less consistent. Zeiner, Stanitis, Spurgeon, and Nichols, (1985) found alcoholics who smoked cigarettes to be more externally focused, indicating a possible relationship among addictions. Donovan and O'Leary (1978) found external focus in alcoholics, a finding which was substantiated by a recent study using the I-E scale in tandem with another scale. The scale used was considered by the authors of the new study to be a more sensitive instrument specifically designed for use with alcoholics, and results were significant for external locus of control (Bunch & Schneider, 1991).

Other research has found that, contrary to expectations, chemically addicted individuals tend to score on the internal dimension of locus of control (Abbott, 1982; Gozali & Sloan, 1971). These findings suggest that an addict's belief in his or her ability to control the outcome of events may influence drinking behavior. It is possible that feedback from the consequences of drinking does not modify behavior because of the
belief in individual control over addiction. There are those who see addiction as a false sense of control coupled with a lack of awareness. In his Rational Recovery program, Trimpey (1991) seeks a goal of more external control achieved by cognitive understanding of behavior. Gozali & Sloan (1971) conclude that treatment for addiction should include modification of locus of control. For the purposes of the proposed study locus of control will be evaluated for significant change after SIS training.

The reliability and validity of the I-E scale were examined by Rotter (1966). In tests addressing the internal consistency among varying populations and various sample sizes, a correlation of .70 and above was reported. "The test shows reasonable homogeneity or internal consistency, particularly when one takes into account that many of the items are sampling a broadly generalized characteristic over a number of specific or different situations" (Rotter, 1966, p. 17). Gozali & Sloan (1971) found a high test-retest reliability of .81 on the I-E when administered to alcoholics in treatment and again in 3 months after treatment. In Rotter's tests of test-retest reliability results ranged from .49 to .83, with the second administration resulting in somewhat lower results. The studies represent "adequate reliability" of the measure according to Gozali & Sloan (1971).

Other studies have addressed the construct validity of the I-E scale. Adams-Webber (1963) found highly significant correlations between a projective test of tendency (for individuals to view punishment for immoral acts to be externally imposed, or coming from an internal source), and the I-E scale. Also, in a study by Phares (1975), the I-E
scale scores resulted in accurate prediction as to shifts in expectancies regarding success or failure on learning performance tasks. The tests of reliability and validity, as well as the tests conducted by Rotter himself, yield adequately strong support for the stability of the I-E scale.

The McMaster Family Assessment Device

Family functioning is a complex phenomenon which can be assessed in a number of ways. Family functioning is considered by the designers of the McMaster Family Assessment Device (FAD) to be related to transactional and systemic properties of the family system more than the intrapsychic characteristics of the individual family members. The FAD is designed as a screening instrument to identify problem areas in a simple and efficient format (Epstein, Baldwin, & Bishop, 1983).

The FAD is a 53-item, self-report scale, considered to be a reliable and valid instrument to assess family functioning along 7 dimensions. 6 of the dimensions reflect the levels of family functioning as described by the McMaster Model of family functioning: Problem Solving; Communication; Roles; Affective Responsiveness; Affective Involvement; and Behavior Control. The 7th scale is the General Functioning dimension which assesses overall health and pathology (Miller, Epstein, Bishop & Keitner, 1985).

The FAD has demonstrated reliability and validity in studies reported by Miller et al (1985). The data which is described includes: a) the relationship between social
desirability and the FAD; b) test-retest reliability; c) the relationship between the FAD and other self-report measures of family functioning d) the relationship between the FAD and the clinical ratings of family functioning, and e) the development of health/pathology cut-off scores for the FAD.

The correlations of social desirability and the FAD were uniformly low, ranging from .06 to .14. Social desirability does not appear to exert a strong influence on the FAD. The test-retest and concurrent validity were addressed by administration of the FAD simultaneously with other well-known family functioning instruments, and administration of the FAD one week later. The test-retest correlations ranged from .66 to .76. Comparisons between the FAD and other family assessment devices provide good evidence for the concurrent validity of the FAD with the Family Unit Inventory (FUI) and the Family Adaptability and Cohesion Evaluation Scale (FACES II); with correlations at or approaching the .50 level of substantial relationship in scale comparisons to these instruments (Miller et al 1985).

The discriminate validity of the FAD was done by comparing FAD scores with experienced family therapists' clinical ratings of the same family. The therapists rated the family as healthy/unhealthy along the 6 dimensions of the FAD, as well as the overall functioning of the family. The analyses of the data provided evidence of high correlation between clinical assessments by practitioners and the FAD. Finally, although the FAD significantly discriminates between healthy and unhealthy families, cut-off scores were established to differentiate healthy and unhealthy families along each dimension. The
studies of FAD cut-off scores indicate that the FAD significantly discriminates psychiatric and non-clinical families (Miller et al 1985).

A recent factor analysis of the 6 sub-scales of the FAD showed that of 48 items analyzed, 44 items (92%) loaded highest on the factor the item was hypothesized to represent (Kabacoff, Miller, Bishop, Epstein & Keitner, 1990). The General Functioning Scale was considered separately, and correlated highly with the principal component of the other 48 items. These results provide strong support for the hypothesized structure of the FAD as a measure of family functioning (Tutty, 1995).

Research Design and Statistical Analysis of Data

The research design of the study was a Pre-test/Post-test control group design. Randomness of selection of subjects and random assignment to groups was not possible due to the necessity of conducting the research within the already existing structure of the groups at the treatment facilities. The groups were hypothesized to be representative of the population of chemically dependent individuals by virtue of their resemblance to that population under the assumption of the "good enough" principle (Kruskall & Mosteller, 1979, p. 259). Valid inferences may be made to a hypothetical population resembling the sample (Serlin, 1987). The design of the study was as follows:
The control group completed the pre-test battery of questionnaires, continued the regular course of treatment for 5-8 weeks and completed the post-test questionnaires. The experimental group continued in the treatment course with the addition of the weekly SIS training sessions, and then completed the post-test battery of questionnaires.

Definition of Terms

The operational definitions for the purposes of the study are as follows:

Addiction- complex biological adaptations after prolonged drug abuse; resulting in a physical withdrawal after discontinuing use of the drug. Note: for operational use in the above study, addiction, dependence, and alcoholism are used interchangeably. I subsume the view that for the purposes of understanding treatment for addiction to substances; the impact of chemical dependence upon the person is similar, regardless of the particular chemical involved.
Alcoholism- the National Council Alcoholism defines alcohol addiction as a "chronic, progressive, and potentially fatal disease"; characterized by tolerance, physical dependency, organ changes, or all three.

Chemical Abuse- a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences, related to the repeated use of substances. There may be failure to fulfill major life obligations, legal problems, interpersonal and social problems.

Chemical Dependence- complex biological adaptations after prolonged drug abuse; resulting in a physical withdrawal after discontinuing use of the drug; a pattern of repeated self-administration that usually results in tolerance, withdrawal and compulsive drug-taking behavior.

Family Functioning- the manner in which the several personalities in a family cohere in an ongoing structure that is both sustained and altered through interaction.

Locus of control- the sense of personal control over the events in an individual's life as measured by the Rotter Internal-External Locus of Control Scale.

Movies- In SIS training the role play is done in the format of "making movies". This experiential format allows participants to experience their own feelings, bodily sensations, and reactions from the safety of playing a role in one of the movies.

Quality of Life- an atmosphere of trust, caring, and open attitude toward change in the family or peer group.
Self-Esteem- the self-evaluations associated with an individual's perceptions of self.

Spirituality- a belief in a power greater than the resources of the individual as a source of power, meaning, hope, peace and serenity.

Substance Abuse- a maladaptive pattern of substance use leading to clinically significant impairment or distress.

Substance Dependence- a cluster of cognitive, behavioral, and physiological symptoms, indicating that the individual continues to use the substance despite significant substance-related problems.

Recovery- a shift in awareness, attitudes, and behaviors of chemically dependent individuals; resulting in positive changes in the quality of the individual's life.

Substance- a drug of abuse, a medicine, a toxin. Classes of substances include: alcohol; amphetamines; caffeine; cannabis; cocaine; hallucinogens; inhalants; nicotine; opioids; phencyclidine (PCP); sedatives; hypnotics; anxiolytics.
CHAPTER III

RESULTS AND DISCUSSION

This chapter presents the results of the analysis of the data obtained from this study as well as a discussion of the findings. The purpose of this study was to determine if SIS communications training is an effective adjunct to out-patient chemical dependency treatment. This research employed a quantitative approach to examine client change in the treatment setting by exploring the effect of this particular intervention with CD clients on variables represented by the SASSI 2, FAD, and Rotter I-E Scale.

The chapter is organized into sections which discuss the demographics of groups, results of analysis of data, and discussion of the results. The discussion section includes limitations of the study, clinical applications and implications for future research.

Demographics

A high attrition rate in the participating centers yielded a substantially smaller sample size than was anticipated in the original design of the study. A total of 76 subjects dropped out of the study after completing the pre-test questionnaires and were lost to analysis. This loss resulted in sample sizes for the experimental group of N=26 and the control group of N=14. While attrition problems are common when attempting studies in out-patient chemical dependency treatment settings (McAuliffe & Ashery, 1993), the
interpretation of the results of this study should take the small sample size into consideration.

Several circumstances were noted as explanations for attrition from treatment prior to completion of the pre-test battery of questionnaires. Some of these circumstances were reported by the treatment centers as: discharge for noncompliance with treatment requirements; revocation of probation or parole resulting in return to incarceration before completion of treatment; relapse to chemical use (followed by dropping out of treatment or by admittance to in-patient treatment care); environmental instability (loss of data set due to inability to locate subject for Post-testing).

Due to the large number of subjects who dropped out of treatment prior to completion of the Post-test questionnaires, an attrition analysis was performed on pre-test scores to test for differences between the 76 subjects who dropped out and those who completed the study. T-test analysis was done on pre-test scores of the SASSI-2, FAD, and Rotter I-E scale, comparing the subjects who dropped out and those who completed the study. This analysis yielded no significant differences between the attrition subjects and the subjects who completed the study.

The demographic characteristics of the subjects who completed the study are presented in Table 1, which follows.
Table 1. Demographic Characteristics of 26 Experimental and 14 Control Subjects.

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>33.65</td>
<td>34.21</td>
</tr>
<tr>
<td>Gender</td>
<td>F=27% M=73%</td>
<td>F=43% M=57%</td>
</tr>
<tr>
<td>Race</td>
<td>Caucasian=69% Noncaucasian=31%</td>
<td>Caucasian=67% Noncaucasian=33%</td>
</tr>
<tr>
<td>Marital Status</td>
<td>M=58% Other=42%</td>
<td>M=43% Other=57%</td>
</tr>
<tr>
<td>Age of First Substance Use</td>
<td>14.5 years</td>
<td>15 years</td>
</tr>
<tr>
<td>History of IV Drug Use</td>
<td>Yes=19% No=81%</td>
<td>Yes=22% No=78%</td>
</tr>
<tr>
<td>Average # of Days in Treatment</td>
<td>85</td>
<td>88</td>
</tr>
</tbody>
</table>

As can be seen in Table 1, the two groups were similar on the chosen demographic variables. The age reported for first use of drugs or alcohol was noted as 14.5 for the experimental group, with an age of first use of 15 years in the control group. At the time of treatment, the average age was 33.65 years in the experimental group and 34.21 years in the control group. It is interesting to note that 10 of the 14 (71%) of the control subjects chose not to report annual income, as opposed to 6 (21%) of the 26 experimental subjects who chose not to report annual income on the demographic questionnaire.

Results

This section of the chapter discusses the statistical analysis of data from 26 experimental group and 14 control group subjects on SASSI 2, FAD, and Rotter I-E Scale.
SASSI 2 (Substance Abuse Subtle Screening Inventory)

The frequency of experimental and control subjects whose SASSI-2 scores moved toward the mean (desirable change), compared to those who moved away from the mean (undesirable change) at post-test was analyzed by means of a Chi Square ($\chi^2$) analysis.

Table 2, A through H, shows the contingency diagrams and results of Chi Square analysis for SASSI-2 sub-scales: Face Valid Alcohol (FVA), Face Valid Other Drug (FVOD), Obvious Attributes (OAT), Subtle Attributes (SAT), Defensiveness (DEF), Supplemental Addictions (SAM), Family (FAM), and Correctional (COR). Note that FVA and FVOD results are missing 3 Experimental and 2 Control Subject Post-test results due to subject failure to respond on these 2 scales at Post-test.

Table 2. Contingency Diagrams Comparing Experimental and Control Subjects on the Sub-Scales of the Substance Abuse Subtle Screening Inventory-2.

A. Comparison of 21 Experimental and 12 Control Subjects on the Face Valid Alcohol Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable Toward Mean</th>
<th>Undesirable Away From Mean</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>11</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Control</td>
<td>3</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>19</td>
<td>33</td>
</tr>
</tbody>
</table>

$\chi^2 = 2.34$, df = 1, p =ns

A $\chi^2$ value of 3.84 is needed for significance at the .05 level.
B. Comparison of 21 Experimental and 12 Control Subjects on the Face Valid Other Drug Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>8</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>Control</td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>20</td>
<td>33</td>
</tr>
</tbody>
</table>

$\chi^2 = 0.041$, df = 1, $p = ns$

C. Comparison of 26 Experimental and 14 Control Subjects on the Obvious Attributes Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>13</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>Control</td>
<td>5</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>22</td>
<td>40</td>
</tr>
</tbody>
</table>

$\chi^2 = 0.770$, df = 1, $p = ns$

D. Comparison of 26 Experimental and 14 Control Subjects on the Subtle Attributes Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>11</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>Control</td>
<td>3</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>26</td>
<td>40</td>
</tr>
</tbody>
</table>

$\chi^2 = 1.74$, df = 1, $p = ns$

E. Comparison of 26 Experimental and 14 Control Subjects on the Defensiveness Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>7</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Control</td>
<td>5</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>28</td>
<td>40</td>
</tr>
</tbody>
</table>

$\chi^2 = 0.335$, df = 1, $p = ns$
F. Comparison of 26 Experimental and 14 Control Subjects on the Supplemental Addictions Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>9</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>Control</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>23</td>
<td>40</td>
</tr>
</tbody>
</table>

χ² = 1.89, df = 1, p = ns

G. Comparison of 26 Experimental and 14 Control Subjects on the Family Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>10</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>Control</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>23</td>
<td>40</td>
</tr>
</tbody>
</table>

χ² = 0.495, df = 1, p = ns

H. Comparison of 26 Experimental and 14 Control Subjects on the Correctional Sub-Scale.

<table>
<thead>
<tr>
<th></th>
<th>Desirable</th>
<th>Undesirable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>13</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>Control</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>23</td>
<td>40</td>
</tr>
</tbody>
</table>

χ² = 0.000, df = 1, p = ns

As can be seen in Table 2, A through H, χ² results were not statistically significant.

Family Assessment Device (FAD)

Comparisons of changes at post-test between the experimental and control subjects on the sub-scales of the FAD were analyzed by a repeated measures MANOVA. Mean scores and Standard Deviations for the subscales of the Family Assessment Device,
Problem Solving, Communication, Family Roles, Affective Responsiveness, Affective Involvement, Behavior Control, and General Functioning are presented in the following Table 3, and the MANOVA results are presented in Table 4.

Table 3.
Mean Scores on the Family Assessment Device Sub-Scales for 26 Experimental and 14 Control Subjects at Pre and Post-test and Standard Deviations

<table>
<thead>
<tr>
<th>Sub-Scale</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Pre</td>
<td>SD Pre</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>2.16</td>
<td>0.51</td>
</tr>
<tr>
<td>Communication</td>
<td>2.32</td>
<td>0.57</td>
</tr>
<tr>
<td>Family Roles</td>
<td>2.15</td>
<td>0.42</td>
</tr>
<tr>
<td>Affective Responsiveness</td>
<td>2.24</td>
<td>0.65</td>
</tr>
<tr>
<td>Affective Involvement</td>
<td>2.20</td>
<td>0.48</td>
</tr>
<tr>
<td>Behavior Control</td>
<td>1.87</td>
<td>0.36</td>
</tr>
<tr>
<td>General Functioning</td>
<td>2.11</td>
<td>0.60</td>
</tr>
</tbody>
</table>

As can be seen in Table 3, both groups show improvement (lower scores) on every sub-scale of the FAD at post-test. A repeated measures MANOVA was performed on the means in Table 3 to compare the degree of change between the experimental and control groups at post-test. Use of MANOVA increases the possibility of detecting the effect of the experimental intervention when there is a small sample size by creating a
linear combination of the dependent variables. Results of the MANOVA are presented in
the following Table 4.

Table 4.
Results of MANOVA Comparing 26 Experimental and 14 Control Subjects on the Family
Assessment Device at Pre and Post-test, Main Effects for Group, Time, Interaction of
Group x Time, with F-Values, df, p and Effect Size

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Significance p</th>
<th>Effect Size (Eta Sq.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>0.947</td>
<td>8</td>
<td>24</td>
<td>0.018</td>
<td>0.398</td>
</tr>
<tr>
<td>Time</td>
<td>0.781</td>
<td>8</td>
<td>24</td>
<td>0.171</td>
<td>0.266</td>
</tr>
<tr>
<td>Group x Time</td>
<td>1.423</td>
<td>8</td>
<td>24</td>
<td>0.502</td>
<td>0.173</td>
</tr>
</tbody>
</table>

Special attention should be paid to the Group x Time interaction in Table 4, because
this interaction specifically addresses the amount of change in the experimental versus
control group, which can shed light on the effectiveness of the experimental intervention.
As can be seen in Table 4, the Group x Time interaction did not reach significance with
F (8, 24) = 1.423, p = 0.502.

While the interaction was not statistically significant, the moderate effect size, (above .10)
suggests that an experimental intervention effect is present and might reach significance
with a larger sample size (Cohen, 1988). A moderate effect size is important with small
samples, because the small sample size results in a reduction in the power of the analysis.
In this case the moderate effect size indicates that had the sample size been larger, the
interaction effect might have reached statistical significance. The presence of a
A moderate effect size indicates the appropriateness of examining univariate results (Cohen, 1988).

Therefore, univariate analysis was done for each of the sub-scales of the FAD.

These results are reported in Table 5, which follows.

Table 5.
Results of Univariate Analysis Comparing 26 Experimental and 13 Control Subjects on Family Assessment Device Sub-Scales at Pre and Post-test, F-Values, df, p, and Effect Sizes.

<table>
<thead>
<tr>
<th>Source Sub-Scale</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance p</th>
<th>Effect Size (Eta Sq.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob. Solv.</td>
<td>2.980E-01</td>
<td>1, 35</td>
<td>2.980E-01</td>
<td>4.168</td>
<td>0.048</td>
<td>0.101</td>
</tr>
<tr>
<td>Comm.</td>
<td>2.140E-01</td>
<td>1, 35</td>
<td>2.140E-01</td>
<td>2.807</td>
<td>0.102</td>
<td>0.071</td>
</tr>
<tr>
<td>Fam. Roles</td>
<td>5.912E-02</td>
<td>1, 35</td>
<td>5.912E-02</td>
<td>0.945</td>
<td>0.337</td>
<td>0.025</td>
</tr>
<tr>
<td>Aff. Resp.</td>
<td>1.279</td>
<td>1, 35</td>
<td>1.279</td>
<td>11.28</td>
<td>0.002</td>
<td>0.234</td>
</tr>
<tr>
<td>Aff. Inv.</td>
<td>1.570E-01</td>
<td>1, 35</td>
<td>1.570E-01</td>
<td>2.270</td>
<td>0.140</td>
<td>0.058</td>
</tr>
<tr>
<td>Beh. Cont.</td>
<td>3.070E-01</td>
<td>1, 35</td>
<td>3.070E-01</td>
<td>4.556</td>
<td>0.039</td>
<td>0.110</td>
</tr>
<tr>
<td>Gen. Func.</td>
<td>7.380E-01</td>
<td>1, 35</td>
<td>7.380E-01</td>
<td>5.254</td>
<td>0.028</td>
<td>0.110</td>
</tr>
<tr>
<td><strong>Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob. Solv.</td>
<td>1.482</td>
<td>1, 35</td>
<td>1.482</td>
<td>3.680</td>
<td>0.063</td>
<td>0.124</td>
</tr>
<tr>
<td>Comm.</td>
<td>4.519E-02</td>
<td>1, 35</td>
<td>4.519E-02</td>
<td>0.113</td>
<td>0.739</td>
<td>0.090</td>
</tr>
<tr>
<td>Fam. Roles</td>
<td>4.220E-01</td>
<td>1, 35</td>
<td>4.220E-01</td>
<td>1.748</td>
<td>0.194</td>
<td>0.003</td>
</tr>
<tr>
<td>Aff. Resp.</td>
<td>5.808E-02</td>
<td>1, 35</td>
<td>5.808E-02</td>
<td>0.087</td>
<td>0.769</td>
<td>0.045</td>
</tr>
<tr>
<td>Aff. Inv.</td>
<td>8.900E-01</td>
<td>1, 35</td>
<td>8.900E-01</td>
<td>1.910</td>
<td>0.175</td>
<td>0.002</td>
</tr>
<tr>
<td>Beh. Cont.</td>
<td>1.253</td>
<td>1, 35</td>
<td>1.253</td>
<td>3.926</td>
<td>0.055</td>
<td>0.049</td>
</tr>
<tr>
<td>Gen. Func.</td>
<td>2.140E-01</td>
<td>1, 35</td>
<td>2.140E-01</td>
<td>0.414</td>
<td>0.524</td>
<td>0.096</td>
</tr>
<tr>
<td><strong>Group x Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob. Solv.</td>
<td>2.054E-04</td>
<td>1, 35</td>
<td>2.054E-04</td>
<td>0.003</td>
<td>0.958</td>
<td>0.000</td>
</tr>
<tr>
<td>Comm.</td>
<td>1.281E-03</td>
<td>1, 35</td>
<td>1.281E-03</td>
<td>0.017</td>
<td>0.898</td>
<td>0.017</td>
</tr>
<tr>
<td>Fam. Roles</td>
<td>2.999E-02</td>
<td>1, 35</td>
<td>2.999E-02</td>
<td>0.480</td>
<td>0.493</td>
<td>0.013</td>
</tr>
<tr>
<td>Aff. Resp.</td>
<td>1.570E-01</td>
<td>1, 35</td>
<td>1.570E-01</td>
<td>1.389</td>
<td>0.246</td>
<td>0.036</td>
</tr>
<tr>
<td>Aff. Inv.</td>
<td>9.502E-04</td>
<td>1, 35</td>
<td>9.502E-04</td>
<td>0.014</td>
<td>0.907</td>
<td>0.000</td>
</tr>
<tr>
<td>Beh. Cont.</td>
<td>8.871E-02</td>
<td>1, 35</td>
<td>8.871E-02</td>
<td>1.317</td>
<td>0.259</td>
<td>0.034</td>
</tr>
<tr>
<td>Gen. Func.</td>
<td>9.815E-02</td>
<td>1, 35</td>
<td>9.815E-02</td>
<td>0.699</td>
<td>0.408</td>
<td>0.019</td>
</tr>
</tbody>
</table>
As can be seen in Table 5, univariate analysis of the individual sub-scales of the FAD yielded no statistically significant findings of the interaction effect of group by time. In addition, the effect sizes were not large enough to interpret the results. The main effect of group approached statistical significance on problem solving with F (1, 35) = 3.68; p = 0.063, and affective involvement with F (1, 35) = 2.27; p = 0.055 sub-scales. The means in Table 3 show that the experimental group demonstrated better functioning at pre and post-test compared to the control group.

Main effect of time reached statistical significance on problem solving with F (1,35) = 4.168, p =0.048); affective responsiveness with F (1, 35) = 11.28, p = 0.002); the behavioral control scale with F (1, 35) = 4.556, p = 0.039); and the general functioning scale with F (1, 35)=5.254; p = 0.028). These main effects indicate that both the experimental and control groups improved significantly over time.

Rotter I-E Scale

Comparisons of changes at post-test between the experimental and control subjects on the Rotter I-E scale were analyzed by analysis of variance (ANOVA). Mean scores and Standard Deviations for the Rotter I-E are presented in Table 6 and ANOVA results are shown in Table 7.
Table 6.
Mean Scores and Standard Deviations on the Rotter I-E Scale for 26 Experimental and 14 Control Subjects.

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>I-E Scores</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Pre</td>
<td>0.357</td>
<td>0.187</td>
<td>0.358</td>
<td>0.185</td>
</tr>
<tr>
<td>Post</td>
<td>0.470</td>
<td>0.180</td>
<td>0.403</td>
<td>0.153</td>
</tr>
</tbody>
</table>

As can be seen in Table 6, the pre-test mean scores of both groups fell within the internal locus of control range of scores (below .478). Lower scores indicate a more internal locus of control. The post-test mean scores were also within the internal locus of control range. Statistical analysis of these scores was done using an analysis of variance (ANOVA) and the results of this analysis is presented in Table 7.

Table 7.
Results of Analysis of Variance Comparing 26 Experimental and 14 Control Subjects on the Rotter I-E Scale at Pre and Post-test, F-Values, df, p, and Effect Size.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance p</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>1.990E-O2</td>
<td>1, 38</td>
<td>1.990E-O2</td>
<td>1.70</td>
<td>0.200</td>
<td>0.043</td>
</tr>
<tr>
<td>Group</td>
<td>1.130E-O1</td>
<td>1, 38</td>
<td>1.130E-O1</td>
<td>2.134</td>
<td>0.152</td>
<td>0.053</td>
</tr>
<tr>
<td>Group x Time</td>
<td>2.052E-O2</td>
<td>1, 38</td>
<td>2.052E-O2</td>
<td>1.753</td>
<td>0.193</td>
<td>0.044</td>
</tr>
</tbody>
</table>
As can be seen in Table 7, there were no statistically significant results from the analysis of the Rotter I-E. The result of main effect for time was $F(1, 38) = 1.700, p = 0.200$; the result of main effect for group was $F(1, 38) = 2.134, p = 0.152$, and the interaction effect of time by group was $F(1, 38) = 1.753, p = 0.193$. Effect Sizes were below moderate levels.

Discussion

This study was designed to examine the effectiveness of Say It Straight communications training as an addition to chemical dependency treatment. The research used the SASSI-2, the McMaster Family Assessment Device, and the Rotter I-E scale to evaluate subjects prior to treatment and following treatment.

Hypothesis 1 anticipated that there would be an increase in healthy functioning on the part of the individual as measured by the dimensions of the SASSI 2 and the FAD.

Hypothesis 2 stated that there would be an increase in the level of healthy functioning reported within the family as measured by the dimensions of the SASSI-2 and FAD.

Hypothesis 3 stated that there would be an increase in the reported level of healthy communications as measured by the dimensions of the FAD.

Hypothesis 4 stated that there would be a shift in locus of control as measured by the Rotter I-E scale after SIS training.
Hypothesis 5 stated that there would be change in the reported severity level of chemical dependency symptoms after SIS training.

Hypothesis 6 stated that there would be greater change in the experimental group than in the control group regarding hypotheses 1-5.

The null hypothesis was not rejected for hypotheses 1-6 of this study. There were no statistically significant results from the analysis of the results of SASSI-2, FAD, or Rotter I-E. As noted, the 76 subjects lost due to attrition may partially explain results not reaching statistical significance.

Because there were no statistically significant results for MANOVAS, ANOVAS, or Chi Square analysis, the effect sizes were examined to detect effects of the intervention which might be overlooked by focusing only on the p value (Cohen, 1992). Effect size measures mean change, which is especially relevant to studies concerned with the impact of a particular psychological intervention.

Effect size is important in addressing the practical value of this research using SIS training as an adjunct to chemical dependency treatment (Kirk, 1996). Previous research using SIS training (see Chapter 1, p. 37) has yielded statistically significant results, and the moderate effect size of the interaction of group by time obtained here on the FAD suggests that results might have reached statistical significance in this study with a larger sample size (Cohen, 1988).
Limitations of the study

The internal validity of the study is limited by the difficulties in experimental design which have been noted in conducting studies of out-patient CD clients (McAuliffe & Ashery, 1993). Problems in retaining subjects; 76 subjects dropped out and did not complete the Post-test yielded a small sample size, which limits the power of this study to detect statistical significance. The inability to randomize assignment of subjects to groups also limits the internal validity. However, the naturalistic design of the study increased the possibility of generalizing the results to the population of chemical dependency clients.

The reader should be aware that there were some violations when the data was checked for normality and outliers. These violations were also due in part to small sample size, and to an apparent pattern of neutral response bias on the FAD. Since MANOVA is especially sensitive to outliers, these violations should also be considered when interpreting any results of the study.

The use of the SASSI-2 for the study may have not have been the best instrument to detect changes due to a treatment intervention, due to the problems with the use of the SASSI-2 for research purposes discussed in the instruments section of this paper (see Chapter II, p. 54). Subjects demonstrated little change on the SASSI-2. While the SASSI-2 instructions ask for responses relating to substance use in the last 30 days, people seem
to respond along lifetime substance use lines. Another instrument could be more useful in
detecting the effect of SIS training on addiction related variables.

The experimental groups were conducted by the principle investigator, in order to
insure consistency in the methods and procedures of the experimental groups. There
should be awareness that the possibility for researcher bias exists, due to the possibility
that the subjects were in some way influenced by the individual facilitator (Rosenthal,
1966). The facilitator was also limited by time and financial constraints, which prohibited
extending the study beyond the time allotted in the original design of the study in order to
obtain a larger sample size.

Another limitation of this study was the necessity for the investigator to integrate
SIS training into the existing structure of the treatment facilities, and to ask counselors at
the facilities to administer the questionnaires to the control subjects in addition to their
existing job duties. The imposition of research into treatment schedules which were
already structured to include the essential elements of treatment taxed the system, the
treatment center counselors and the subjects. This limitation may have affected outcomes
and should be considered in future research design.

Clinical Applications

SIS training has been proposed as an addition to CD treatment which could
enhance the recovery process through improved communication, self awareness, and
family functioning. The effect size on the group by time interaction on the FAD observed
in this study (and results of other studies using SIS training), may suggest that SIS is an intervention which could be added to existing treatment to give CD clients a unique set of awarenesses which could further augment treatment and recovery. Larger sample sizes are needed to examine this question.

One anecdotal result of this study is important to the implications for future research with SIS training, in spite of the inability to analyze the data of one particular experimental group subject. Subject # 27 from the experimental group filled out the pre-test questionnaires with the group, and participated in the training with his peers. This subject spoke up after participating in all sessions, but before taking the Post-test. During the processing of the impact of the training, this subject asked to be able to share how he had been impacted by the training. He then shared with the group two facts he had never been able to tell anyone before. First he shared that he had been imprisoned in a POW camp at the end of the Viet Nam war. The subject stated that after the training he was connected to himself, the group, and his resources in a way that he could share his story with his peers for the first time. He also could share his grief for the first time, and receive support. The second fact he shared was his inability to read, and the fact that he had pretended he could read his whole life and had faked his responding on the pre-test. This was the first time he had allowed himself to tell anyone he was illiterate. The subject described the group as a turning point in his life. This observation is included with the quantitative results to give direction to possible clinical uses of this study. SIS training
may add elements to the treatment regimen which are not currently available to clients as a part of the usual didactic or therapeutic treatment plan.

Implications for Future Research

This study provides some directions for future research using SIS training. The results demonstrate that CD treatment does produce change in recovery related variables and at least one effect size observed for the experimental group in this study suggest that SIS training might be integrated to enhance the treatment process and the quality of recovery. Future studies may use the problems encountered in this research to design studies with more experimental control to extend the knowledge base of how SIS (and also other specific interventions) impacts the recovery of individuals.

Research in out-patient facilities could be enhanced by the training of counselors within the individual facilities to do the SIS groups as a part of the usual treatment protocol. In this way the sample size could be increased; by extending the time available to conduct the research as needed. The intervention could be included as an ongoing part of the treatment. It is important to allow for some flexibility of design when conducting research in out-patient facilitates (McAuliffe & Ashery, 1993), due to the less confined environment for clients and the high rate of attrition.

This intervention is also suited for the in-patient milieu, and research could be conducted using SIS in in-patient facilities. Research with greater control of experimental design could be conducted in the more intensive format of in-patient treatment.
APPENDIX A

HUMAN SUBJECTS COMMITTEE APPROVAL
University of North Texas

April 15, 1997

Ms. Rebecca Hardy
4827 Lakeside Dr.
Colleyville, TX 76034

Re: Human Subjects Application No. 97-077

Dear Ms. Hardy:

As permitted by federal law and regulations governing the use of human subjects in research projects (45 CFR 46), I have conducted an expedited review of your proposed project titled "The Effectiveness of SAY IT STRAIGHT Communication Training with Chemically Dependent Adults and Their Family Members." The risks inherent in this research are minimal, and the potential benefits to the subjects outweigh those risks. The submitted protocol and informed consent form are hereby approved for the use of human subjects on this project.

The UNT IRB must re-review this project prior to any modifications you make in the approved project. Please contact me if you wish to make such changes or need additional information.

If you have questions, please contact me.

Sincerely,

Mark Elder
Chairman
Institutional Review Board

cc. IRB Members
APPENDIX B

AGREEMENT TO CONDUCT DISSERTATION RESEARCH
Agreement To Conduct Dissertation Research

This agreement between ______________________ outpatient chemical dependency treatment agency and Rebecca B. Hardy gives permission for the researcher to conduct a study of the effectiveness of SAY IT STRAIGHT TRAINING with adult chemically dependent clients and their affected family members for the researcher’s doctoral dissertation at the University of North Texas in Denton, Texas.

The study will involve approximately ______ subjects who are either clients or who will be given the option to participate in the SAY IT STRAIGHT communications training sessions. The researcher will take all reasonable and prudent steps to protect the well-being of the clients who participate in the study by informing the clients of details of the procedures to be used in the training groups, of any possible risks and benefits of SAY IT STRAIGHT training groups, and of their rights to confidentiality and their right to choose not to participate in the study at all, or to drop out of the study at any time and to not have their results used as part of the study.

The duration of the study will be approximately ______ beginning in ______ and continuing until the needed number of subjects has been attained and the groups trained.

At the end of one complete training cycle of SIS, which is eight weeks, either party to this agreement will have the option to dissolution of this agreement if it has proved to be unsatisfactory to either party. The researcher agrees to follow the described federal guidelines with respect to human subjects research as reflected in the policies and procedures of TCADA, and The UNT Human Subjects Committee, and to use the described methods of these agencies to insure the confidentiality of all data and client records.

This agreement is signed on __________________________

Between __________________________ for __________________________ and __________________________

RESEARCHER Rebecca B. Hardy, M.D.
APPENDIX C

INFORMED CONSENT TO PARTICIPATE IN RESEARCH
Informed Consent to Participate in Research

Please read this form carefully-sign and date it. If you would like a copy for yourself, one will be provided for you.

I __________________________ agree to participate in a study of communications skills training as an adjunct to chemical dependency treatment and aftercare. I understand that my participation in the study will consist of my involvement in a drug-free treatment modality consisting of approximately 6-7 individual and group counseling sessions. I have heard a clear explanation of the treatment procedures, and of what will be expected of me as a participant in this intervention. I further have been advised that the training will be evaluated by means of a battery of 5 questionnaires which I will be asked to complete on two different occasions: prior to participating in the treatment and after completion of the treatment sessions. I am aware that the questionnaires will be completed in two sessions of approximately 1 hour per session.

I understand that the purpose of this training is investigational and that the results are to be used as the doctoral dissertation of the researcher and for possible publication for educational purposes. I understand that the risk to me as a participant in this study is minimal, but that any psychotherapeutic intervention may cause temporary worsening of emotional pain. I have been informed that I may refuse to participate in any procedure that I may find objectionable or not in my best interest. I have been informed that I may withdraw my consent for participation in this research study at any time with no penalty to me, nor with any adverse effect upon the services available to me in the participating agency; and that only aggregate results will be published.

I understand that the researcher will take all reasonable steps to preserve the confidentiality of records and data. I have been advised that the data collected in the study which relates to me will be recorded with a code number which will allow Rebecca B. Hardy to identify me. I agree that the information obtained from this study may be used in any way thought best for education and publication by the researcher, provided that the anonymity of the participants is maintained.

As I have received a clear explanation of the requirements, procedures, possible benefits and risks, purposes of the treatment, and satisfactory answers to any questions I may have regarding the study or its intent, I voluntarily consent to be a participant in the described research study.

I have read the above information and agree to participate in this study.

SIGNED __________________________ Subject
DATE __________________________

SIGNED __________________________ Researcher
DATE __________________________

Should you have any questions or concerns, please feel free to contact Rebecca B. Hardy at (817) 355-9300: you may contact my supervisors: Dr. Douglas Norton (817) 565-2912 or Dr. Paula Englander-Golden (817) 565-3290 at The University of North Texas
This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects (817) 565-3940
APPENDIX D

ROTTER INTERNAL-EXTERNAL LOCUS OF CONTROL SCALE
This page has been inserted during digitization.

Either the original page was missing or the original pagination was incorrect.
5. (a) The idea that teachers are unfair to students is nonsense.

(b) Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. (a) Without the right breaks, one cannot be an effective leader,

(b) Capable people who fail to become leaders have not taken advantage of their opportunities.

7. (a) No matter how hard you try, some people just don't like you.

(b) People who can't get others to like them don't understand how to get along with others.

8. (a) Heredity plays the major role in determining one's personality.

(b) It is one's experiences in life which determine what they're like.

9. (a) I have often found that what is going to happen is going to happen.

(b) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. (a) In the case of the well-prepared student, there is rarely, if ever, such a thing as an unfair test.

(b) Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. (a) Becoming a success is hard work, luck has nothing to do with it.

(b) Getting a job depends mainly on being at the right place at the right time.

12. (a) The average citizen can have an influence on government decisions.
(b) The world is run by the few people in power, and there is not much the little guy can do about it.

13. (a) When I make plans, I am almost certain I can make them work.

(b) It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune.

14. (a) There are certain people who are just no good.

(b) There is some good in everybody.

15. (a) In my case, getting what I want has little or nothing to do with luck.

(b) Many times we might just as well decide what to do by flipping a coin.

16. (a) Who gets to be the boss often depends on who was lucky enough to be in the right place at the right time.

(b) Getting people to do the right thing depends on ability, luck has little or nothing to do with it.

17. (a) As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.

(b) By taking an active part in political and social affairs, people can control world events.

18. (a) Most people don't realize the extent to which their lives are controlled by accidental happenings.

(b) There really is no such thing as "luck."

19. (a) One should always be willing to admit mistakes.
(b) It is usually best to cover up one's mistakes.

20. (a) It is hard to know whether a person really likes you.
(b) How many friends you have depends on how nice you are.

21. (a) In the long run, the bad things that happen to us are balanced by the good ones.
(b) Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. (a) With enough effort, we can wipe out political corruption.
(b) It is difficult for people to have much control over the things politicians do in office.

23. (a) Sometimes I can't understand how teachers arrive at the grades they give.
(b) There is a direct connection between how hard I study and the grades I get.

24. (a) A good leader expects people to decide for themselves what they should do.
(b) A good leader makes it clear to everybody what their jobs are.

25. (a) Many times I feel I have little influence over the things that happen to me.
(b) It is impossible to believe that chance or luck plays an important role in my life.

26. (a) People are lonely because they don't try to be friendly.
(b) There's not much use in trying to please people, if they like you, they like you.

27. (a) There is too much emphasis on athletics in high school.
(b) Team sports are an excellent way to build character.

28. (a) What happens to me is my own doing.
(b) Sometimes I feel that I don't have enough control over the direction my life is taking.
29. (a) Most of the time I can't understand why people behave the way they do.

(b) In the long run, the people are responsible for bad government on a national as well as a local level.
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