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Altered states of consciousness: Trance as an adaptive coping mechanism for chemically dependent people

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Antioch University/New England Graduate School, 1994

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Altered States of Consciousness: Trance as an Adaptive Coping Mechanism for Chemically Dependent People

BY

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DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Psychology
in the Department of Clinical Psychology
of Antioch New England Graduate School, 1994

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WE HEREBY RECOMMEND THAT THE DISSERTATION BY

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ENTITLED

Altered States of Consciousness: Trance As An Adaptive Coping Mechanism for Chemically Dependent People

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY

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Table of Contents

Abstract

There is a considerable amount of research showing that chemically dependent people tend to use substances in order to reduce tension and improve their mood. Newer research suggests that addicts use alcohol and other drugs in order to obtain an altered state of consciousness (ASC). In general, ASC possess healing and adaptive functions which addicts could benefit from by learning different ways of achieving a drug free ASC. There are many natural routes people can take to achieve an ASC including relaxation and hypnosis. This study examined the effectiveness of hypnosis as compared to relaxation exercises in reducing anxiety and improving mood. It showed that hypnosis is more effective in reducing anxiety and improving the mood of chemically dependent people when hypnotic susceptibility was taken into account. It also showed that the "high" addicts experience when using psychoactive substances is similar to the high they experience when in an ASC from hypnosis. Moreover, it showed that the people who engaged in group hypnotherapy felt a sense of mastery and competence. Based on these results, it is recommended that hypnosis be used as an adjunctive

and/or alternative treatment strategy for chemically dependent people.

Chapter I

Introduction

The following study is concerned with understanding the addictive "high". A review of the literature on the etiology of addiction will focus on tension-reduction hypotheses and altered states of consciousness hypotheses. Since a high can be considered an altered state of consciousness, literature is presented to show the similarities between the high of addiction and the high produced by a hypnotic trance. One of the goals of this study is to show similarities between the addictive high with that of a trance high so that information can be provided for using hypnosis in the treatment of addiction.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) (1987) estimates that alcohol abuse causes major health, social and economic difficulties for approximately 18 million Americans who are 18 years of age or older. Furthermore, Bratter and Forrest (1985) estimate there are at least two to three million people who abuse drugs other than alcohol. According to NIAAA (1987) and the National Institute for Drug Abuse (NIDA) (1988) alcohol and other drug abuse costs over $161 billion per year in lost productivity, lost

employment, social welfare programs and motor vehicle accidents. Clearly, alcohol and other drug abuse is a serious problem and one which needs to be attended to.

In regard to the severity and prevalence, chemical dependency has gained enormous attention over the past 15 years. Admission to chemical dependency treatment centers skyrocketed during the decade of the 1980's, and a surge of self help interest groups, books and language surfaced. Concepts like "enabling", "co-dependency", "ACOA", "drinking and drugging" and "parentification" have become common everyday language in the attempt to understand dynamics associated with drug abuse and dependency.

Although drug treatment centers have seen a surge in admissions over the past 10 years (NIDA, 1989) and there has been an active movement by self help groups and professional treatment centers to provide addicts with viable treatment and support, there is also a high relapse rate following such treatment. In general, former patients tend to relapse within 90 days of discharge (Armour, Polich, & Stambul, 1978; Marlatt & Gordon, 1980) and these patients typically return to using the same chemicals they used prior to treatment (Marlatt & Gordon, 1980, 1985). Additionally, Schonfeld

and his colleagues (1989) have recently shown that patients relapse within 60 days if the research emphasis is placed on abuse of any drug, rather than on the preferred drug of choice.

With such high relapse rates occurring, one is struck with trying to understand what it is about getting high that addicts continually want to seek, despite the adverse social consequences (Deschenes, Anglin, & Speckart, 1991) that usually accompany their addiction. This is so important because treating addicts and alcoholics without understanding what the motivation is behind their using behavior can be a "set up" for relapse. If clinicians better understood the motivating factors behind an addicts quest for a high, then perhaps more effective treatment strategies can be used to prevent relapse.

For the purposes of this study, chemical dependency will be operationally defined by the criteria of the Psychoactive Substance Use Disorder put forth in the Diagnostic and Statistical Manual of Mental Disorders (Third Edition-Revised) (American Psychiatric Association [APA], 1987) (DSM-III-R). Alcohol will not be distinguished as a separate entity from drugs, as alcohol is indeed a drug. Many different terms will be

used when referring to chemically dependent people, including: abusers, users, alcoholics, addicts, psychoactive substance abusers/users and chemically dependent. When necessary, a distinction will be made between an "alcoholic" and an "addict", (e.g. some research differentiates between the two); otherwise the above terms will be used interchangeably. Further, the subjects in this study will meet the DSM-III-R criteria for abuse or dependency described in Psychoactive Substance Use Disorder.

Although it is clear that chemical dependency has affected millions of people and relapse rates are high, the etiology of addiction and the motivation behind an addicts need to get high are less clear. In fact, the etiology of addiction is highly debatable with over 43 different theories offered by 50 different theorists (NIAAA, 1987). This study will present several psychological theories on the etiology of addiction. An emphasis on tension reduction and ASC theories will be examined in an attempt to understand why the user gets high and what the user feels when high. Trying to deterimine if the user can feel this high without consuming chemicals is a crucial element of this study. An experimental design will examine the addicts'

feelings and sensations around the chemically induced high with that of a natural high.

The Proposed Research Question

What do abusers feel when using chemicals? What is it about the high that reinforces this behavior and consistent quest for a high? Are addicts using because they enjoy their highs despite social implications, or do they use for other purposes? And what could those purposes be? Could they perhaps want to reduce their own inner turmoil or pain and use chemicals in an attempt to self medicate such pain? Or maybe addicts are attempting to reach these highs because they like being in an altered state of consciousness and they only know how to reach this state through chemical ingestion.

While there are many theories on the etiology and maintenance of addiction, this author subscribes to the theories which support anxiety reduction and achievement of altered state of consciousness as the motivation for addiction. Theoretical and empirical evidence will be cited to support this etiological stance and an alternative treatment strategy will be offered which is consistent with this theory.

There has been limited investigation (McPeake, Kennedy & Gordon, 1991) in looking at the relationship

between a chemically induced high, which results in an altered state of consciousness and natural highs, which also result in altered states. This paper will look at similarities between chemically induced highs and those which are accomplished by natural, drug free highs. It will examine how altered states of consciousness can be seen as healthy, coping mechanisms when achieved naturally through mediums such as meditation, prayer, and trance. It will further propose that addicts may get high due to a need to self medicate their feelings of anxiety.

This paper will focus on hypnotic trance as a means of 1) reaching an altered states of consciousness; 2) in reducing anxiety and 3) in improving mood. Instead of relying on drugs and alcohol to self medicate or reach pleasurable states, it is proposed that addicts experience the natural high of trance in reducing anxiety, improving mood and attaining ASC.

In order to understand how trance is considered an altered state of consciousness, a brief history of hypnosis is provided with an emphasis in describing these altered states and their healing properties. The Ericksonian trance or hypnotherapy techinque will be emphasized and explained in detail. Once the reader has

an idea of how the hypnotic experience works, the author will explain how historically altered states of consciousness have been considered natural, healthy and useful. A theoretical model of addiction is offered with a rationale for a treatment strategy which incorporates hypnosis as a vehicle to altered states. This paper will conclude with a report of the data collected from this treatment strategy followed by a discussion of said results.

Chapter II

Literature Review

A Brief History of Hypnosis

Hypnosis in England.

The beginning of hypnosis is usually associated with Franz Anton Mesmer (1734-1815), an Austrian physician. The now common term of mesmerism originated with his work (Crasilneck & Hall, 1985) and is generally associated with one being entranced or in an altered state of consciousness. Mesmer completed his dissertation about hypnosis in 1766 (Fromm & Shor, 1979) and eight years later provided the first hypnotic treatment. This early mesmerism was quite different from the hypnosis of today, requiring objects or fluid to transport magnetism in order to facilitate the trance.

Marquis de Puysegur, a student of Mesmer, (1751-1825) defined trance as a somnambulistic sleep (Laurence & Perry, 1988, p. 107). This somnambulism produced a serenity and quietness in the patient, often accompanied by amnesia to the events occurring during the somnambulism. For the first time a similarity was being drawn between sleep and trance, thus observing a tie with calmness. With Puysegur's emphasis on rapport

with the patient as essential in establishing the healing properties of mesmerism, communication between healer and patient took on great significance. The earlier need of fluid or objects to transport the animal magnetism was replaced by the strength of the magnetist's will and the rapport with the patient.

Although the concept of hypnosis was introduced in the 1770's with Mesmer's work, the term hypnosis was not coined until the early 1840's by James Braid (1785-1860). Braid introduced the term hypnosis which is a derivative of the the Greek word "hypnos" for sleep. Braid concluded hypnosis was a kind of "nervous sleep" (Hilgard, 1986, p. 4) and credited the success of mesmerism to the process of an altered state of consciousness where..."concentration, imagination, belief, and expectancy"... (Wagstaff, 1981, p. 5) were all intensified in comparison to a waking state of consciousness.

Mesmerism developed into hypnosis with an emphasis on a sleep-like state, a rapport with the hypnotist, subsequent control by the hypnotist and amnesia in response to the trance. While agreement seemed to coalesce around the above criteria, disputes later occurred regarding whether trance was being considered a

pathological or normal phenomenon. In France, in the late 1800's, this dispute became crystallized into two schools of thought, the Salpetriere and the Nancy. The Salpetriere (pathological) school of thought related hypnosis to hysteria, whereby the hypnotized person was manifesting an abnormality of the nervous system. The Nancy (normal) school of thought attributed hypnosis to suggestibility and believed it was a normal phenomenon (Wagstaff, 1981). This debate spawned a general interest in hypnosis, which eventually led to the First International Congress for Experimental and Therapeutic Hypnotism that was held in Paris in 1889 (Hilgard, 1986).

While the roots of hypnosis were in Europe, its growth took place in the United States. In order to understand the development of hypnosis in this country we need to look at what was happening at the turn of the twentieth century. This paper will offer a synopsis about the major contributions occurring at the turn of the century and leading into Ericksonian hypnotherapy, the technique which was used in this study.

Hypnosis in America.

Boris Sidis (1867-1923) is considered one of the best known publishers of material on hypnosis in the

early 20th century. Sidis's major contribution in 1907 was the condition he called hypnoidal, a state one reaches which lies somewhere on a "continuum between waking and hypnosis" (Edmonston, 1986, p. 175). Sidis helped patients reach this state by sitting them comfortably, reducing environmental stimulation, having their eyes fixated on an object, and providing general suggestions to induce fatigue. These general induction techniques are still being used today.

Along with the interest in conscious and subconscious processes of the hypnotic state, autosuggestions were implemented by Emile Coue (1857-1926), a chemist who studied hypnosis in both England and America in the late 1880's. Coue professed that patients were healed from within, not from the practitioner, and emphasized how autosuggestion works within the subconscious and unconsciousness spheres. His belief in the patient's unconscious, the power of the unconscious via autosuggestion, and the transformation of thought into action to obtain curative powers are notions which resemble present day Ericksonian thinking (Edmonston, 1986).

Relaxation was becoming highly important as an avenue to reach the patients' subconscious to activate

the autosuggestions being made. Through the patients relaxed state, the practitioner taught the patient how to use his or her own inner healing powers of the subconscious (Edmonston, 1986). This emphasis on the relaxed state of the 1920's led to the development of Progressive Relaxation by Edmund Jacobson. The patient is taught to relax muscle groups progressively and verbalizations are considered instructions not suggestions (Edmonston, 1986, p. 191).

The 1940's established a trend with autohypnosis (hypnosis induced by self) rather than earlier heterohypnosis (hypnosis induced in one person by another). This may have been due to less of an emphasis on one person having more power over another and more of an emphasis on a client-centered therapeutic frame (Edmonston, 1986). Another trend was the avoidance of the word hypnosis during the induction phase, and replaced with suggestions of drowsiness, relaxation and sleep.

During the 30 year period of the 1950's through the 1970's, major articles concerning the application and understanding of hypnosis were published. Most of the publications centered on variations of earlier works established in the 1920's and 1940's, rather than

offering major innovations in technique or theory (Edmonston, 1986). Eye fixation, verbal suggestions, relaxation, progressive relaxation and ideomotor techniques (ie: hand levitation) were all being used in slightly varying ways. Television had become an indirect way of inducing hypnosis with children, as the clinician would ask the child to mentally visualize a favorite TV show (such as Lassie) and relaxation suggestions would be introduced using Lassie in the induction phase (Marmer, 1959). Ericksonian hypnotherapy was also being developed during the middle of the twentieth century and will be discussed in detail in the next section.

In general, the 1980's and beyond "has been devoid of quantum leaps forward in the development of hypnotic induction procedures" (Edmonston, 1986, p. 270), although there has been certain refinements in particular techniques. There has been an emphasis on both direct and indirect verbal inductions to suit the individualized needs of the patient. Another kind of hypnotic experience which has been gaining momentum is called Neuro-Linguistic Programming, which is being used therapeutically with addicted people. Neuro-Linguistic Programming is very similar to Ericksonian theory in

that it places significance on utilizing the patient's own resources and paying attention to the interaction of language and cognition. (Overdurf, 1989).

In the 1980's there has been an increased interest in alternative means of attaining rapid inductions. These may have emerged in order to save time (Edmonston, 1986) and money. Examples of such inductions are group hypnotherapy, self hypnosis and use of mechanical devices such as audio cassette, VCR, and the telephone.

In summary, this section has provided the reader with a brief overview of the origins of hypnosis in England and its general impact in the United States. Some key notions of Ericksonian hypnotherapy, the type of hypnosis to be used in this study, will now be described. Ideas about trance and altered states of consciousness will also be reviewed.

Ericksonian hypnotherapy.

According to Gilligan (1987) techniques of hypnosis are usually divided into three camps: the authoritarian approach, the standard approach and the cooperation approach. The authoritarian approach is frquently associated with stage hypnosis, where a powerful hypnotist can elicit strange and bizzare behavior from susceptible subjects in the audience. This form of

hypnosis embraces the notions of "mind over matter", "implanting suggestions", and "susceptibility" (Gilligan, 1987, p. 4). The standard approach de-emphasizes the power of the hypnotist and instead looks at the subject as being hypnotizable or not. The cooperation approach emphasizes the interaction between the hypnotist and the subject and does not rely on one person being more instrumental in the trance induction over another. The flexibility and sensitivity of the hypnotherapist is considered as equally important as the subjects' motivational level and particular interests.

The cooperation approach was developed by Erickson over a 60 year span and is usually referred to as Ericksonian hypnotherapy (Gilligan, 1987). This approach was considered quite unique at the time of its development, utilizing several creative hallmark principles: accepting and utilizing the person's reality, pacing and leading behavior, and using indirect communication for development of change (Erickson, Rossi, & Rossi, 1976).

"Accepting and utilizing the person's reality" refers to the hypnotherapists ability to accept whatever the patient is doing as being "fine" (Erickson, Rossi, & Rossi, 1976, p. 91) and acknowledging this reality as

valid. Once behavior is accepted, then it can be utilized in the service of establishing cooperation within the therapeutic relationship. For example, if a patient is anxious about being hypnotized, the therapist does not try to change the patient's anxiety but instead accepts this anxiety as valid and then utilizes it by perhaps talking about the behavioral manifestations of anxiety.

Pacing communications mirror the patient's behavioral expressions without adding new content to the interaction. By reducing differences and encouraging rapport, the therapist is enhancing trance. Not all behavior needs to be mirrored and the therapist needs to be in tune to significant behaviors which should be attended to. In addition to pacing, the hypnotherapist needs to attend to leading subject's behavior. This leading communication refers to the insertion of some new behaviors, yet not too inconsistent from the patient's normal way of being. For example, the anxious patient might be paced by the therapist mirroring the patient's body language in a subtle manner. If the patient is skirming in his or her seat, the therapist might also slightly shift back and forth. The leading comes in when the therapist introduces some

calm sitting and breathing while also continuing with the subtle shifting. Erickson does not view patient behaviors as resistant, but only as behaviors that may need more pacing and leading. Subsequently, he believes the therapist needs to better adjust her or his communication skills to accomodate the patient's experience. For example, if a patient remains anxious and cannot experience trance, it is not the therapist's fault, nor is it attributed to the client's resistance. Instead the therapist needs to observe more closely and try to provide messages consistent with the patient's world.

The use of indirect communication is something Erickson is most noted for. He believes that being too direct with patients is a mistake because he adheres to an indirect approach through the pacing, leading, use of metaphor, storytelling, and various strategic techniques. Although Erickson chiefly did individual work, his technique can be used within a group fashion. In fact, Stephen Gilligan, one of Erickson's proteges', often relied on group hypnotherapy when training future hypnotherapists. The flexibility of this approach and its adapative capacities for zeroing in on the uniqueness of each patient does not discount its

effectiveness for group use. Group inductions are done in the same format as individual inductions but are usually modified to the group climate, rather than to each individual.

Since hypnosis assumes an altered state of consciousness, the concepts of trance and altered states of consciousness will now be explored. A brief historical account is given along with a presentation of classic definitions of both trance and altered states.

Altered States of Consciousness (ASC): Natural and Healthy

Consciousness and Unconsciousness

In order to fully address the meaning of altered states of consciousness (ASC), a brief description of consciousness is provided so that ASC can be understood in relationship to it. In general, consciousness refers to a state of awareness in which one attends to at any given moment. It contains the sensations, memories, perceptions, cognitions and affects of each moment and also the deeper capacity of mentally reviewing and scanning these moments as they occur (Reber, 1985). This combination of self awareness and self analysis is unique to the human species.

Psychodynamically, consciousness is often referred to in the explanation of its opposite, the unconscious. Freud clinically studied the processes of unconsciousness while exploring the neurotic symptoms of hysteria disorders. He described unconsciousness as a repression of socially unacceptable impulses, usually sexual and aggressive in nature (Freud, 1915). These feelings are not directly attended to by the person, but can be indirectly manifested through free association, slips of speech, dreams, hypnosis or symptoms of bodily illness. Erickson describes the unconscious mind very differently than Freud, in that Erickson uses the term to refer to all of the "cognitions, perceptions, and emotions which occur outside of a person's normal range of awareness." Erickson described conscious mind as the "limited range of information that enters the restricted focus of attention of most people in everyday life" (Havens & Walters, 1989, p. 7).

Another level of consciousness is often referred to as the "preconscious" or "subconscious." These terms are frequently used interchangeably. This phenomena embraces the notion that memories, perceptions and sensations are marginally attended to by a person, yet not within the full range of conscious awareness. This

marginal attention refers to the idea that a person is not consciously in tune to some particular mental operations, but under proper circumstances, can bring them into consciousness (Reber, 1985). Hypnosis can be considered one of the conditions which could bring the preconscious into conscious awareness. Erickson's description of the unconscious bears similarities to this description of the preconscious.

Consciousness and unconsciousness are extremely complex psychic phenomenon to understand, and this paper will not attempt to cite a comprehensive account of such phenomena. The above is meant to provide a foundation for understanding ASC, the focus of this dissertation. ASC will be described in greater detail in the next section.

Description and Adaptive Functioning of ASC

The concept of ASC was popularized by Charles Tart's 1969 book, Altered States of Consciousness. Tart's 1990 edition has updated the conceptual underpinnings of ASC. Ludwig (in Tart, 1990) describes ASC as:

> any mental state(s), induced by various physiological, psychological, or pharmacological maneuvers or agents, which can be recognized

> subjectively by the individual himself (or by an objective observer of the individual) as representing a sufficient deviation in subjective experience or psychological functioning from certain general norms for that individual during alert, waking consciousness. This sufficient deviation may be represented by a greater preoccupation than usual with internal sensations or mental processes, changes in the formal characteristics of thought, and impairment of reality testing to various degrees. (p. 18)

This definition offers a succinct, yet broad, framework in which one can formulate ideas about ASC. Furthermore, this definition, first offered in 1969 can be considered an accepted, time honored description.

Ludwig (1964) elaborated on the characteristics of ASC which include: alterations in thinking, disturbed time sense, loss of control, change in emotional expression, body image change, perceptual distortions, change in meaning or significance, sense of the ineffable, feelings of rejuvenation and hypersuggestibility. These general characteristics bear tremendous overlap to the features observed and felt during a hypnotic state. Hypnotic features are

typically described as: autonomous ideation, catalepsy, changed voice quality, slowed pulse/respiration, sensory and muscular changes, time lag in motor and conceptual behavior, objective and impersonal ideation, response attentiveness, amnesia and regression (Erickson, Rossi & Rossi, 1976). The descriptions of ASC and hypnotic features appear to be so similar that one could reasonably speculate that a trance, induced by hypnosis, is some type of ASC.

The functions of ASC seem to have maladaptive and adapative components. Ludwig (1964) cites maladaptive ASC as attempts to deal with emotional conflict, defensive functions in times of anxiety, escaping responsibilities and turmoil, neurological disturbances, and a breakthrough of forbidden impulses. Though maladaptive uses exist, the potency of the adaptive uses far outweigh the maladaptive. These adaptive functions include healing properties, common pathways to new knowledge, and providing adaptive social functions (Ludwig, 1964). The healing properties will be explored through the methodology of this dissertation.

The healing properties of ASC can be traced to early Egyptian and Greek practices. These practices included incubation, the faith cures at religious

shrines, spiritual healing, the laying on of the hands, prayer and meditation, mesmeric healing and hypnotherapy (Ludwig, 1964). Other healing states include ASC in dream, sleep, and sexual states. The chemically induced ASC can also be considered a "healing state" when managed medically. Initially, cocaine was used to assist patients in surgical procedures by anesthetizing them.

Ludwig's (1964) second adaptive function of ASC is described as the "pathways to new knowledge." These occur in the areas of religion, meditation, mystical experiences, and intense aesthetic experiences. Moving into an ASC or a state of absorption may increase one's appreciation of inspiration and creativity, thus expanding one's realm of knowledge. Ludwig calls this "eureka", an experience while in an ASC which produces feelings of profound insight, illumination, or truth (p. 229). Similarly, Aldous Huxley's (1965, p.18) concept of Deep Reflection refers to a state of mental withdrawal and absorption: "subjective feelings of being lost in an all-absorbing sea of color, had sensed a certain timelessness-spacelessness and had experienced a comfortable feeling of something meaningful about to happen" (Huxley, 1965, p. 21).

The third adaptive function of ASC is social. For example, in early tribal ceremonies high status as well as secondary gain of cultural priveleges (ie: sexual choice, freedom from some responsibilities...) was attributed to the one who had the ability to demonstrate, through ASC, spiritual possession and profound wisdom.

Another aspect of the healthy ASC can be found in Weil's notion that people in general desire ASC, and as children, they learned to obtain this state in their play when they spin to dizziness or hold their breathe. However, as children develop, society does not encourage such routes of ASC and these activities are subsequently terminated over time. Society does approve of alcohol consumption as a vehicle in obtaining ASC and growing children and adolescents witness this approval. Furthermore, children and adolescents will continue in their pursuit of ASC, despite societal discouragement, through nonacceptable pursuits, such as listening to music and using a variety of drugs. Weil (in McPeake et al., 1991) believes that society's efforts to stop such ASC practices are useless, because such practices represent a "primary motive...and ASC are consistent

with some of the highest and most noble spiritual and religious goals of humanity" (p. 77).

Erickson viewed trance as inner directed states "wherein the multiple foci of attention so characteristic of our usual everyday consciousness are restricted to relatively few inner realities" (p. 298). This restriction, while in ASC, helps a person learn more effectively because there are fewer interruptions in one's typical perceptions and cognitions. He further viewed trance as an "active process of unconscious learning" wherein the "object of trance is to relax these learned limitations of the patient's usual frame of reference to permit the vast reservoir of their unrecognized potentialities to operate" (p. 298). In other words, once in an ASC, patients are free from the inhibitions of their usual cognitive and emotional consciousness and can tap into their own undiscovered potentialities. They can then reframe these inner strengths and unrecognized potentialities for adaptive functioning, in whatever area of their life they are searching for therapeutic healing.

Physiological Indices of ASC

Although this dissertation does not explore the physiology of ASC, a synopsis of its biochemical indices

will be mentioned. There is a general consensus in the literature that meditative states are different than waking, sleeping and dreaming states. Furthermore, there appears to be some similarity between meditation and hypnosis. Some research demonstrates a markedly reduced autonomic arousal in people who meditate and who are hypnotized. For example, Walrath and Hamilton (1975) found a decrease in heart rate, respiration and galvanic skin responses in comparison to people in an alert state. Other researchers have found similar decreases in heart rate and respiratory rate as well as oxygen consumption, carbon dioxide elimination and blood lactate levels. Increases in skin resistance, slow alpha and theta electroencephalogram (EEG) patterns have also been seen (see Morse, Martin, Furst, & Dubin, 1984). Hypnotizability has been related to right hemisphere dominance (Bakan, 1969; Gur & Reyher, 1973).

Although some studies show a correlation between physiological indices of hypnosis and meditation, most of the research centers on meditation. A preponderance of evidence concerning the physiology of meditation shows a reduction in autonomic arousal and a slowing in energy metabolism (Woolfolk, 1975). Other physiological markers include a right hemisphere cortical dominance,

reports of excitatory phenomena (ie: visual hallucinations, spontaneous emotional feelings and somatic illusions) and similarities between rapid eye movement (REM) sleep and meditation (see Earle, 1981).

Despite evidence which supports these physiological markers, there are several other studies which dispute these findings (see Holmes, 1984). Nevertheless, these above indices appear to be generally accepted physiological indications of what happens to a person when in an ASC. In terms of ASC and drug use, classic research has shown that drugs either enhance brain stimulation reinforcement or lower brain reinforcement thresholds (Gold & Miller, 1992) by way of the medial forebrain bundle. In addition to positive reinforcement coming from the medial forebrain bundle when using dugs, there is also a release of dopamine which seems to serve as a neurochemical reinforcement for continued drug use (Gold & Miller, 1992). Furthermore, Blum and Topel (1986) studied endorphins (natural substances found in the brain which are similar to the pain relieving qualities of narcotics) and hypothesized that alcoholics are either born with or develop deficiencies in endorphins and the addictive cycle is reinforced by the need to produce these endorphins. However ASC is

measured, it must be kept in mind that once an ASC has been achieved, there is a subjective interpretation on how this ASC is reported, especially if using self report measurements. These physiological indices of meditation, hypnosis and drug use have been briefly presented to offer an overview of the different measurements of an ASC.

In summary, this section explained consciousness, unconsciousness, preconsciousness and altered states of consciousness. Considerable space was given to the description of ASC, as this was the heart of the dissertation. Historical data on how ASC has been viewed as natural and healthy over time has been presented. The adapative functioning of ASC was discussed at some length since ASC as a healing/adaptive state will be explored as a treatment modality in the healing process of recovering addicts.

A Proposed Link Between Hypnosis, ASC And Addiction

Introduction to the Proposed Linkages

This paper has provided a historical context of hypnosis in terms of its origins, development and capacity to promote trance states. Trance states or ASC can be derived at through a variety of drug free ways such as meditation, prayer and hypnosis, and ASC has

been considered both natural and healthy throughout time.

ASC can, however, be achieved through the ingestion of chemicals, such as drugs or alcohol, a potentially destructive process in that one can become addicted to these chemicals in pursuit of an ASC. Since there are many theories about the etiology of addiction, one might speculate, based on what is known about the appealing qualities of ASC, linkages between hypnosis, ASC, and addiction.

Both hypnosis and drugs/alcohol promote an ASC. Addicts appear to desire these ASC or highs through chemical ingestion while other people tend to desire these ASC through routes such as meditation, prayer, running, and so forth. To better understand the addictive process, some of the classic etiological models of addiction will be offered as a basis for understanding the connection between addiction and ASC.

The next section will briefly look at some of the most commonly accepted etiological models of addiction, followed by a section highlighting theories of addiction specifically emphasizing an addict's quest for a high in order to change one's feelings or mood. The overview will provide a foundation for a presentation of a

theoretical model of addiction based on the desire to obtain ASC in the pursuit of altering one's mood. Lastly, this theory will be tied to the idea that hypnosis might be useful as a natural means of obtaining ASC for addicts.

Etiology of Addiction

There are numerous theories attempting to explain the etiology of addiction, all which seem to have sufficient evidence to support their theories as well as contradictory evidence to oppose them. Various ways of viewing addiction include: psychological models (Armour et al., 1978; Blane & Leonard, 1987; Khantzian, Halliday, & McAuliffe, 1990; O'Brien & Chafetz, 1982; Vaillant & Milofsky, 1982; Valliant, 1980), social learning models (Caudill & Marlatt, 1975; Collins, Parks, & Marlatt, 1985; Hendricks, Sobell, & Cooper, 1978), expectancy effects models (Brown, Goldman, Inn, & Anderson, 1980; Christiansen, Goldman, & Inn, 1982), genetic and neurophysiologic models (Blum et al., 1990; Cloninger, 1991; Jellinek, 1960; Nathan & Hay, 1984; Ohlms, 1987; Tarter & Van Thiel, 1985), family systems models (Beardslee, Son, & Vaillant, 1986; Black, 1981; Moos, Bromet, Tsu, & Moos, 1979; Woititz, 1983), and multidisciplinary models of addiction (Blane & Chafetz,

1979; Galizio & Maisto, 1985; Huba & Bentler, 1982; Jessor & Jessor, 1977). Some of these models focus solely on alcoholism whereas others include a general model of addiction to any or all psychoactive substances.

These models represent only some theories of addiction and in no way are meant to embody the entire gamut of etiological thinking. It is beyond the scope of this paper to delve into an embellished account of each and every theoretical model of addiction. Instead this review will include models that focus on stress and alcohol as primary etiological components of addiction.

Stress and Alcohol: Theoretical Constructs

Tension Reduction Hypotheses

Tension reduction theories grew out of classic psychoanalytic theories about alcoholism, which defined an "alcoholic personality" as embracing distinctive personality characteristics. These included: dependency, immaturity, low tolerance frustration inability to delay gratification and tension (Cox, 1987, p. 57). Alcoholics were considered to have high levels of tension and anxiety due to unresolved oral frustrations and dependency conflicts originating in early childhood. In keeping with this psychoanalytic

construct, experimenters were interested in observing and testing for this anxiety and tension in alcoholics.

During the 1940's and 1950's Conger (1951, 1956) did a series of studies in support of his drive reduction theory on alcohol consumption. Conger developed this theory based on his observation of alcohol's behavioral effects on learned conflict in rats and in combination with Masserman and Yum's (1946) study of cats which found an increase in alcohol consumption when the cats were placed in approach-avoidance conflict situations. Once the cats consumed the alcohol they approached these otherwise noxious situations, leading investigators to posit the idea that the alcohol had reduced their previous tension. According to Sher (1987), Conger's concept of "drive" was later replaced with the term "tension" and Conger's original formulation came to be known as the "tension-reduction" hypothesis.

These experiments (Conger 1951, 1956) were considered evidence that alcohol reduces tension and animals drink in order to alleviate such affective states. The tension reduction hypothesis became the main theoretical construct for over 20 years (Pohorecky,

1991) and generated much ongoing research in its effort to demonstrate its validity.

Though this work was originally established with animal experiments in approach-avoidance paradigms, theories of human consumption developed out of these preliminary studies, embracing the notion that drinking is a learned way of reducing the anxiety which exists in the psychological and social environment of the alcoholic (Conger, 1951, 1956; Horton, 1943; Ludwig, 1983). Alcoholics learn to achieve pleasant feelings and a reduction in anxiety when they drink, so they continue to drink, despite adverse physical or social consequences. Mello (1983) attributes this continued use to the reinforcing properties of alcohol, which override the negative effects often associated with consumption. The tension reduction model is further elaborated on by Ludwig (1983) who points out how early alcohol use produces euphoric states that seem more reinforcing than the dysphoria, which often accompanies withdrawl, is punishing. The alcoholic ends up in a cycle of repeated use in order to achieve the high and reduce anxiety, to ward off the withdrawal effects and to satiate the cravings. It seems apparent from this

description that alcoholics want to reduce their tension and use alcohol as a way to do this.

The tension reduction model was used as a catalyst for a variety of similar theoretical propositions. Several of these newer models will now be cited.

Stress response dampening. Originally introduced in a 1980 empirical study (Levenson, Sher, Grossman, Newman, & Newlin, 1980) the stress response dampening model was later generated by Sher and Levenson (1982) and further elaborated on by Sher (1987). Sher (1987) asserts that "alcohol is posited to dampen stress response and thus is seen as being particularly reinforcing when it is consumed in a stressful context. Because of this, individuals who experience stress dampening effects are likely to drink with increased frequency and possibly in greater quantity when stressed" (p. 234). Stress correlates (ie: heart rate, self reported anxiety response to the stressor) is only dampened, rather than totally reduced, because alcohol can simultaneously increase and decrease stress, contingent on the drinker's anticipated perception of impairment and/or societal punishment. However, if the alcoholic has in fact consumed a dose sufficient to disinhibit the anticipated worries, the alcohol related

stressors will be sufficiently dampened and the alcoholic will continue to drink.

This model postulates that a reduction in anxiety could be due to: a) pharmacalogical effects of ethanol; b) the influence of cognitive mediators such as expectancy effects; and c) the perception of specific stressors (Levenson et al., 1980). Despite variations and complexities in explaining the process, the theory postulates that when alcohol is consumed in a specific stressful context, alcohol takes in tension reducing properties and subsequently becomes reinforcing to the drinker (Sher & Walitzer, 1986).

Stress reduction hypothesis. According to Powers and Kutash (1985) and Powers (1987) people drink to relieve some forms of stress, while not necessarily other forms of stress. A distinction is made between three different kinds of stress: a) eustress (good stress), b) mesostress (neutral stress) and c) distress (classic stress). Powers and Kutash believe that "stress is [a] broader concept than tension" (p. 463) and therefore use this term over tension. They assert affective states such as anxiety and tension are types of a stress response and therefore the terms should not be used interchangeably. Other affective states, such

as anger, low self esteem and depression all fall under the stress response but should not be confused with stress.

Stress-buffering concept. This concept puts forth the notion that moderate alcohol consumption may actually buffer the effects of stress (Neff & Husaini, 1982). Alcohol consumption does not necessarily reduce or increase stress, but instead the stress-buffering resources "provide nonspecific tension reduction" (p. 303) which can help a person better cope with a specific stressor (Neff & Husaini, 1982). In other words, they are proposing that alcohol consumption may effect other stress related symptomology (ie: depression or somatic distress) when faced with life event stressors. For example, they found abstainers and heavy drinkers had more depressive symptomatology than did moderate drinkers when faced with similar life event stressors. They assert this may be due to the stress buffering effects of ethanol, "...perhaps facilitating the individual's ability to cope with specific stressors..." (p. 303) rather than coping better per se (Neff & Husaini, 1982).

In summary, these selected stress reduction models are generally postulating that the anxiolytic effects of

alcohol offer reinforcing properties in the way it reduces a drinker's internal distress, or at least the perception of such distress. This distress has been referred to as tension, anxiety, stress, frustration, fear of failure, and so forth. Although these models seem to be attending to mood alteration and changes in affective states, some also include ideas about cognitive changes. Having presented a straight forward review of these tension reduction models, criticisms will now be cited in order to provide a more balanced view.

Critiques of the Tension-Reduction Hypothesis Models

While all of the above theories propose that anxiety is reduced due to alcohol consumption, some researchers (McNamee, Mello, & Mendelson, 1968; Mendelson, LaDou, & Solomon, 1964; Steffen, Nathan, & Taylor, 1974) argue that prolonged use of alcohol actually increases, rather than decreases, anxiety and dysphoric states. Some of this appears to be related to the pharmacological effects of ethanol consumption which is dose-dependent, in that moderate or large doses seem to be more effective in reducing anxiety than smaller doses (Bandura, 1969; Kalin, McClelland, & Kahn, 1965; Logue, Gentry, Linnoila, & Erwin, 1978). Completely

different results are seen by Williams (1966) who reported low doses (4-6 ounces) of alcohol as decreasing anxiety whereas larger doses (more than 8 ounces) as increasing anxiety. On the other hand, low doses of alcohol have been found to have excitatory effects while higher doses have sedative or depressant effects (Mello, 1968). It seems apparent there remains some conflict concerning the physiological effects ethanol has on tension reducing properties, despite other supportive studies.

A peron's anticipation of alcohol's effects seem to play a role in how much the alcohol ingestion actually relieves the felt stress or anxiety. The anticipation of what effect the alcohol will have on the drinker, the expectancy effects, can be a powerful factor in influencing the felt reduction in anxiety, even over the physiological effects of the ethanol (Marlatt & Rohsenow, 1980; Powers & Kutash, 1985; Sher & Walitzer, 1986; Wilson & Abrams, 1977). Expectancy effects can actually increase the subjects level of anxiety (Polivy, Schueneman, & Carlson, 1976; Wilson & Abrams, 1977) or expectancy effects can decrease the subjects anxiety level (Vanicelli, 1972; Wilson & Abrams, 1977). Additionally, the subject may anticipate a decrease in

anxiety prior to ingesting alcohol and then experience an increase in anxiety following consumption (Nathan, Titler, Lowenstein, Solomon, & Rossi, 1970; Vanicelli, 1972), where other subjects may anticipate an increase in anxiety (Abrams & Wilson, 1979; Menaker, 1967) prior to consumption and then experience a decrease once they drink (Menaker, 1967). These expectancy effects are difficult to sort out from pharmacological effects and Kalin et al. (1965) suggests that the sterility of laboratory settings may get confound predictions due to an increase in anxiety simply by being in the laboratory.

Other criticisms include: 1) the difficulty in verifying that a high state of tension was induced in the laboratory prior to the subjects having a drink and then measuring the affective changes upon ethanol ingestion (Levenson et al., 1980); 2) conducting studies without considering the potential interactions of treatment paradigms with the personality characteristics of the patient (Spoth, 1983); 3) poor attention to the variety of individual differences in coping patterns (Powers & Kutash, 1985) and cognitive mediators (Levenson et al., 1980); and 4) the differences in intensity of the actual life event stressors (Powers &

Kutash, 1985) that contribute to one's alcoholism. A final criticism addresses the cognitive mediators of laboratory subjects who may perceive their own state of intoxication as a function of the beverage content and expectation of the examiner (Levenson et al., 1980), rather than a real decrease in anxiety.

Summary: Connection between Tension Reduction Models and ASC.

Although these studies do report contradictory evidence within the tension reduction models, one can not dismiss the plethora of evidence which does support the anxiety reducing properties of this model (Abrams & Wilson, 1979; Berglas, 1987; Berglas & Jones, 1978; Conger, 1951, 1956; Horton, 1943; Hull, 1981; Kalin et al., 1965; Masserman & Yum, 1946; Neff & Husaini, 1982; Powers & Kutash, 1985; Sher, 1987). When examining the tension reducing aspects of these models, one can see how alcoholics are seeking to achieve some kind of mood alteration (ie: changes in stress, anxiety, tension, distress and so forth...) or change in such affective states. Perhaps this desire to change or alter one's mood or affect can be considered or is close to an altered state of consciousness (ASC) in that the person appears to be looking for some deviation in their normal

subjective experience. Although stress reduction and relaxation moods are not necessarily ASC, there is a close proximity to this concept. For example, Ludwig (in Tart, 1990) describes ASC as a "sufficient deviation in the subjective experience or psychological functioning from certain general norms for the individual during alert, waking consciousness (p. 18)". He talks about how ASC is any mental state which achieves this experience through physiological, psychological, or pharmacological agents. Certainly the desire to reduce one's stress level in hopes of feeling better or to cope more effectively can be considered a "sufficient deviation in one's subjective experience". In keeping with this definition, tension reduction models seem to have some similarities with attaining these subjective alterations and perhaps in attaining ASC, although that is not the language used with the alcohol and stress studies. Furthermore, the common characteristics of ASC, such as alterations in thinking, changes in emotional expression, disturbed time sense, and a sense of the ineffable (Ludwig, 1964) may also be found in the intoxicated or drug induced state of the individual looking for stress/anxiety reduction. Although it is not being advocated that tension

reduction is exactly the same as ASC, the similarities of the two concepts can not be overlooked and may have some exploratory value when investigating why the substance abuser desires these highs in pursuit of an alteration in affect or mood.

In keeping with this theoretical premise, two alcohol and stress models will be presented which propose that addicts use chemicals in order to achieve an ASC. The next two models are not as widely published as the former, but offer rich innovative thinking in the field. After these two models are presented, a theoretical model of addiction which embraces some notions of the three models, will be discussed. This model will be related to a particular treatment strategy in the hopes of finding out more about how the abuser experiences the high of the substance with the high of the proposed treatment paradigm.

Schoen's Defense and Conditioning Model

Schoen (1985) presents a two-fold theoretical framework for understanding the urges or cravings that alcoholics experience during the recovery process. The detoxification urges of the first two to three weeks of treatment are considered mostly physiological. This withdrawal period is an attempt by the body to restore

itself back to homeostasis, and Schoen realizes these urges diminish with the physical restoration of the body. He is interested in the psychological urges, not the withdrawal urges, of the recovering alcoholic. He presents his view on the origins of these psychological urges and proposes a treatment stategy conducive with his theoretical premise.

The alcoholic experiences two stages of urges, the primary and secondary, which Schoen has labeled as the Defense Model and the Conditioning Model, respectively. Urges occurring immediately following the withdrawal period are considered the primary urges and are conceptualized within the Defense Model. This model draws from psychoanalytic concepts of defense mechansims, anxiety, and neurotic symptoms. Anxiety is therefore considered a "consequence of faulty defense mechanisms, and symptoms materialize to help allay this anxiety. In this framework, the process of ingesting alcohol is construed as serving as a defense mechanism for the alcoholic" (Schoen, 1985, p. 405) against the stressors in an alcoholic's life. Schoen sees alcoholics as coping ineffectively with stress (similar to the tension reduction theory of alcoholism) and instead of using healthy coping mechanisms, they rely on

the unhealthy and maladaptive defense mechanism of alcohol. Once this happens, alcohol is used to alter the body's response to stress providing a temporary lift from stress, that is, a reduction in anxiety and subsequent relaxation (Schoen, 1985). He cites Khantzian (1982) and Kernberg (1975) as sharing his psychodynamic views on the role of alcohol's anxiolytic properties, within this Defense Model. As the alcoholic stops drinking, she or he also loses a primary defense mechanism, and is left without an adaptive coping strategy, thus anxiety prevails in the form of urges.

In addition to alcohol being viewed as a maladaptive coping mechanism, alcohol also "plays the role of a dissociative process, serving as a vehicle for creating a dissociative response" (Schoen, 1985, p.407) in that the drinker is creating a state which is separate from her or his normal conscious reality. He uses the concept of dissociation to mean that alcoholics drink in order to remove themselves from some conscious awareness of their anxiety and the intoxicating effects of ethanol produces this dissociative process. Schoen sees the development of dissociative processes both as a defense mechanism or a coping strategy.

Schoen also views alcohol as serving both as a defense mechanism and a dissociative process in the drinker. He believes the recovering abuser not only loses the defense mechanism for which one is accustomed to but also is at a loss for how to effectively dissociate without the use of alcohol. He proposes treatment strategies which would replace the maladaptive defense mechanisms with healthier ones (ie: psychotherapy, assertiveness training, relaxation techniques and so forth...) and encourage the development of effective dissociative processes (ie: Ericksonian hypnosis) over the ineffective ones of intoxication.

The secondary urges usually occur after the alcoholic is feeling more emotionally stable and has learned how to replace her or his lost defense mechanism. Despite these successes, Schoen points out how the alcoholic can still have triggered urges, albeit less intense. He proposes the Conditioning Model as his theoretical explanation of the dynamics involved in these secondary urges. In this model, he sees alcohol as being unconsciously bonded to several associations in the drinker's life and subsequently a conditioning process takes place which continues to pair alcohol with

these triggers (eg: stress and tension). Therefore, Schoen believes that once stress and tension are aroused in an alcoholic, they "serve as the stimulus for the response of drinking, which subsequently provokes the urge response" (p. 408). He hypothesizes that perhaps alcoholics continue to have these urges, even after years of successful sobriety, due to this unconscious bond between the conditioned stimuli and drinking.

The Defense Model and the Conditioning Model may be interacting together during the initial urge phases, however Schoen believes that the Defense Model properties would be stronger due to the deficit in alternative defense mechanism. Once the drinker has formed some healthy coping mechanisms, then the secondary urges (Conditioning Model) accounts for the later urges in an alcoholic's life. In order to adequately treat a recovering alcoholic, clinicians must help the patient overcome urges by developing adequate dissociative processes which would serve as newer defense mechanisms and healthier coping strategies. This would reduce the emergence of anxiety and subsequently reduce the accompanying urges produced by such anxiety. The second treatment strategy would attempt to replace the unconscious bond between alcohol

and stress with healthier conditioned responses other than alcohol. For example, "a conditioned stimulus such as stress would be unconsciously paired with a new conditioned response other than alcohol" (Schoen, 1985, p. 409) which he believes can be done with hypnotic intervention.

Summary: Connection between Schoen's Model and ASC.

This model is looking at addiction through the hypothetical lens of tension reduction, dissociation and stimulus-response conditioning. Schoen is arguing that alcoholics use alcohol as a primary defense mechanism to relieve stress and tension, similar to the tension-reduction models, and as a vehicle to achieve dissociation. Furthermore, he argues there are unconscious bonds between alcohol and life stressors which trigger the alcoholic to want the feeling of intoxication. Healthy and adaptive coping mechanisms are recommended for recovery and he insists that alcoholics need to learn how to develop effective dissociative states in order to achieve sobriety with success, rather than through chemically destructive use of ethanol.

Schoen's arguments are quite intriguing as he is proposing that dissociation be considered an effective

coping mechanism if provided in a therapeutically proper way, and he suggests the use of Ericksonian hypnosis. He recognizes the positive aspects of dissociation as reached through hypnotic trance or ASC.

As cited earlier in this dissertation, ASC has historically been considered to have adaptive functions and provide one with healing properties through practices of incubation, faith cures at religious shrines, spiritual healing, the laying on of the hands, prayer and meditation, mesmeric healing and hypnotherapy (Ludwig, 1964). If ASC is considered a natural and healthy way of being (Ludwig, 1964; Tart, 1990) and if alcoholics are in pursuit of ASC through the ingestion of alcohol (see McPeake et al 1991; Schoen, 1985) then would it not make sense to provide them with more useful ways to attain ASC? Schoen did argue that recovering alcoholics can be "viewed as having a deficit in the ability to effectively dissociate without alcohol" (p. 407) thus leaving the alcoholic in a tenuous situation on how to obtain an ASC without the chemical ingestion. Perhaps if alcoholics learned how to effectively dissociate or reach ASC without ethanol, perhaps they can experience a natural high that is common and healthy, rather than continue in self destructive

dissociative highs. Perhaps one can look at this adaptive ASC as being healthy over the destructive way that chemicals seem to provide. If substance abusers feel less tense, perhaps their desire to abuse chemicals will diminish. Healthier coping strategies appear to be needed in treating the substance abuser.

The next section will present one final theory concerning alcohol and drug addiction that offers further support for the notions of tension reduction and dissociation in the etiology of addiction. The authors suggest a particular treatment regime which incorporates the healthy coping mechanisms of ASC as a treatment strategy.

Altered States of Consciousness Therapy (ASCT) Model

The need for healthier coping strategies is addressed by McPeake, Kennedy, and Gordon (1991), who clearly outline a need to incorporate "Altered States of Consciousness Therapy (ASCT)" (p. 75) into the inpatient regime when treating addicts. McPeake and his colleagues agree in theory with Schoen's argument about how alcohol is used as a defensive strategy and when removed, the alcoholic is left without adaptive coping mechanisms. They state "if alcohol and/or other drugs have been integrated into a person's life, removing them

also removes important adaptive behaviors without which the individual cannot function" (p. 77), thus supporting both Schoen's and my concern about replacing the addict's using behaviors with healthier forms of altered states.

McPeake and his colleagues point out how substance dependent people actively pursue ASC but do so in self destructive ways rather than through healthy, adaptive ways such as meditation, trance, adventure-based activities and so forth. They assert the pursuit of ASC has historically been considered healthy and normal and cite the works of Tart (1969) and Weil (1972) as advocates of this historical recognition. For instance, they draw on Weil's argument that people in general desire ASC, and as children, they learned to obtain this state in their play when they spin to dizziness or hold their breath. However, as children develop, society does not encourage such routes of ASC and these activities are subsequently terminated over time. Society does approve of alcohol consumption as a vehicle in obtaining ASC and growing children and adolescents witness this approval. Furthermore, children and adolescents will continue in their pursuit of ASC, despite societal discouragement, through nonacceptable

pursuits, such as listening to music and using a variety of drugs. The article continues to assert that people need to learn how to attain ASC without drugs, as drug-induced states are only transitory, and permanent more healthy pathways can be taught and practiced.

McPeake and his colleagues maintain that "part of the pathology of addiction lies in the unbridled pursuit of ASC associated with the substances used" (p. 75) thus emphasizing the pathology of the chemicals, not necessarily a pathology with wanting to reach an ASC. The authors are clear in their affirmation that substance-dependent people seek ASC through self destructive ways and this is related to their addictive illness. Since people in general are also motivated toward seeking ASC, and ASC is considered normal and healthy, then addicts need to learn natural ways of obtaining ASC over their self destructive patterns of chemical ingestion.

In hopes of finding a treatment regime which incorporates the practice of attaining a natural and healthy ASC, they created a treatment protocol which they have labeled, Altered States of Consciousness Therapy (ASCT), which proposes to teach healthy and natural ways of attaining ASC. These routes include

physical activities which produce the "natural highs" which are frequently reported by runners and physically active people. ASCT recommends adventure-based programs for acheiving ASC's as well as relaxation training, art/aesthetic experiences, meditation and prayer. The authors are in the preliminary stages of gathering data to empirically support their theoretical notions.

The authors assert that other treatment facilities use strageies such as biofeedback, music, dance, and hypnosis which all produce ASC, yet these paradigms are rarely used primarily in the pursuit of an ASC, but rather in alleviation of specific targeted problems. By not emphasizing their ASC qualities the authors believe these strategies are missing "the opportunity to help patients satisfy a basic motive that propels their substance use, that is, to alter consciousness" (p. 81). It would seem useful, then, to explain to recovering addicts excatly what the ASC is about and help them realize that these specific practices can be used in the pursuit of such ASC. The authors also specify the need to incorporate spirituality and the cognitive mediums of AA/NA slogans into the ASCT, as they see these as fostering ASC.

Summary: Connection between ASCT Model and ASC.

McPeake and his colleagues (1991) make several cogent points about substance abusers and ASC. First of all, they believe that the removal of drugs/alcohol for an addict is "removing an important adapative function without which the individual cannot function" (p. 77), which bears resemblance to Schoen's thesis that alcoholics are lost without their drink because it is their primary defense mechanism. Secondly, they maintain that ASC should be considered as natural and healthy and cite historians who support this belief. Thirdly, they believe substance abusers are pursuing ASC, but due to their addictive illness, they are pursuing it in self destructive ways, rather than in more healthy and balanced ways. Finally, they assert that addicts need to develop drug free ways to pursue their ASC and offer a variety of treatment regimes which allow for chemically free ASC.

McPeake and his colleagues (1991) offer rich and innovative ideas about ASC and addiction. Their proposal is exciting in that they clearly outline a need for ASC treatment, although they do not necessarily emphasize hypnosis in the attainment of such ASC. Despite their ommission of hypnotic intervention, their

theoretical notions support the use of hypnosis as an adjunctive treatment strategy.

The next section will summarize the three theoretical constructs which have been presented in attempting to link addiction with tension-reduction, dissociation and ASC. Theoretical notions in support of the proposed ideas about how hypnosis can assist as an adjunct to treatment with recovering substance abusers will be offered. Following this section, some studies will be cited which give support for the use of hypnosis with the chemically dependent.

A Theoretical Model of Addiction: The Search for an ASC

Some research and theory supports the notion that some alcoholics drink to reduce stress (Abrams & Wilson, 1979; Berglas, 1987; Conger, 1956; Masserman & Yum, 1946; Powers & Kutash, 1985; Sher, 1987) while other theoretical propositions support the notion that alcoholics drink to achieve dissociative states (Schoen, 1985) or to pursue an ASC (McPeake et al., 1991). By reducing their anxiety level and/or attaining an ASC, abusers theoretically achieve a more desirable state depite the adverse consequences that usually accompany addiction (Deschenes et al., 1991), perhaps because the

immediate relief one feels upon chemical ingestion is more powerful than subsequent adverse consquences.

ASC are not only adaptive (Ludwig, 1964), but also healing (McPeake et al., 1991; Schoen, 1985). In keeping with this theoretical premise, alcoholics and addicts want to reduce tension and achieve ASC by consuming alcohol and other drugs. Substance abusers may have learned to reach these desirable states with psychoactive substances, rather than relying on more natural ways, such as relaxation, meditation or ASC. In order for abusers to reach desirable states in drug free ways, they will need to learn others routes of reducing stress and reaching ASC. And since hypnosis has been used to reduce stress and reach ASC, then incorporating hypnotic interventions in the treatment of chemical depedency seems reasonable. If hypnotic intervention can be utilized as an adjunct to treatment, perhaps the chemically dependent can learn new ways to reduce their anxiety and reach pleasurable, yet natural, highs which ASC's produce. In this pursuit, they may feel similar desirable highs in the drug free state that they were use to feeling in the drug induced state.

Before a specific treatment strategy is cited, it is important to verify the utility of hypnotic

intervention as a general treatment strategy and in treating addictions. The literature is scarce regarding current hypnotic treatment with addictions, but what is available will be cited.

Hypnosis

General Hypnosis

During the 1960's and 1970's, curiosity about clinical hypnosis had reached a high degree of interest, spawning numerous research projects. The effectiveness of hypnosis has been cited for cigarette smoking (Holroyd, 1980), hypertension (Wadden & de la Torre, 1980), migraine headache (Cedercreutz, 1978; Pantesco, 1989), anxiety and depression (Payne & Friedman, 1986), obesity (Mott & Roberts, 1979) and chronic pain (Reuler, Girard & Nardone, 1980; Webb, 1983). Clinical hypnosis has been successfully used with addicts in alleviating anxiety (Paterson, 1974), creating an aversion to drugs (Paterson, 1974), and a reduction in drug/alcohol use (Lovern & Zohn, 1982; Martin, 1974; Orman, 1991; Stanton, 1987; Van Pelt, 1975). Combinations of individual, group, and self taught hypnosis have all been used.

As these studies indicate, hypnosis can be used in many ways while treating a variety of problems. Since

the focus of this dissertation is in how hypnosis pertains to addicts, the next section will look at the usefulness of hypnotic intervention with substance abuse patients as it relates to their abstinence rate and/or reduction in anxiety.

Hypnotic Interventions with Substance Abusers

Generally, hypnotherapy as an adjunct to chemical dependency treatment has been provided in an individual as opposed to a group, format. Anywhere from one to 17 sessions has been considered successful. Abstinence from substances have been reported after one or two hypnotic sessions (Schultz in Langen, 1967; Stanton, 1987) as well as up to 17 sessions (Orman, 1991). Different follow-up time periods range from six months (Martin, 1974; Orman, 1991; Smith-Moorehouse, 1969) to more than one year (Orman, 1991; Page & Handley, 1993; Stanton, 1987; Vandamme, 1986) In some case, abstinence is reported, yet there is no mention of time period (Paterson, 1974; Gabrynowicz et al., 1977) for follow-up monitoring. A more detailed look at these sessions is offered in support of hypnotic utility with substance abusers.

Six months after six to 15 individually administered hypnotic sessions, adolescent drug users

indicated they were abstinent with drugs and only minimally drank alcohol (Martin, 1975) while 15 habitual drinkers are cited as reaching abstinence after one effective hypnotic session (Schultz in Langen, 1967). Six months and one year later after 17 hypnotic sessions, one man was reported to have abstained from drugs and alcohol (Orman, 1991). Three patients were hypnotized for two sessions, and two of them reported complete abstinence for two years while one remained abstinent for 13 months (Stanton, 1987). After a three month hypnotic intervention period, one woman was reported to have been abstinent for 18 months (Vandamme, 1986). After a four month audio tape hypnotic intervention, one cocaine addict was reported to have been abstinent for 9 years (Page & Handley, 1993). Nineteen patients out 21 were completely abstinent after four sessions of medium trance followed by six weeks of post hypnotic suggestion, then monthly sessions for six months, then bi-monthly for the remainder of the year (Gabrynowicz et al., 1977). Out of 42 alcoholics who engaged in hypnotherapy, a success rate of 55% was reported (Smith-Moorehouse, 1969) for sobriety. Finally, 21 out of 37 patients with alcohol problems avoided alcohol for periods ranging from two to four

years with as little as one hypnotic session (Stanton, 1987). These studies support the fact that hypnosis does indeed play a role in helping substance abusers to refrain from using psychoactive substances.

In addition to abstinence, hypnosis has also helped the chemically dependent with improvement in affective states including a reduction in anxiety (Paterson, 1974) and an alleviation of depression (Vandamme, 1986). Paterson (1974) used hypnosis with three chemically dependent people and they all reported a reduction in anxiety as a result of this intervention. Vandamme (1986) used hypnosis with a heroin addict and test results showed that her depression continued to improve six months and 18 months following treatment.

General Criticisms of Hypnosis

Although numerous research studies demonstrate improvement in patient distress and symptoms as a result of clinical hypnosis, some researchers criticize these outcomes by suggesting that the success was more likely attributable to nonhypnotic factors (Bowers & Kelly, 1979; Wadden & Penrod, 1981; Wadden & Anderton, 1982). The most commonly cited intervening nonhypnotic factors have been: expectancy effects, placebo effects, subject characteristics and differential attention. Expectancy

and placebo effects refer to the subjects' expectation that something will happen simply by being part of the experiment; subject characteristics refers to the sujects' own hypnotic susceptibilities at work, rather than the actual trance induction and; differential attention refers to the fact that the experimental group is given more attention than a control group.

In conclusion, although there are some studies indicating hynotic interventions as ineffective (Bowers & Kelly, 1979; Wadden & Anderton, 1982; Wadden & Penrod, 1981) there are other studies which report success (Martin, 1974; Orman, 1991; Page & Handley, 1993; Paterson, 1974; Stanton, 1987; Van Pelt, 1975; Vandamme, 1986). At the very least, there appears to be enough evidence to support the use of hypnosis as an adjunct to treatment, both for abstinence and improvement in distressful affect. Most of these studies employed individual hypnotic interventions while this study is proposing group hypnotherapy in the treatment of addiction. The next section will review how group therapy works with addicts. Group hypnotherapy, in particular, as an effective treatment modality will be reviewed and a specific exploratory empirical design will be explained.

Rationale for Group Hypnotherapy

Anderson (1982) notes the centrality and importance of groups in the treatment of addictions. Levine and Gallogly (1985) emphasize the curative factors of groups as increasing motivation, reducing denial, building hope, and developing a capacity to cope without the drugs. Levine and Gollogly (1985) cite four specific purposes of how group therapy can work for alcoholics (p. 20): "to reduce denial and flight behavior, to increase capacity and alternatives for coping, to insulate aganist destructive influences, and to meet the dependency needs for acceptance and support". On the other hand alcoholics tend to "love to talk but fear communication" and therefore resort to the common "drunk-a-logues" (p. 37) seen in beginner AA meetings and inpatient units. Hypnotherapy might be particularly useful with this fear as the patients will be able to work on their inner processess quietly and privately, yet contained and comforted by the presence of other addicts.

In 1948, Wolberg wrote about the efficacy of group hypnotherapy for increasing hypnotic susceptibility. He further stated that two important factors were needed for effective group hypnotherapy treatment of

alcoholics: 1) establishment of a positive transference between the patient and therapist; 2) support and understanding from others with similar problems. Trance seems to be particularly helpful in quickly propelling strong transference relationships, either within a group or individually (Watkins, 1963). Induction may actually be faster in group than in individual hypnosis due to the group contagion effect (Fox, 1977; Klippstein, 1991). This contagion effect can also be seen in Klippstein's (1991) belief that some people may feel more secure with numbers than in actual face to face contact.

In doing general group psychotherapy, Yalom (1975) asserts that if the group is organized around a particularly critical theme, then a strong group attraction usually occurs. If addiction is the theme and group members are attracted by this common element, then hypnosis can further the group attraction by increasing cohesiveness and empathy within the group climate. Furthermore, the implicit peer pressure of the group can help to effect change (Braun, 1979).

Although there appear to be many advantages of group hypnotherapy for addicts, there are also potential disadvantages. For example, Serlin (1970) points out

how patients may fear a loss of control or other patients finding out private thoughts. These fears can be alleviated, according to Serlin, by emphasizing prior to induction that patients do not have to say or do anything in the group, and that they can just think about what the therapist is saying. She points out how patients are in charge of what material they chose to present after the session is over, and no one is coerced to say anything. Serlin's guidelines seem very similar to Ericksonian therapy and, if properly executed, the patient's fears could be diminished.

In her recently edited book, "Ericksonian Hypnotherapeutic Group Inductions" (1991), Klippstein addresses some significant limitations therapists should be aware of when doing group inductions. For example, one must be aware of any fragile personality organization (borderline, psychotic) which could decompensate into a psychotic episode. This is usually seen when hypnosis is used to shatter a person's defense mechanisms, particularly when attempting to break down resistances. Since Ericksonian hypnotherapy does not expressely do this, it would seem to be a much safer vehicle for trance. Other limitations include: less opportunity for feedback from the patients, less ability

for therapist to register bodily cues and more activity for the therapist to be aware of in the room. This activity includes the group development as a whole, the psychological state of each member and the interactions amongst one another (Klippstein, 1991).

Despite these limitations, the advantages seem to outweigh the disadvantages. Furthermore, with rising health costs and tighter managed care criteria, group hypnotherapy offers a savings in both time and money. The next section presents a strategy of group hypnotherapy for addicts.

A Treatment Paradigm: Group Hypnotherapy with Substance Abusers

As presented in the theoretical section of this dissertation, some research and theory supports the notion that alcoholics drink to reduce stress (Abrams & Wilson, 1979; Berglas, 1987; Conger, 1956; Masserman & Yum, 1946; Powers & Kutash, 1985; Sher, 1987) while other theoretical propositions support the notion that alcoholics drink to achieve dissociative states (Schoen, 1985) or that chemically dependent people abuse psychoactive substances in the pursuit of an ASC (McPeake et al., 1991). By reducing their anxiety level, dissociating and/or attaining an ASC, abusers may

find they "feel better", despite the adverse consequences that usually accompany addiction (Deschenes et al., 1991), perhaps because the immediate relief one feels upon chemical ingestion is more powerful than subsequent adverse consquences.

The healing and adaptive functions of ASC have already been described (Ludwig, 1964; Tart, 1991). Given the healing benefits of ASC, combined with the premise that many substance abusers seek an ASC through their chemical ingestion, this study aims to investigate the use of drug free ASC, in the form of hypnosis as an adjunct to treatment. It is hoped that chemically dependent people could learn new ways to reduce their anxiety and reach pleasurable, yet natural, highs which ASC's produce. The goal of this study is to 1) assess the effectiveness of hypnosis in alleviating anxiety and improving mood, especially, as compared to relaxation methods and 2) to try to ascertain whether addicts find the hypnotic high comparable to the addictive high. Hopefully, this study will provide clinicians with an idea of how to incorporate hypnotic treatment intervention in the service of sobriety.

It is proposed that trance/hynosis be utilized as a treatment strategy among chemically dependent patients to reduce anxiety, improve moods and to obtain ASC. As addicts experience trance, it is hypothesized that their anxiety will be reduced, moods will improve and they will report feelings and experiences consistent with ASC. Further, it is hypothesized that this description of ASC will be as similar to what they experienced when they were high from drugs.

In order to investigate these propostions, this study will actually utilize an ASCT approach, as recommended by McPeake and his colleagues (1991). A group administration of ASCT, rather than individual administration, will be used. This approach seemed useful as most inpatient facilities use some form of group therapy within their therapeutic milieu and it seems to have strong positive therapeutic results (Yalom, 1985). Specifically, Ericksonian group hypnotherapy will be utilized as the treatment strategy because this kind of hypnosis is based on a subject's capacity to elicit their ASC from within themselves, rather than be induced from without (Erickson, Rossi & Rossi, 1976). The hypnotist simply establishes the climate for such change to take place by utilizing

whatever material (ie: body language) the patient offers.

In this study, an empirical research design will be employed to collect data on the effectiveness of group hypnotherapy in the reduction of anxiety, improvement in mood and in the experience of ASC. It is hypothesized that anxiety will be reduced and mood will improve because drinking and drugging (a defense mechanism and destructive ASC) will be replaced with a healthier coping strategy. In addition, hypnotic ASC will replace drug induced ASC.

The three hypotheses to be investigated in this empiricially based, yet exploratory, study are as follows:

Hypothesis #1: Chemically dependent people will report less anxiety after experiencing trance in group hypnotherapy.

Hypothesis #2: Chemically dependent people will report improved mood after experiencing trance in group hypnotherapy.

Hypothesis #3: Chemically dependent people will describe the hypnotic ASC as similar to the ASC derived from using psychoactive substances.

Chapter III will now describe the exact details of this study to include methodology, subject population, instruments, procedure and statistical analysis.

Chapter III

Methodology

In order to demonstrate the effectivenss of group hypnotherapy in the attainment of ASC and reduction in anxiety, an experiment was conducted. Chemically dependent people, who were living in a therapeutic community, were asked to volunteer for this study. These addicts took pre and post test questionnaires to measure their experience of ASC, mood states and level of anxiety. One third of the volunteer addicts were assigned to a hypnotherapy group, one third to a relaxation group, and the other one third only received the regular treatment modalities offered in their therapeutic community. It was hypothesized that the addicts who received the group hypnotherapy treatment will have a reduction in anxiety and an experience of ASC, as compared to the other two sets of subjects.

Subjects

The volunteers for this study consisted of 32 recovering addicts and were from Marathon House in Dublin, New Hampshire. Marathon House is a therapeutic community of 48 men and women between the ages of 19 and 42 years old. The recovering addicts live at Marathon House for approximately one year as they attempt to

remain drug free within the confines of a therapeutic milieu. This particular milieu is highly confrontative and peer oriented, especially within the context of group therapy and community interactions. Interpersonal bonding and a strong support system is also fostered within this therapeutic regime. Demographic data was collected to include: age, race, educational status, marital status, drug of choice, length of use and amount of time off drugs ("clean time"; see Appendix A). Out of the original 32 volunteers, one person dropped out after the third week of research bringing the total sample to 31. The 31 subjects in the study were all Caucasian. Of the 31 subjects, 9 were female (29%) and 22 were male (71%). They ranged in age from 19 to 42 years old (range = 23, mean = 30). Educational data showed that 23% did not complete high school, 30% completed high school, 16% obtained a GED, and 30% attended college with only one person securing a college degree. Marital status indicated 55% were single, 17% were married, 17% were divorced, .06% were separated and .03% were widowed. The age of first drug use ranged from 6 to 33 years old (range = 27, mean = 14.5). The amount of "clean time" experienced at any given time during one's lifespan (since first use) ranged from two

to eight years: 73% = under 12 months, 23% = 12 months to 24 months and .03% = over 24 months. Seventy-seven percent of the subjects reported that other family members (fathers, mothers, siblings and spouses) were also using substances at the time of the subjects first use. The subjects first and second drugs of choice can be found on Table 1.

The subjects' participation was on a voluntary basis and the group selection process was randomized (Kerlinger, 1986). There was a minimum of ten subjects in each group. Subjects were told that I am a doctoral candidate from Antioch New England Graduate School in Keene, NH, and that their participation in this study would be used to compile data as part of a required dissertation. They were told that this study was about examining the benefits of different types of groups on an addicts' treatment. A consent form was signed in accordance with American Psychological Association (APA) research guidelines insuring anonymity and confidentiality and in accordance with Federal Confidentiality guidelines (see Appendix B).

Table 1

Subjects Drug of Choice by Percentages (N=30)

Drug	Percentages (%)			
	First choice		Second choice	
	%	n	%	n
Alcohol	37%	(11)	33%	(10)
Cocaine	33	(10)	30	(9)
"Downers"	.03	(1)	0	(0)
Opiates	17	(5)	.07	(2)
Cannabis	10	(3)	23	(7)
"Pain killers"	0	(0)	.03	(1)
Hallucinogens	0	(0)	.03	(1)

Instruments

The Harvard Group Scale of Hypnotic Susceptibility: Form A, (Shor & Orne, 1962) measured the subjects' capacity for hypnotic susceptibility. The scale is a quantitative approach to measuring hypnotic susceptibility within a group context, rather than on an individual basis. The subject, after being induced hypnotically, was asked to do self-report scoring on criteria which reflects being hypnotized. A single score, ranging from one to twelve, reflects the level of susceptibility reported.

The Harvard Group Scale of Hypnotic Susceptibility is fashioned after Form A of the Stanford Hypnotic Susceptibility Scale. There is a .74 correlation with the results obtained from a group score with those obtained from an individual's observer score. A standard error of estimate of 1.8 is cited for individual scores being predicted from the group scores (Buro, 1978), indicating an acceptable range of variability of scores.

The State-Trait Anxiety Inventory (STAI), Form Y measures two components of the anxiety concept: Trait anxiety and state anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Scores for both the

state anxiety and trait anxiety range from a minimum of 20 and a maximum of 80. The authors define trait anxiety as that of an enduring personality characteristic, an anxiety proneness. State anxiety, on the other hand, is defined as the anxiety experienced in response to specific conditions, rather than an enduring personality characteristic. The examinee checks off 40 brief items: 20 to assess "how you feel right now, that is, at the moment" and 20 to assess "how you generally feel". Test-retest reliabilities for the A-trait scale over a six month period are .73 and .77 for male and female undergraduates (Buro, 1978), respectively. Internal consistency for the A-state ranges from .83 to .92. Dreger in The Eighth Mental Measurement Yearbook (Buro, 1978) defines the "revised STAI as one of the best standardized of anxiety measures, if not the best" (p. 683).

The Profile of Mood States (POMS) consists of 65 5-point adjective rating scales which are then factored into six mood scores: tension-anxiety, depression-dejection, anger-hostility, vigor-activity, fatigue-inertia and confusion-bewilderment (McNair, Lorr, & Droppleman, 1971). A Total Mood Disturbance (TMD) score is obtained by summing the scores (with

Vigor-Activity weighted negatively) on the above six mood scores. This scale measures mood changes that occur as a direct result of psychotherapy or medication and is considered useful due to its capacity to assess for a mood state that is "more transisent than a personality trait and yet more lasting than a momentary mood state produced by a short event like watching a film" (Weckowicz in Buro, 1978, p. 1018). Validity of the test is high (Buro, 1978). Predictive and construct validity have been well established through several well controlled studies (Buro, 1978). Reliability is adequate, yet further studies are recommended by reviewers in the "Eighth Mental Measurement Yearbook" (Buro, 1978).

All of these testing instruments are widely recognized and used within the professional field. Reliability and validity are well established for each instrument, and detailed accounts can be found in the manuals and obtained directly from the publishers (McNair et al., 1971; Shor & Orne, 1962; Spielberger et al., 1983) .

A brief post group questionnaire was also administered. This questionnaire was developed for this study and consists of 17 questions designed to evaluate

trance state and determine if addicts experience the high of a drug state as similar to the high of an ASC from hypnosis. A copy of this questionnaire is attached, which has been labeled the "Post Group Questionnaire" (see Appendix C).

Procedure

An orientation session was held for the purpose of introducing the principal investigator and to provide a rationale for participation in the research project. Potential subjects were told about the goals of the research: to assess the effects of different kinds of groups on the treatment of addiction. Potential subjects were also told they would receive $20.00 at the end of study if they volunteered to participate and complete the groups. The initial procedure, requiring volunteers to complete 70-90 minutes of pre test questionnaires, were then delineated. They were also told about the need to fill out post test questionnaires, requiring approximately 15 minutes, at the end of each group. Confidentiality, anonyomity, and informed consent were all discussed. The subjects were told that they should agree to attend at least 7 out of the 8 sessions offered in order for the research to be valid. However, subjects were told they have the right

to drop out of the study at any time, without negative consequences for their overall treatment program. Subjects were asked not to speak to one another about their different experiences in the groups while the research was being conducted and a brief questionnaire at the end of the study assessed for compliance to this request (see Appendix D). After answering questions, volunteers were requested, and the pre-test administration began. The pre-test forms filled out were the consent forms, STAI, POMS and Harvard Group Scale of Hypnotic Susceptibility. All tests were pre-coded prior to the administration so that the names of the subjects were replaced with coded numbers.

Upon completion of the pre-test procedures, subjects were randomly assigned to one of three categories: Groups A, B or C. The groups were divided according to a computer generated random number table (Kerlinger, 1986), a copy of which can be found on page 640-643 in Kerlinger's book. Group A was the hypnotherapy group, Group B was the relaxation group and Group C was the control group, where the subjects received regular Marathon House treatment but did not have an additional intervention. After the experimental

intervention was completed, they were offered their choice of a hypnotherapy or relaxation group.

The experimental groups met two times per week for 4 weeks. Each group session lasted for one hour. All pre-test materials were completed on 1-17-93; the dates for analysis of group test materials used in this study were: 1-17-93 (pre), 1-31-93 (mid), 2-14-93 (post). Upon completion of each group session, subjects from groups A and B were required to take the STAI, POMS and Post Group Questionnaire again in order to determine if the intervention had a significant impact in reducing anxiety, in changing any mood states and in attaining feelings of an ASC. This took approximately 15 minutes. This design is in keeping with a pretest-posttest control group design (Campbell & Stanley, 1963). Group C subjects were required to take the STAI and POMS but did not take the Post Group Questionnaire because they had not participated in any intervention. Experimenter bias was monitored by having a Marathon House staff member sit in on both groups and check off various items on a rating scale to insure treatment integrity (see Appendixes E and F). Experimenter bias did not seem strong based on the results of these scales. The monitor checked the "yes" box 100% of the time when

observing the "group as a whole" in assessing the likelihood that the residents looked either tranced (see Appendix E) or musculary relaxed (see Appendix F).

Intervention group. The Ericksonian hypnotherapy treatment group (Group A) introduced different themes of mastery with sobriety at each sesssion. The format relied on the utlization of the subjects' resources, and the classic pacing and leading that accompany this technique (Erickson, Rossi & Rossi, 1976). Over the 8 group sessions 8 topics were introduced for mastery and competence development. These were introduced in the following order over the 4 week period:

Week I: 1. Acceptance of addiction.

2. How to cope with the availability of drugs and alcohol.

Week II: 3. Enhancement of socialization skills.

4. Exploration of developing intimacy.

Week III: 5. Competency over relapse dynamics/triggers.

6. Confidence in re-entering the mainstream community.

Week IV: 7. Inner resources and natural highs.

8. Pleasures of sobriety, sparkling visions and golden future.

The structure of hypnotic sessions were as follows:

1. Group Exchange: During the first session, introductions were made. Time was provided to share concerns about the group and to allow for questions; however there were no questions. All subsequent sessions allowed time for subjects to bring up any issues that had emerged over the past week and to allow for some interpersonal exchange. The purpose was to allow for communication among members and to foster a sense of togetherness prior to starting the induction. This was originally designed to last approximately 10 minutes, yet subjects did not feel a need to communicate in this manner and therefore took approximately four to five minutes.

2. Centering: An induction followed the interpersonal exchange lasting approximately 15 to 20 minutes. The subjects' body language was observed and the leader paced and led the induction according to

these signals. An emphasis on resource development was incorporated. For example:

Hi everyone, and welcome! There is a lot to be done tonight, so I would like us to get centered and spend some time attending to the evening's events. I invite everyone to spend a couple of minutes centering to your own needs, desire, feelings and so forth as you think about tonight's group. You can do this by perhaps sitting comfortably in your chairs or moving about as you'd like. You can either close your eyes, keep them open, or shift back and forth. Perhaps you will listen to everything I say or maybe not. Sometimes I may tend to fade in and out of your awareness and other times I may seem real alert. You can pay attention at all times or you may choose not to. Either way, its up to you. You pace yourself with what you are comfortable with and feel your own sense of limits and calm. As time goes on, we will gradually pace through the evening and develop ways to feel good, according to what each person wants. I want you to trust in yourself and do respect your own beliefs, feelings and sense of warmth.

It might be nice at this time to take a deep breath, maybe a couple of deep breathes, and begin to feel the relaxing sensation of deep breathing. Perhaps

deep breathing is too much for you, so I ask you that you take in breathes according to your own pace. Maybe pacing and breathing are important to do together, important like other things done together...like being in this room together....like being drug free together...like breathing deeply together. That's right...imagine how nice it is to know that we are experiencing a calmness and quietness (pause)... a time for letting go of tensions....a time to become centered in our own warmth, deepness and relaxation.

Now isn't it nice to know that with this calmness comes a safety, a sense of awareness of safety, and a time for deep reflection of this... That's right....In your safety you can think of pleasant images and know that you have these resources deep down inside of you. Deep enough but accessible enough for us to wonder about tonite...Maybe these images are on a beach, or in a mountain cabin, or walking along the woods, or looking at a rainbow, or perhaps in a special place that's all yours...It might be nice to go to this place and become comfortable with yourself as you relax and deepen the nice feelings you have right now...And know that you are in charge and you are protected by your own self .....and when you feel ready, protected and warm, let us

explore the sober feelings of life, the intoxicating joys of sobriety and the warmth which accompanies this lifestyle....

3. Mastery Themes during Trance (ASC) : This is the heart of the intervention, where classic Ericksonian strategies were utilized in the service of facilitating trance in collaboration with a development of mastery and competence in the subjects. The trance assisted in obtaining an ASC while also reducing anxiety. The mastery themes assisted the addicts in using their inner resources to feel good about sobriety rather than feel good about using. Story telling, metaphors, theme association and utilization of body language were all used during the trance progression. A formal protocol was used which was taken from two current books that specifically offer Ericksonian hypnotherapeutic group inductions and scripts (Havens & Walters, 1989, pp. 62-184; Klippstein, 1991, pp. 24-26, 97-104). The inductions and scripts were followed as indicated in the books and some wording was changed in order to keep the stories associated with substance abuse. The telling of these stories lasted about 20 minutes.

4. Re-orientation from ASC: This final piece ended the trance gradually, allowing subjects to both re-orient to their surroundings and to ask questions if necessary for re-orientation. Re-orientation took approximately 10 minutes. The re-orientation process facilitated an arousal from trance as they became alert and aware of their surroundings. The goal was to allow sufficient time for the subjects to reorient, so that they were not leaving the room in an ASC. Stretching, yawning, talking, moving about and rubbing eyes were all typical indicators of re-orientation. Conversation was encouraged to help facilitate re-orientation and they were given the post group questionnaires (PGQ, STAI, POMS) at this time.

Relaxation group. This group utilized a deep muscle relaxation technique. The induction of deep muscle relaxation was done through the tension-release method of Jacobson (see Watson and Tharp, 1977, pp. 138-139) where different muscle groups are tensed and then relaxed a number of times. The tension-release instructions were done in a set of exercises, focusing on each muscle group, until the final goal of achieving total body relaxation was reached. The procedure is a

gradual one, starting with the arms, and working into the facial area, neck, shoulders, and upper back; then chest, stomach, and lower back; then hips, thighs, and calves; and finally the entire body. The exercise took approximately one hour.

Control group. The control group, Group C, was offered the opportunity to participate in a hypnotherapy or relaxation group after the formal research groups were completed. All control group subjects declined the invitation.

Statistical Analyses

An analysis of variance (ANOVA) was done to ascertain statistical differences between Groups A, B and C. A one-way ANOVA was done for each dependent variable (ie: anxiety and mood state). Separate ANOVA's are indicated when one attempts to answer independent experimental questions (Kerlinger, 1986; Welkowitz, Ewen, & Cohen, 1991). This enables one to answer the question about effects of the independent variable on outcome measure, and maximizes the power of the statistical analysis. In the case of significant ANOVA's, subsequent post hoc comparisons were done. According to Kirk (1968) the Tukey HSD test is particularly "robust" when analyzing three or four mean

scores. Other quantitative analyses included: Pearson r correlation coefficients and analysis of covariance. Most of the statistical analyses were performed by SYSTAT: The system for statistics (Wilkinson, 1989), a statistical program for use on microcomputers.

Single item scales from the "Post Group Questionnaire" were also analyzed for exploratory purposes. Content analysis, case analysis, inductive analysis, use of percentages and chi squares were done in order to explore the relationship between a psychoactive induced high with a trance induced high. This was exploratory because caution is warranted whenever using single item scales for predictors of outcome (Welkowitz et al., 1991) because it is not a precise method. Significant findings may suggest new areas for exploration.

Chapter IV

Results

Description of Analyses

The overall purpose of this study was to demonstrate the effectiveness of group hypnotherapy in the attainment of ASC, anxiety reduction and improved mood among chemically dependent people. Pre and post test questionnaires were used to measure the changes in mood and anxiety states while a self report questionnaire was used to ascertain the experience of an ASC. The STAI and POMS were used to assess anxiety states, while the POMS was also used to assess changes in mood. The Post Group Questionnaire was used to explore how addicts compare the high of a substance abuse state with the experience of a trance state. STAI and POMS scores for the three different groups (trance, relaxation and control) were compared using a series of analysis of variances (ANOVA) and analysis of covariance. Other quantitative analyses included: Pearson r correlation coefficients, post hoc pairwise comparisons and chi squares. Analysis of qualitative data included: Content analysis, case analysis, inductive analysis, and use of percentages.

Quantitative Results

Anxiety Measures

Pre-test differences.

In order to take into account any initial group differences, an analysis of variance was used to see if a difference existed between the groups during the pretest assessment (Kerlinger, 1986). ANOVA's showed no pretest differences concerning both state and trait anxiety between the three groups. The POMS tension-anxiety scale (F (2, 28) = 2.48, $p < .10$, NS) and the STAI state anxiety (F (2, 28) = 1.38, $p < .27$, NS) yielded no differences in anxiety between the groups at the onset of the research. The subjects' trait anxiety (as opposed to the temporal quality of state) also showed no pretest differences between all three groups (F (2, 28) = 2.97, $p < .07$, NS). Therefore it can be stated that although the means of the groups seem to vary considerably (see Table 2), there was no statistically significant differences among the groups. The standard deviations are large because there is such a wide spread of scores within each group. Although there were no pretest differences, the subjects scored higher in POMS tension-anxiety (see Table 3) and STAI state anxiety (refer to STAI manual) than the normative

sample, reflecting they began the study with more anxiety than the norm.

Table 2

Pre Test Mean Scores of Anxiety Measures

	POMS tension anxiety		STAI state anxiety		STAI trait anxiety	
Group	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Hypnosis Group A	17.64	7.33	50.91	14.84	54.54	10.47
Relaxation Group B	21.60	6.83	47.80	11.60	57.20	6.43
Control Group C	15.00	5.64	41.50	12.49	47.90	8.82

Table 3

Normative Sample Scores for POMS Tension-Anxiety Factor

	Adult		Adult Outpt	
POMS tension anxiety	Female	Male	Female	Male
$\bar{X}$	12.8	12.3	8.82	10.13
SD	7.9	7.0	8.48	7.42
Alpha	.92	.90	.94	.92

Note. Adapted from "POMS Manual" (pp. 20 & 23) by D.M. Mc Nair & M. Lorr & L. F. Droppleman, 1992, San Diego: Edits. Copyright 1992 by Edits. Adapted and reproduced by permission.

Post test differences.

Initial ANOVA's indicated that there were no post test group mean differences for POMS tension-anxiety (F (2, 28) = 1.67, p < .21, NS) and STAI state anxiety (F (2, 28)= .105, p < .90, NS) between the three groups.

In summary, initial ANOVA's showed there were no pretest or posttest differences between the three groups in regard to state and trait anxiety (see Figures 1 and 2).

Trait anxiety as a covariate with two measures of state anxiety.

Although there were no posttest group differences for POMS tension-anxiety and STAI state anxiety using initial ANOVA's between the groups, the STAI trait anxiety score was used as a covariate to remove characterlogical variations from the posttreatment state anxiety means. This would adjust or control for the stable qualities of trait anxiety while testing for state anxiety differences. Before an analysis of covariance can be done, homogeneity of slopes must be determined. Preliminary tests of homogeneity of slopes using STAI trait anxiety as a covariate were not significant for POMS tension scores at pretest (p = .82), at midpoint (p = .38) and at posttest (p = .55).

Figure 1

Group Means for STAI State Anxiety Scores over the Course of Treatment

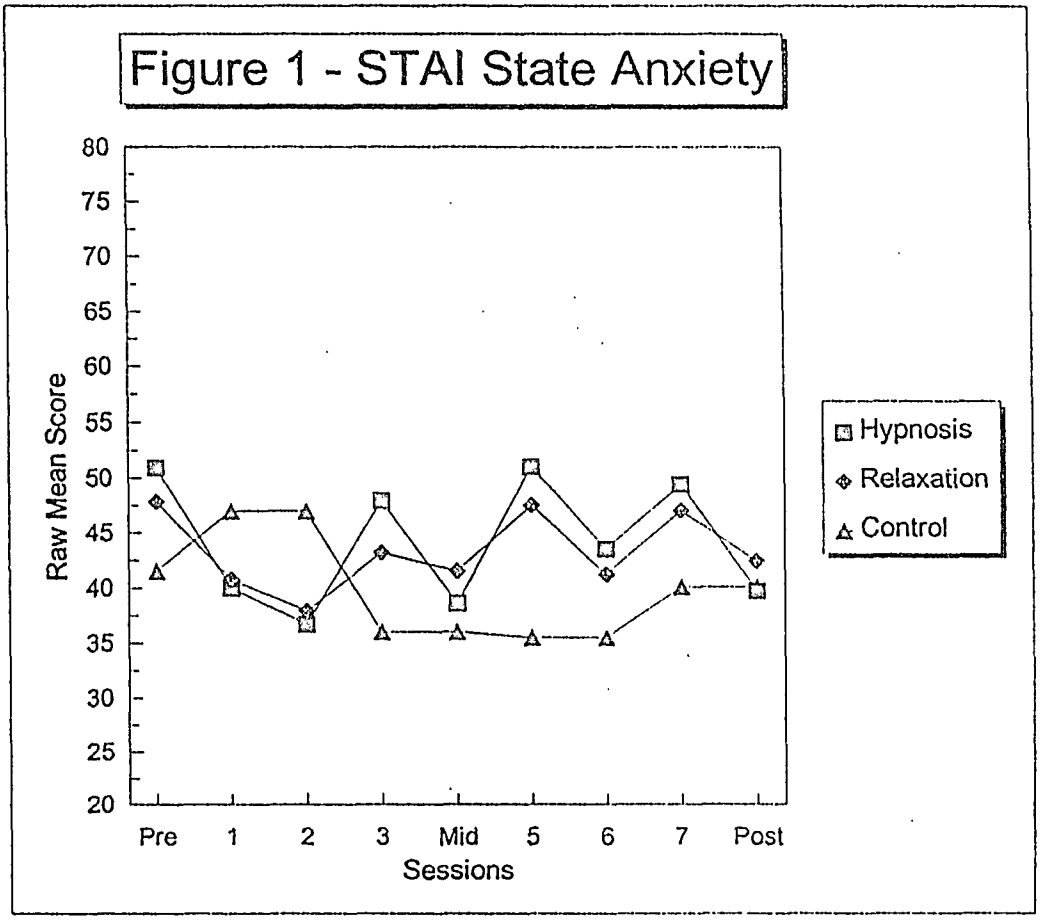
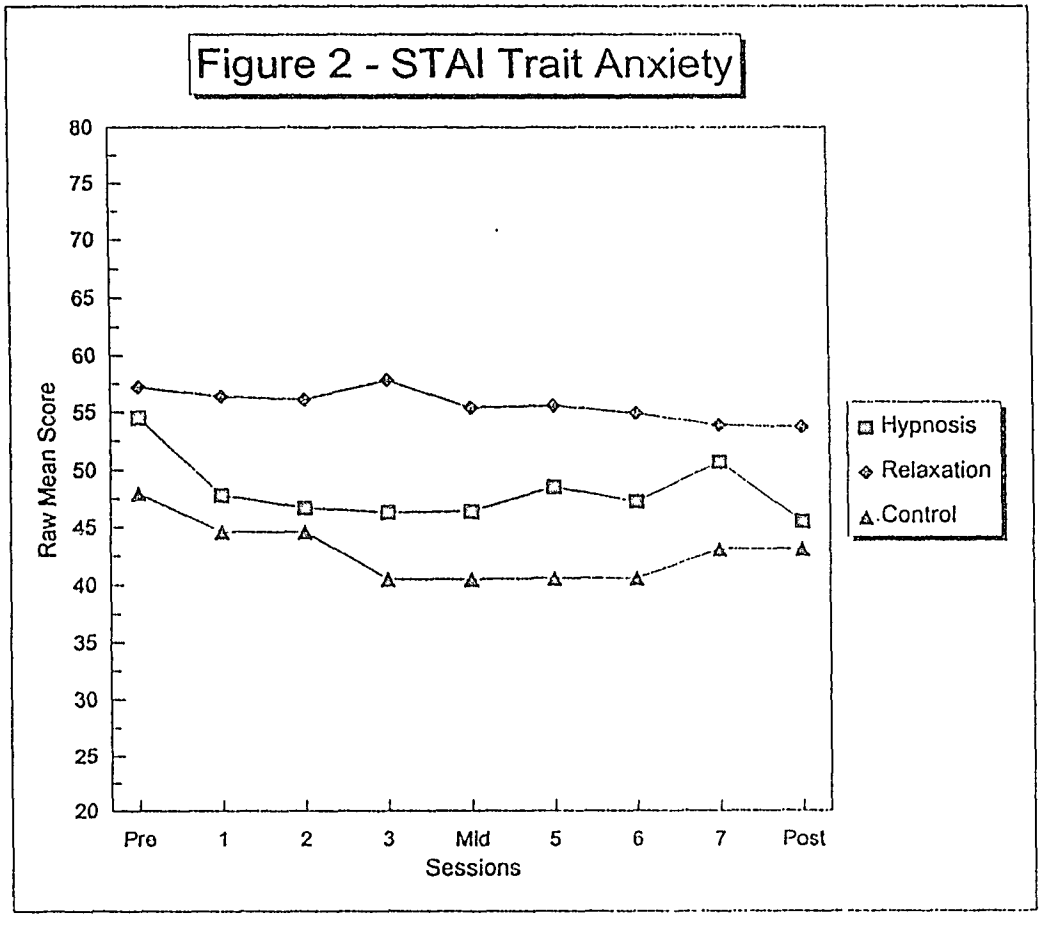


Figure 2

Group Means for STAI Trait Anxiety Scores over the Course of Treatment



They were also not significant for STAI state anxiety scores at pretest (p = .92), at midpoint (p = .32), and at posttest (p = .17). Therefore, since there is homogeneity of slopes as indicated by these non significant findings, the STAI trait anxiety score can be used as a covariate.

Using the STAI trait anxiety as a covariate with POMS tension anxiety revealed no significant differences at pretest (F (2, 1) = .71, p < .50, NS), at midpoint (F (2, 1) = 1.6, p < .21, NS) and at posttest (F (2, 1) = 1.5, p < .24, NS). The STAI state anxiety also revealed non significant results at pretest (F (2, 1) = .65, p < .53, NS), at midpoint (F (2, 1) = .10, p <.90, NS) and at posttest (F (2, 1) = .43, p < .65, NS) when adjusted for STAI trait anxiety.

In summary, these findings indicate that there were no group differences in state anxiety or tension anxiety even when scores were adjusted for initial trait anxiety.

Susceptibility to hypnosis as a covariate.

The scores of the Harvard Group Scale of Hypnotic Susceptibility were also used as a covariate to see if a subjects' hypnotic susceptibility contributed to any changes in their dependent variable scores.

Preliminary tests of homogeneity of slopes using susceptibility as a covariate were not significant for POMS tension-anxiety scores at pretest (p =.47), at midpoint (p = .87) and at posttest (p = .99). However, there was a significant susceptibility by group interactions for STAI state anxiety, but only at posttest (p < .01). Since there is homogeneity of slopes with POMS tension-anxiety, the susceptibility variable (Harvard score) can be used as a covariate. However, since there is no homogeneity of slopes with STAI state anxiety, the susceptibility variable can not be used as a covariate with STAI. The statistical significance of STAI at posttest is not related to a posttest significance, it relates to the inability of using the Harvard score as a covariate with STAI. This simply means using the Harvard score as a covariate with STAI would yield meaningless results because the assumption of homogeneity of slopes is violated.

Due to the difference in homogeneity of slopes between the two anxiety scales (POMS and STAI) when attempting to covary with the Harvard score, a correlation coefficient between the STAI and POMS was done in order to determine the strength of association between these two tests. Using a Pearson r correlation

coefficient, the correlation yielded a .713 which may account for the above differences. Although the correlation is positive and moderately strong, it is not a perfect correlation, and, therefore, it can be assumed that different types of anxiety are being measured by the POMS and STAI tests. The differences in the actual test measurements or the differences in the kind of anxiety being measured, may account for the homogeneity of slope differences; that is, the anxiety being measured in each scale is not excatly the same.

Once susceptibility to trance was covaried with the POMS tension-anxiety scores, different results occurred. When scores were adjusted for trance susceptibility, the groups differed (E (2, 1) = 4.76, $p < .05$) at midpoint with respect to POMS tension-anxiety at a statistical significance of $p < .05$. Therefore, there were midpoint treatment differences when scores were adjusted for susceptibility. A Tukey HSD post hoc comparison revealed that Group A and C had less tension-anxiety at midpoint than Group B after scores were adjusted for susceptibility. However, it is also important to emphasize that Group A's mean dropped 6.91 points from pre to midtest whereas Group B only dropped 5 points and Group C only dropped 4.2 points (see Table 4 and Figure

3). Furthermore, Group A's mean dropped pre to post 5.55 points whereas Group B only dropped 3.80 points and Group C dropped 1.40 points. Although Group A did not differ statistically from Group C, it seemed noteworthy to mention that Group A did yield the highest numerical loss of any group.

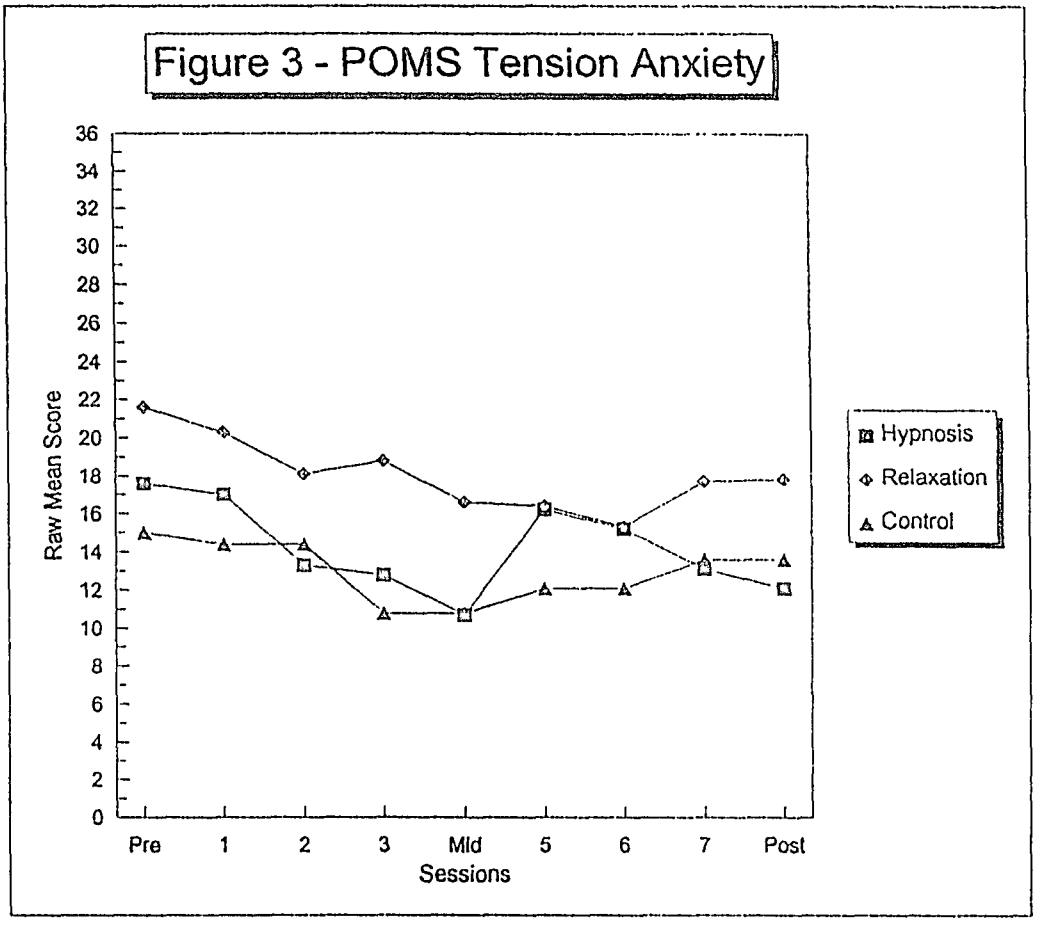
Table 4

Means for POMS Tension-Anxiety Factor at Three Dates and Mean Losses

	$\bar{X}$'s			$\bar{X}$	$\bar{X}$
	Pre	Mid	Post	Pre to Mid Loss	Pre to Post Loss
Hypnosis Group A	17.64	10.73	12.09	-6.91	-5.55
Relaxation Group B	21.60	16.60	17.80	-5.00	-3.80
Control Group C	15.00	10.80	13.60	-4.20	-1.40

Figure 3

Group Means for POMS Tension-Anxiety Scores over the Course of Treatment



In summary, using susceptibility to hypnosis as a covariate was attempted with both POMS and STAI. Since there was homogeneity of slopes with POMS tension-anxiety, the susceptibility variable was used as a covariate. The STAI state anxiety could not be used with susceptibility as a covariate because of the lack of homogeneity of slopes. When susceptibility to trance was covaried with POMS tension-anxiety, group differences occurred at midpoint in treatment. Groups A and C had less tension anxiety than Group B. Despite the seemingly similar results of Groups A and C, Group A's mean tension score at mid and post test dropped more than Group C.

Mood Disturbance Measures

Pre test differences.

ANOVA'S showed that there were pretest differences in mood between the groups (F (2, 28) = 3.81, p <.05) when using the Total Mood Disturbance (TMD) score of the POMS. Post hoc comparisons (Tukey HSD) revealed the difference was between Group B and C (F (1, 28) = 7.5, p < .01) and not between Group A and B (F (1, 28) = 2.91, p < .09, NS) or Group A and C (F (1, 28) = 1.2, p < .28, NS). Examination of the means showed Group B had the most mood disturbance while Group C had the least

mood disturbance (see Table 5). It should also be noted that overall, the subjects in this study scored higher in mood disturbance than the normative sample (see Table 6), reflecting they began the study with worse moods than the norm.

Table 5

Means of the Total Mood Disturbance (TMD) Scores

	Pre		Mid		Post	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Hypnosis Group A	72.27	35.22	35.27	26.74	38.36	36.03
Relaxation Group B	97.90	40.51	76.40	38.15	69.40	45.75
Control Group C	55.80	25.62	28.70	41.84	30.80	35.30

Note. The larger the numerical value the more total mood disturbance.

Table 6

Means and Standard Deviations of the Total Mood Disturbance (TMD) Scores of Adult Normative Sample

	$\bar{X}$	SD
Females	48.4	33.6
Males	43.5	28.8

Note. Adapted from "POMS Manual" (p.23) by D. M. McNair & M. Lorr & L. F. Droppleman, 1992, San Diego: Edits. Copyright 1992 by Edits. Adapted and reproduced by permission.

Post test differences.

Initial ANOVA's indicated that there were statistically significant differences in TMD mood scores between the groups at midpoint (F (2, 28) = 5.25, p < .05). However, due to initial pre test differences, an adjustment was needed to equalize or control for these pre test differences. A test for homogeneity of slopes was conducted to determine if the TMD pretest scores could be used as a covariate for a more accurate interpretation of the results. Tests of homogeneity of slopes using pretest TMD scores were not significant at midpoint (p = .21) or at posttest (p = .86). Since the assumption of homogeneity of slopes is not violated, the pretest TMD could be used as a covariate.

After adjusting their scores for pretest TMD group differences, there were no treatment differences between the groups at midpoint (F (2, 1) = 2.13, p < .14, NS) or at the end (F (2, 1) = .622, p < .54, NS). This is a more accurate picture of the groups performance than the simple ANOVA scores because the pretest difference was taken into account.

In summary, once the mood scores were adjusted for pretest mood difference, there were no statistical

differences in mood between the three groups at mid or end of treatment.

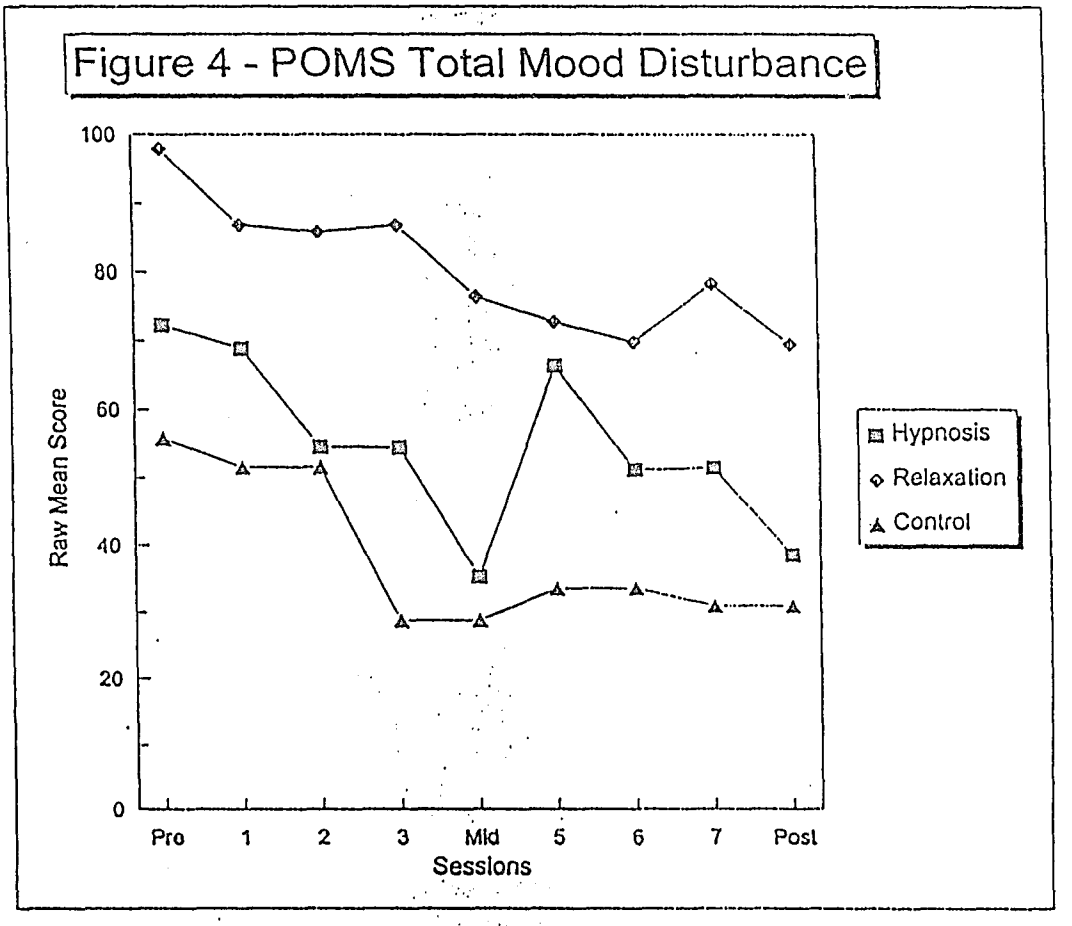
Susceptibility to hypnosis as a covariate.

Preliminary tests of homogeneity of slopes using susceptibility to hypnosis and pre test TMD as covariates were not significant at midpoint (p = .60) or at the end (p = .81) of treatment. Since there is homogeneity of slopes, the susceptibility variable can be used as a covariate in conjunction with pretest TMD. When scores were adjusted for trance susceptibility and pretest TMD, the groups differed in respect to overall mood at midpoint (F (2, 1) = 5.41, p < .01) but not at the end of treatment (F (2, 1) = 1.34, p < .28, NS). Post hoc tests (Tukey HSD) revealed statistical differences between Group A and B (F (1, 23) = 5.93, p < .02) and between Group B and C (F (1, 23) = 10.02, p < .004) but not between Group A and C (F (1, 23) = 1.65, p < .21, NS). In other words, Group A's mood improved in comparison to Group B but Group A's mood improvement was not statistically different from Group C (see Figure 4). Despite the fact that Group A's mood improvement was not statistically different from Group C's mood improvement, Group A's improvement from pre to mid was the most

substantial (pre $\bar{X}$ = 72.27, post $\bar{X}$ = 48.36) and could have been due to the experimental variable of hypnosis.

Figure 4

Group Means for POMS Total Mood Disturbance Scores over the Course of Treatment



In summary, all of these subjects started the study in worse moods than the normative sample. Furthermore, Group B began the study in a worse mood than Group A or Group C, despite the randomization process. Once this pretest mood difference was adjusted for, there were no treatment differences seen between the groups. However, once susceptibility was factored in with pretest mood differences, the groups statistically differed at mid point in terms of mood. Group A's mood improved in comparison to Group B but not in comparison to Group C.

Quantitative Results Summary

The major quantitative results are summarized as the following:

1. There were no pretest differences between the groups for POMS tension-anxiety, STAI state anxiety or STAI trait anxiety.

2. The subjects in this study scored higher in all anxiety measures in comparison to a normative sample.

3. There were no posttest differences between the groups for POMS tension-anxiety or STAI state anxiety.

4. There were no posttest group differences in state anxiety when scores were adjusted for initial trait (characterlogical) anxiety.

5. When scores were adjusted for trance susceptibility, the groups were statistically different ($p < .05$) at midpoint in treatment with respect to POMS tension-anxiety. Group A and C had less tension anxiety than Group B.

6. The subjects scored higher in total mood disturbance (TMD) in comparison to a normative sample.

7. There were pretest differences ($p < .05$) in total mood disturbance (TMD) between the groups with Group B starting the study in a worse mood than either Group A or C.

8. There were no posttest group differences in TMD once adjustments were made for the pretest mood differences.

9. When scores were adjusted for trance susceptibility and pretest TMD differences, the groups statistically differed in mood at midpoint in treatment. Group A's mood improved ($p < .01$) in comparison to Group B but not in comparison to Group C.

Qualitative Results

Post Group Questionnaire

The Post Group Questionnaire's (PGQ) responses which were qualitative in nature consisted of questions # 14, 15, 16, 17, 18 and 19 (see Appendix C). A content

analysis of the item responses was completed in order to identify, code and categorize primary patterns in the data, as recommended by Patton (1990). This was done by case analysis where the data was organized by specific groups: hypnotherapy (group A), relaxation (group B) and control (group C) and organized into a coding system. A coding system was established where all of the raw data was condensed into a manageable package on index cards. An index card was made for each subject which contained the following data: control number, pre test response to questions #14, 18 and 19, and post test responses for questions #15, 16, 17, 18 and 19. After the data was recorded on the index card, an inductive analysis was done in order to observe the natural variation in the data. Patton (1990) recommends using an inductive analysis because it allows for patterns "to emerge out of the data rather than being imposed on them prior to data collection and analysis" (p. 390). In order to facilitate an inductive analysis, two columns were made which listed the subjects' pre test (#14) and post test (#15, 17) comments as asked on the PGQ. (Since Group C did not fill out a PGQ each week, there is no data from them on these particular post group responses, but there is data on their responses to item #18 and 19, which was

done pre and post for all subjects). Appendix G shows the comments as reported by subjects in Group A and B for questions #14, 15, 17 which refer to pretest affective state and post experimental affective state.

At pretest, group A and B's feelings regarding their current affective state were quite similar. Differences emerged, however, between groups A and B at posttest. Group A described their feelings at posttest with words which were not only indicative of trance (ie: drifted, disroriented, falling sensation...) but also reported feelings which were indicative of mastery and competence (ie: more confident, more sure of self, ready for challenges...). Comments from the previous table were organized into separate headings, revealing major discrepancies between the groups (see Appendix H).

PGQ #'s 16 and 18 were asked in order to discover if addicts' description of the high of a substance abuse state was similar to the descriptions of the addicts' new experience of a trance state. In order to make sense out the data, the items most frequently endorsed on 1-17-93 (pretest) were used as a scale to gauge what subjects felt when high on psychoactive substances (see Table 7). Five items (out of 12) emerged as the most frequently endorsed items among all three groups.

Table 7

Percentages of Most Frequently Selected Description of What it Feels Like to be High on Drugs/Alcohol at Pre Test - "Substance Abuse High"

Groups A, B & C (Hypnosis, Relaxation & Control) N=31			Groups A & B (Hypnosis & Relaxation) n=21	
%	#	Item Descriptions	%	#
87%	27	Escaped Reality	95%	20
81	25	Relaxed, Comfortable	86	18
68	21	Feeling Good	76	16
68	21	Numbed	71	15
64	20	Peaceful/Calm	71	15

The five desriptors were: escaped reality, relaxed and comfortable, feeling good, numbed and peaceful/calm. These items were put into percentiles as were the other seven items which were not as frequently endorsed. Since Group C did not fill out the PGQ at the end of the study, their input was not used for comparison purposes. However, it is important to note that their description of what it feels like to be high is almost identical with Group A's and B's descriptions (see same Table 7). The "substance abuse high" percentiles can now be compared to the "intervention experience" percentiles for Groups A and B at midpoint and at posttest. Table 8 shows the "intervention experience" while Table 9 makes for easier viewing by having both substance abuse high and intervention experience percentiles together. Since there were obviously some strong similarities between the experience of a substance abuse high and that of an ASC, chi-squares were done to determine if the obtained frequencies of the substance abuse high differed significantly from the frequencies of the intervention experience.

Table 8

Percentages of Most Frequently Selected Description of What it Felt Like at the End of Group - "Intervention Expeience"

	Groups			
	A Hypnosis (n=11)		B Relaxation (n=10)	
Item Descriptions	Mid	End	Mid	End
	Percentages/Item # endorsed			
Escaped Reality	64/7	82/9	40/4	40/4
Relaxed, Comfortable	82/9	73/8	100/10	90/9
Feeling Good	55/6	45/5	70/7	30/3
Numbed	09/1	36/4	30/3	0/0
Peaceful/Calm	64/7	64/7	90/9	80/8

Table 9

Percentages of Most Frequently Selected Descriptions of "Substance Abuse High" and an "Intervention Experience"

	Groups		
	A & B Hypnosis & Relaxation	A Hynosis	B Relaxation
Item Descriptions	"Substance Abuse High"	"Intervention Experience"	
	Pre	Post	
	Percentages		
Escaped Reality	95	82	40
Relaxed, Comfortable	86	73	90
Feeling Good	76	45	30
Numbed	71	36	0
Peaceful/Calm	71	64	80

Chi square analyses revealed at midpoint in treatment Group A (X^2 = (5, N=11) = 4.31, $p < .50$, NS) and Group B (X^2 = (5, N=11) = 4.57, $p < .50$, NS) were not significant, thereby meaning that both groups reported their intervention experience as similar to their substance abuse high. However, at the end of treatment, Group B no longer felt their intervention (relaxation) experience to be similar to a substance abuse high (X^2 = (5, N=11) = 9.13, $p < .20$) whereas Group A definitely felt their intervention (trance) experience was similar to a substance abuse high (X^2 = (5, N=11) = 1.04, $p < .50$, NS). This finding supports the earlier stated hypothesis that there is a similarity between the high of a substance abuse state with the high of an ASC induced by hypnosis.

In summary, the inductive analysis and chi square analysis of the qualitative data resulted in two significant findings: 1) Group A described their intervention (hypnotherapy) experience as an ASC and reported this experience as having left them with feelings of mastery and competence; 2) Group A felt their intervention experience was similar to a substance abuse high throughout the course of treatment. These findings are exciting because they not only support the

hypothesis that there is a similarity between the high of a substance and the high of an ASC induced by hypnosis, but feelings of mastery and competence were also associated with an ASC.

Qualitative Results Summary

1. An inductive analysis revealed that at pretest Group A and B gave descriptions about their current affective state (feelings) which were remarkably similar to each other.

2. An inductive analysis revealed that at post test Group A and B gave descriptions about their current affective state (feelings) which were remarkably different from each other. Group A described feelings which were indicative of trance and mastery/competence. Group B did not report such feelings.

3. Five items (out of 12) on the Post Group Questionnaire (PGQ) emerged as the most frequently endorsed items among all three groups which described their experience of what it feels like to be high from psychoactive substances (substance abuse high).

4. These same five items also emerged as the most frequently endorsed items among Group A and B to describe their intervention experience after being exposed to either trance or relaxation. However, chi

square analysis (X^2=1.04) revealed that by the end of treatment Group B no longer felt their relaxation to be similar to a substance abuse high, whereas Group A continued to experience feelings similar to the substance abuse high throughout the course of treatment.

5. The two most significant findings resulting from the qualitative data are: a) Group A described their intervention (hypnotherapy) experience as an ASC and reported this experience as having left them with feelings of mastery and competence; b) Group A felt their intervention experience was similar to a substance abuse high throughout the course of treatment. Reiterating again, these findings are exciting because they not only support the hypothesis that there is a similarity between the high of a substance and the high of an ASC induced by hypnosis, feelings of mastery and competence were also associated with an ASC.

Chapter V

Discussion

As presented in the theoretical section of this dissertation, some research and theory supports the notion that alcoholics drink to reduce stress (Abrams & Wilson, 1979; Berglas, 1987; Conger, 1956; Masserman & Yum, 1946; Powers & Kutash, 1985; Sher, 1987) while other theoretical propositions support the notion that alcoholics drink to achieve dissociative states (Schoen, 1985) or abuse psychoactive substances in the pursuit of an ASC (McPeake et al., 1991). By reducing their anxiety level, dissociating and/or attaining an ASC, abusers may find they "feel better", despite the adverse consequences that usually accompany addiction (Deschenes et al., 1991), perhaps because the immediate relief and/or new state of consciousness one feels upon chemical ingestion is more powerful than subsequent adverse consquences.

The healing and adaptive functions of ASC have already been described (Ludwig, 1964; Tart, 1991). Given the healing benefits of ASC, combined with the premise that many substance abusers seek an ASC through their chemical ingestion, this study aimed to investigate the use of drug free ASC, in the form of

hypnosis, as an adjunct to treatment. It was hoped that chemically dependent people could learn new ways to reduce their anxiety and reach pleasurable, yet natural, highs which ASC's produce. The goal of this study was to 1) assess the effectiveness of hypnosis in alleviating anxiety and improving mood, especially, as compared to relaxation methods; and 2) to try to ascertain whether addicts found an addictive high comparable to an ASC high.

The discussion section of this dissertation has been organized into three sections. The first section will focus on the quantitative findings while the second section will focus on the qualitative findings. Significant findings and how they pertain to the literature on psychoactive substance abuse and trance phenomena will be discussed. The third section will focus on limitations of this study and will address future research considerations.

Quantitative Major Findings

Anxiety measures.

In terms of the anxiety measures, ANOVA's revealed no pretest or posttest differences between the groups. Even after scores were adjusted for initial trait or characterlogical anxiety, there were still no

differences between the groups. However, after scores were adjusted for trance susceptibility by using an analysis of covariance, interesting results appeared.

Group A (hypnotherapy) and Group C (control) demonstrated a significant drop in anxiety ($p < .05$) at midpoint in comparison to Group B (relaxation). Although it is exciting that Group A's anxiety level was reduced after the fourth treatment session, the fact that Group C followed the same trend is perplexing. Furthermore, although not statistically significant, Group B also followed a trend toward reduction in tension anxiety. However, it is important to note that Group A's mean dropped 6.91 points from pre to mid test whereas Group B only dropped 5 points and Group C dropped 4.2 points. So, although Group A and C appear to look similar, Group A's mean drop is larger than Group C and B's, which reflects a greater reduction of anxiety. Furthermore, Group A's mean dropped pre to post test 5.55 points whereas Group B only dropped 3.80 points and Group C dropped 1.40 points. Susceptibility to trance seems to be playing a significant role by interacting with a reduction in anxiety. How Group C's susceptibility to trance is related to reduced anxiety scores is confusing, as they did not even receive

treatment. In order to better interpret the data, some understanding of hypnotic susceptibility is offered.

Hypnotic susceptibility refers to the ability of person to obtain a level of trance which is then measured by the person responding positively to some hypnotic suggestion. The most concise definition of hypnotic susceptibility seen by this writer is described by Udolf (1981) as stated below:

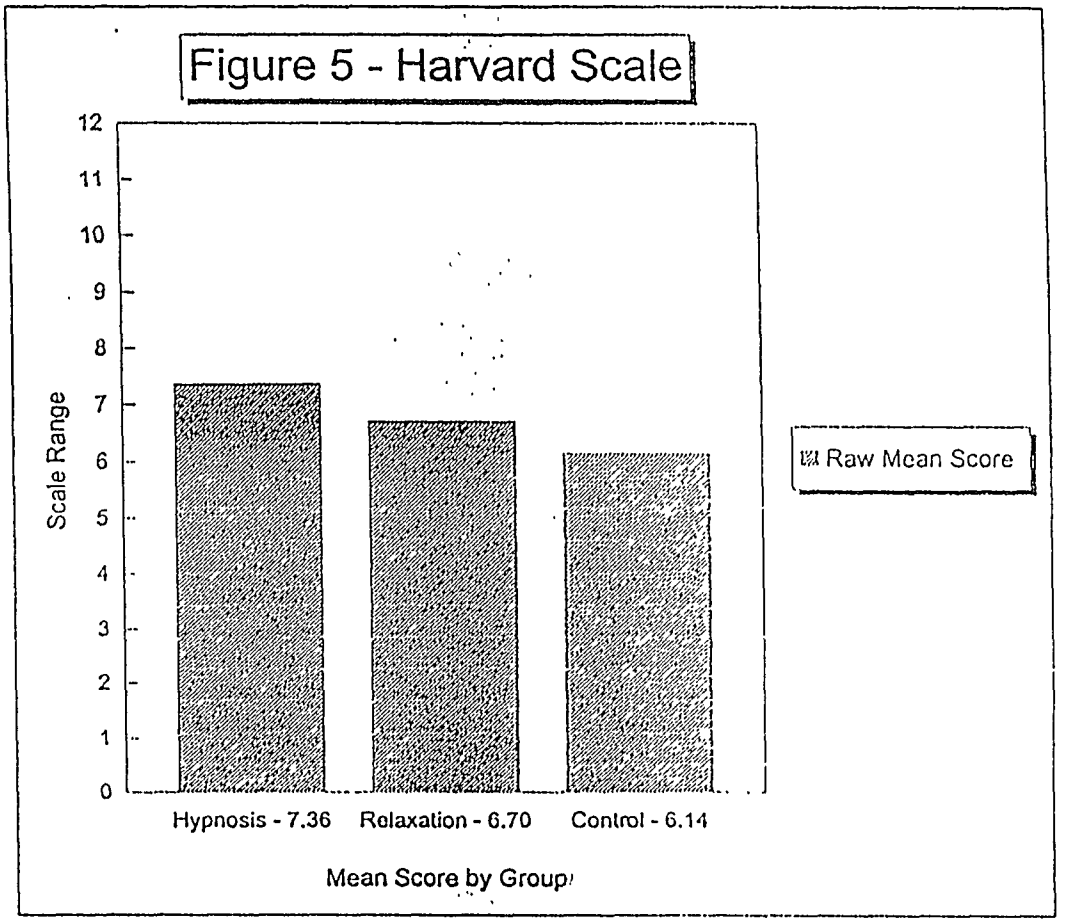
> trance capacity or hypnotic susceptibility is usually regarded as an organismic variable or an individual characteristic of a subject in the same manner that artistic ability or intelligence is. It is measured by using standarized induction procedure to produce a trance state and then measuring the depth of the trance produced by the hypnotic phenomena (p. 22).

Testing for suggestibility (ie: using the Harvard Group Scale of Hypnotic Susceptibility) can help predict who is susceptible to achieving a trance state. Since it was not the goal of this study to sort out compliant vs. susceptible subjects, the scores that were obtained are considered to be an adequate reflection of subjects actual susceptibility capacities. Also, the scores obtained were comparable to other published norms (Shor

and Orne, 1963) and there were no differences between the groups (see Figure 5).

Figure 5

Group Means for Harvard Scale Scores at Pre Test



Apparently, hypnotizability is related to responsiveness to treatment and/or affective state in general. Since hypnotizability is regarded as an individual characteristic in the same way creativity or intelligence is, then it would make sense that once this individual characteristic is taken into account (by covariance), different results would be obtained. Apparently, there is an interaction effect between hypnotizability and anxiety level. Perhaps those who are more likely to be hypnotized are also more likely to respond to an intervention. Given that anxiety seems to be related to hypnotizability, then it seems useful to investigate at what level hypnotizability is most prominent in anxiety reduction. For example, do low hypnotiability subjects score higher in anxiety than medium or high hypnotizability subjects? This study could not separate its subjects into low, medium and high hypnotizability because there were only ten subjects per group, resulting in five or less subjects per hypnotizability cell. This is an insufficient number of subjects per cell to perform a meaningful mathematical calculation (Winer, 1962). However, given that susceptibility seems to have an effect on responsiveness to treatment, then it seems useful to

conduct another study where all the subjects are hypnotized and results are explored in terms of low, medium and high susceptibility. This type of study would focus more on the levels of susceptibility and to what degrees these levels affect lowered anxiety or improved moods. Since the goal of this study was more focused on the effects of an altered state in reducing anxiety as compared to two control groups, another study could capture the essence of hypnotizability in relation to anxiety or mood measures.

In summary, then, there were statistically significant differences in anxiety levels (on the POMS) between the three groups in response to the treatment intervention. Group A did yield less tension-anxiety as was expected in Hypothesis I, but only when susceptibility to hypnosis was covaried. Group A's mean did statistically drop from pretest to midpoint, in comparison to Group B, yet not in comparison to Group C. The fact that Group A's tension-anxiety mean did statistically drop from pretest to midpoint, in comparison to Group B, but not in comparison to Group C deserves a reasonable explanation. This explanation will be discussed in the next section because it is

related to Group B's overall mood throughout the research.

Mood measures.

In terms of mood disturbance measures, ANOVA's revealed statistical differences at $p < .05$ level between the groups at pretest. Group B had the most mood disturbance whereas Group C had the least mood disturbance. In other words, at pretest, Group B was in the worst mood, Group C was in the best mood and Group A was in between these two moods. Although the groups were randomly selected, Group B, by chance, started the study in a worse mood. Because of randomization, pre test differences were not expected, however, it is not unusual to obtain pretest differences when doing research. A word about randomization and sampling is offered to help one understand how randomized groups could still result in pretreatment variations.

A fair amount of psychological data on human behavior is generated from samples of a particular population available to any researcher or experimenter. Quite frequently, college students or laboratory rats are used in experimentation simply because they are available to the experimenter (Matheson, Bruce, & Beauchamp, 1978). This kind of sampling population is

referred to as an available sample and although a typical sampling procedure for psychological experimentation, it is not the same as a representative or quota sample. A representative sample, for this study, is a sample which would be drawn from a larger population in the substance abuse community (instead of only Marathon House residents) and subjects from this larger sample (ie: patients from various hospitals throughout the United States of America) would then be randomly assigned to Group A, B, or C. Since the subjects in this study are all drawn from an available sample and then randomly assigned to the different groups, they were not a "true" representative sample of all addicts. Nevertheless, the sampling procedure is typical of psychological experimentation and is considered empirically sound. Given this explanation of sampling procedures, the fact that everyone came from Marathon House does not equate with homogeneous grouping. In fact, one could argue that because everyone came from a rehabilitation program there may be more diversity in personality variables (ie: characterological and/or mood disorders...). This potential diversity could result in a wider range of scores. The wide range of scores was certainly

reflected in the large standard deviations on all measures. The higher TMD, POMS and STAI scores in comparison to the normative sample may also reflect the diversity of this clinical population.

Another possible explanation for pretreatment group differences is the error variance as reflected in this diversity or individual differences (Matheson et al., 1978). Variability in subjects' responses is expected simply due to heredity and past history. Although the individual differences were minimized via random assignment of an available sample, the total sample size was small enough that the uncontrolled individual differences did not cancel each other.

Therefore, based on the aforementioned explanations, pretest differences could be related to available sampling, personality variables, individual differences, small sample size and/or a chance event.

Nevertheless, these initial pretest differences were adjusted for and when used as a covariate with post test results, there were no posttest differences between the groups for total mood disturbance (TMD). In other words, there were no statistical differences in mood between the groups at midpoint or at the end of the study. Once again, however, there was a trend toward

improved mood in all three groups by the end of treatment, yet there were no statistical significance seen at midpoint as was observed in the tension-anxiety scores.

Susceptibility to trance again played a significant role by interacting with improved mood. Once susceptibility was covaried in the analysis, there was a statistical difference at midpoint in treatment ($p < .01$) but not at the end ($p < .28$) of treatment. Group A's mood significantly improved compared to B but not compared to C. This result favorably supports Hypothesis II which states hypnotherapy will improve mood; however, it only occurs when susceptibility to trance is factored into the equation. Susceptibility to trance is interacting with mood in a similar fashion as it did with anxiety. Perhaps those people who are susceptible to hypnosis are simply more responsive to treatment in general and this was captured with the mood measures as well as the anxiety measures.

As was stated in the previous section, an explanation for Group A's tension-anxiety reduction, in comparison to Group B and C would be discussed here. The fact that Group B started the study in a worse mood than Group A or C can not be overlooked. Group B's

composition of members with poorer moods may have manifested itself in a "crankiness" that stayed prominent throughout the course of treatment. This crankiness or poor mood may have tempered the results such that Group C seemed to be getting better simply because Group B's poor mood made Group C look so much healthier in comparison.

In addition to Group B being in the worse mood throughout this study, there are several other speculations concerning why Group B's overall results were not as favorable as Group C's results. First, perhaps it was better to have no treatment at all (like Group C) than to have a control group receiving treatment which they may have perceived as substandard to the treatment Group A participants experienced. Since 41% of the subjects did speak to one another about the study while it was taking place, it is possible Group A subjects spoke more favorably about their experiences and thus, Group B subjects did not feel as "special". A second explanation is the possibility that Group B subjects could have been flooded with feelings as they became muscularly relaxed and had no vehicle to ventilate such feelings within the context of the relaxation exercises. A third explanation is the

possiblity that instead of subjects feelings relaxed in response to the intervention, an emergence of anxiety developed in response to the progressive relaxation exercises. In some cases, subjects respond to relaxation exercises in a paradoxical manner whereby they become even more anxious rather than relaxed. This condition is known as relaxation-induced anxiety (Borkovec, 1985) where people can experience increasing anxiety under relaxing circumstances. Sometimes this is associated with a feeling of loss of control. Some of the subjects in Group B could have experienced such sensations, thus leading to less favorable results than otherwise expected. A fourth possiblity is that the motivation and attitude of subjects in Group B may not have been as positive as the other subjects, thereby resulting in less positive change. This again may have been related to their bad moods and subsequent poor spirit concerning their participation in the study. All of these ideas are offered as plausible explanations for why Group B had results which were less favorable than Group C's, in terms of anxiety and mood measures.

One other observation deserves mentioning. While looking at Figure 4, it becomes apparent that Group A's TMD score escalated on the fifth treatment session

(2-7-93). The reason for this is unclear as the graph clearly shows that Group A's mood was improving. Since there was no similarity with the other groups; perhaps something in the hypnotherapy itself created poorer moods. The mastery and competence protocol for session #5 was titled "competency over relapse dynamics/triggers". Perhaps this material was too intense for the residents and produced poor moods because of their feeling of incompetence regarding a successful sober lifestyle. As is well known, some addicts who have gone through treatment have a hard time maintaining sobriety and relapse is quite common (Armour et al., 1978; Marlatt & Gordon, 1980, 1985; Schonfeld et al., 1989). Although this explanation for an increase in TMD is only speculation, it seemed useful to mention.

In summary, then, Group A did demonstrate an improvement in mood when susceptibility to trance was factored in the equation. The second hypothesis, which stated hypnotherapy will improve mood, was substantiated when susceptibility to trance was used as a covariate with mood scores.

Conclusions about Quantitative Results

Although there was no statistical evidence to support the hypotheses concerning reduced anxiety and

improved mood when using ANOVA's between the groups, there was substantial statistical evidence to support the intervention of hypnotherapy as reducing anxiety and improving mood when susceptibility to hypnosis was taken into account. Susceptibility to trance seems to be a an intervening variable relative to the effectiveness of hypnotherapy to reduce tension and improve mood.

In addition to Hypotheses I and II supported when susceptibility to trance was used as a covariate with anxiety and mood scores, there was an overall trend, over time, toward less anxiety and improved mood among all three groups. Since this trend was obvious across all three groups, it leads one to suspect that other confounds may have contributed to these results. Several hypotheses have been generated which may account for the overall trend in positive change in all three groups. First, the small number of residents involved in the study resulted in less power to detect statistical significance, even when accounting for an overall positive trend. A small sample size maximizes the effects of individual differences, and therefore such differences were most likely influenced by the wide spread of scores. Secondly, the wide spread of scores required a more substantial change at posttest time in

order for them to be statistically significant. Thirdly, there may have been a repeated testing effect which accounted for a natural decrease in anxiety and improvement in mood. Fourth, the maturation variable (Campbell & Stanley, 1963), might produce effects which confounded the effects of the experimental stimulus. The maturation variable alludes to the processes inherent in the subjects responses as a function of the passage of time. For example, "growing older, growing hungrier, growing more tired and the like" (p. 5) are processes that all of the subjects could have experienced during the study which could have confounded the results. Fifth, the residents, across time, could have been getting better due to the therapy they were receiving at the facility in conjuction with the attention they received while in this study. This confounding or extraneous variable is referred to as history by Campbell and Stanley (1963) which means that "specific events occurring between the first and second measurement in addition to the experimental variable" (p. 5) might produce effects which are then confounded with the effects of the experimental stimulus. In other words, since all of the residents were exposed to the same history throughout the entire study, their results

may have all been affected by this extraneous variable (the history of living together at Marathon House) which led to diminished anxiety levels and improved moods. Although two control groups (B and C) were incorporated in order to control for expectancy/placebo effects and differential attention, the potential strength of history was not foreseen. Although these five reasons are educated speculations, they may account for the overall decrease in anxiety and improvement in mood seen in all three groups over the course of this experiment, despite the lack of statistical significance to support the strength of this trend.

In summary, trance may be a promising approach as an adaptive coping mechanism for the chemically dependent as reflected by the improvement in mood and reduction in anxiety. If the results of this study can be generalized to help recovering addicts, it is suggested that addicts be given the opportunity to experience trance as part of their treatment regime. As addicts recover, it would be useful to feel calm and to be in a good mood while going through the sometimes turbulent feelings that usually accompany a recovery program. Most importantly, however, are the adaptive functions that trance would provide to recovering

addicts as they learn to utilize the benefits of a healthy ASC over a drug induced ASC. Since hypnotizability seemed to play an important role in anxiety reduction and improved moods, then future research could focus on levels of susceptibility in its relationship to trance effectiveness and sobriety.

Qualitative Major Findings

Mastery and competence.

There was a distinct difference between the way Group A reported feeling after the treatment ended compared to how Group B reported feeling. While the quantitative measures captured the numerical differences to support a reduction in anxiety and improvement in mood, the qualitative data captured, in the group member's own words, how the group experience made them feel.

As Appendix G illustrated, the subjects reported feeling similar prior to the group experience. However, upon completion of group, Group A listed words which were indicative of trance as well as feelings of mastery and competence, yet Group B did not. This reporting of mastery and competence is quite remarkable. Not only did they achieve a dissociative state, they also achieved a sense of self mastery. Both the dissociation

coupled with the self mastery is excatly what Schoen (1985) argued for when he stated that alcoholics needed to learn how to develop effective dissociative states which would serve as adaptive defense mechanisms over destructive substance abuse. McPeake and his colleagues' (1991) contention that addicts need to learn natural ways of obtaining ASC over their self destructive chemical ingestion is further supported by this research as the addicts in Group A did experience a drug free ASC and reported it as not only pleasureable but also as something that made them feel more self confident.

Although the hypnotherapy intervention incorporated themes of mastery in concert with sobriety, the emphasis of the intervention was mostly on achieving an ASC in a group context. The fact that the subjects in Group A felt self confident at the end of their treatment experience could attest to the success of the mastery component in conjunction with their achieved ASC. It would be difficult to say that the mastery themes were more effective than the trance because they were so interwined. However, future researchers could do an experiment to create an ASC in their clients without formally doing any hypnotherapy work. Usually trance

induction precedes the work of hypnotherapy, which generally includes specific diagnostic metaphors or suggestions to stimulate insight or change. This study contained elements of both (trance and hypnotherapy) and the subjects reported feeling more confident at the end of the intervention.

Using hypnosis to assist in improving self confidence during the recovery process is defined in various ways in the literature. For example, creating or enhancing positive moods is suggested as an important component in maintaining abstinence (Diener, 1984; Hall, Havassy, & Wasserman, 1991). Ludwig and his colleagues (1964) gave inspirational talks and positive suggestions to hypnotized addicts to help them "enhance their sense of self confidence...and to derive self-satisfaction by resisting the craving for drugs" (p. 56). Hypnosis has been used to create self control, self discipline and to promote growth in recovering patients (Miller, 1991). An increase in self confidence (Araoz, 1979); personal growth and problem solving capacities (Holloway & Donald, 1982); and development of inner resources, increased assertiveness and confidence (Gilligan & Kennedy, 1989) have all been reported as a result of hypnotic interventions. The development of mastery and

competence of these particular skills (ie: self esteem, abstinence, self control, self discipline, personal growth and so forth) seems to be a direct result of hypnotic intervention. As with many successful therapeutic techniques, the development of personal growth usually marks a turning point for progress in treatment. The subjects in this study reported in their own words the mastery and competence they felt at the end of group hypnotherapy. Since the subjects in Group B did not report this sense of mastery and competence after their relaxation exercises, it seems reasonable to say that the subjects in Group A experienced a level of mastery and competence as a direct result of the hypnosis. This obtained feeling of mastery and competence in response to hypnosis certainly corroborates with the literature on hypnosis.

Furthermore, mastery and competence in any particular skill can be considered an adaptive means of functioning. As Schoen (1985) and McPeake and his colleagues (1991) have said, addicts lose their adaptive functioning when they stop using substances. This loss can be related to the cessation of getting high because it removes an adaptive behavior that has been integrated into an addicts' life (McPeake et al., 1991). It is

also observed through the loss of one's capacity to dissociate (Schoen, 1985) because dissociation is considered an adaptive behavior due to its defense mechanism properties. Although taking drugs and dissociating may not seem adaptive to the average person, it provides addicts with a vehicle in which they can rid themselves of uncomfortable feelings. Once this using behavior and all the rituals that go along with it stop, then a person is left with a sense of loss and are not sure how to handle discomfort. Alexander (1990) also views addiction as serving some adaptive function to the user, specifically in its ability to substitute for an integration failure. Integration failure entails a failure to achieve minimal expectations of society, such as social acceptance, competence, self confidence and personal autonomy (p. 39). In order to avoid the social isolation and accompanying sadness, some people adaptively use chemicals to substitute for this integration failure. Likewise, Khantzian (1985) believes compulsive drug use is an addict's self medication to psychological suffering.

Since it has been theorized that addiction serves as an adaptive function to the user, a substitution for the addiction seems logical. Hypnotherapy can be this

substitute not only for its ASC properties but perhaps also for its mastery properties. Addicts can benefit from the drug free ASC high as well as the self confidence which may be created as a result of the hypnotherapy work.

In summary, then, if taking drugs has indeed served as a coping mechanism to psychological sufferings (anxiety, mood states, relationship problems...) then, with its removal during the recovery phase comes a need for healthier substitutions in order to compensate for the loss. Since the subjects in Group A felt "better able to cope, more self assured, more in focus..." (see Appendix H) as a result of the hypnotherapy, then perhaps using a trance induced ASC will serve as an adaptive coping mechanism and aid in their capacity to feel more self assured, competent, integrated and disciplined during their recovery process.

Furthermore, if patients can be taught to do self hypnosis during their recovery process, then perhaps they will master their ability to feel confident and competent about their sobriety. Although the addicts in this study were not taught how to engage in self hypnosis, future research could be done to validate the

use of self hypnosis as an effective tool in the treatment of addiction.

The similarities between a substance abuse high and a trance induced high.

The similarities between drug induced highs to trance induced highs have been highlighted through this study. The subjects in Group A reported their post group experience of ASC as similar to a drug induced ASC, using words like "numbed, escaped reality, feeling good, relaxed/comfortable and peaceful/calm." This being the case, Schoen's (1985) and McPeake and his colleagues' (1991) theoretical arguments which state that addicts could substitute drug free ASC for chemical highs have been reasonably supported. Since addicts like ASC and hypnosis produces natural ASC, they may be able to benefit from a hypnotic therapeutic paradigm in which they learn how to self soothe by drug free ASC. This is extremely exciting material because the addicts themselves reported what it felt like to be high from psychoactive substances and then subsequently reported similar feelings after experiencing an ASC from the experimental process of group hypnosis. Since this was the core idea being investigated in this study, positive results are encouraging. Based on this finding and the

theoretical propositions of Schoen and McPeake and his associates, there seems to be hope for addicts to utilize a drug free ASC as an effective coping mechanism over the self destructive strategies of drug induced ASC.

It should be reiterated that with any self report inventory comes a subjective interpretation reflecting one's perceptual beliefs of the experience. Since a self report measurement has been used in this study, this caveat needs to be kept in mind. Perhaps future research warrants physiological measurements, such as EEG's, galvanic skin responses and blood tests in order to establish more objective verification of such shifts in consciousness. These self report measurements could then be compared to physiological responses as found in the meditative and hypnotic states. Similarities and correlations could be explored in terms of different degrees of ASC (ie: natural highs, drug induced highs, meditative states, etc...) and perhaps a crisper definition of a high could be established.

Although it could be inferred that the subjects in Group A felt an ASC at posttreatment as a direct result of the hypnotic intervention, the fact that Group B also felt an ASC at midpoint, but not at posttreatment, is

worth pursuing. There is a possibility, as in any experiment, that the behavior of the subjects was shaped or produced by experimentation itself. This kind of change in behavior is typically referred to as an artifact of experimentation (Matheson et al., 1978) which implies that the behavior is changed as a result of the observational process of the experiment itself rather than the actual experimental manipulation. Three kinds of artifacts of experimentation will be briefly mentioned. The Hawthorne effect (Roethlisberger & Dickson, 1939) refers to "a change in observed behavior attributable directly to the fact that the subjects are aware that data are being collected" (Matheson et al., 1978, p. 246). Sommer (1968) points out, however, that the Hawthorne effect should not be treated as a source of error because human expectations and beliefs can not simply be eliminated. In fact, Matheson and his colleagues believe the Hawthorne effect should be "recognized as an instance of a fundamental phenomenon of human nature rather than merely an instance of lack of control" (p. 246).

The second artifact, demand characteristics, refers to the cues to fulfill expectations which the experimenter may give to the subjects which the subjects

then fulfill (Orne, 1969). Even though the researcher may not provide direct cues, the subjects may be able to construct their own reality of what is expected of them and then act accordingly. The third artifact, experimenter-expectancy-bias effect, refers to the possibility that the assumptions and expectations of the researcher actually influences the experimental design (Rosenthal, 1969). The researcher could unintentionally bias the responses of the subjects so that the data ends up supporting the researchers' predictions.

These artifacts of experimentation can be alive in any experimental design and should be controlled as much as possible. This writer does not believe that the results of this study were based on artifacts, but rather on the success of the intervention. Controlling for such artifacts was attempted by having two control groups (Group B and C) rather than only one; randomizing the subjects and having a Marathon House staff sit in on all group sessions and fill out a rating scale on the respondent's observable behavior. Experimenter bias did not seem strong based on the results of these scales (see Appendixes E and F). The monitor checked the "yes" box 100% of the time when observing the "group as a whole" in assessing the likelihood that the residents

looked either tranced or musculary relaxed. Nevertheless, these artifacts are offered as possible, although unlikely, explanations on why Group A and B felt high at midpoint. Group B may have felt high midway through their relaxation exercises simply because they were so relaxed and calm. Relaxation and calmness may be associated with a drug high and therefore when relaxed, they felt high. Also the novelty of receiving relaxation exercises could have produced a high, but then the novelty did not last, nor did the high.

In summary, the subjects in Group A definitely reported their post group experience of ASC as similar to a drug induced ASC. As stated before, this is exciting material because the addicts themselves reported what it felt like to be high from psychoactive substances and then subsequently reported similar feelings after experiencing an ASC from the experimental process of group hypnosis. Since this was the core idea being investigated in this study, positive results are encouraging. Based on this finding and the theoretical propositions of Schoen and McPeake and his colleagues, there seems to be hope for addicts to utilize a drug free ASC as an effective coping mechanism over the self destructive strategies of drug induced ASC.

Conclusions about Qualitative Results

It has been demonstrated that using drugs has served as a coping mechanism to psychological sufferings and with its removal comes a need for healthier substitutions in order to compensate for the loss. Since the subjects in Group A felt "better able to cope, more self assured, more in focus..." as a result of the hypnotherapy, then perhaps using a trance induced ASC will serve as an adaptive coping mechanism and aid in their capacity to feel more self assured, competent, integrated and disciplined during their recovery process. Retrospectively, it is recommended that instruments other than anxiety and mood measures be given to determine the benefits of hypnotherapy. Self esteem, coping and mastery scales are suggested as other ways in which the benefits of hypnotherapy can be measured. Physiological measurements are also recommended in order to capture a more objective understanding of an ASC.

Since the subjects in Group A reported their post group experience of ASC as similar to a drug induced ASC, perhaps the loss they experience when recovering can be substituted with healthy ASC. Utilizing a drug free ASC as an effective coping mechanism over the self

destructive strategies of drug induced ASC is certainly an example of adaptive coping.

Limitation and Future Research Considerations

One limitation of the study was the small sample size which could have made it difficult to detect more statistical differences (Matheson et al., 1978) and limits the validity of the analyses. Future replications should consider more than 32 subjects for the entire study.

A second limitation was the confounding variable of history (Campbell & Stanley, 1963) which was further heightened by the subjects all living together in the same facility. Although the End of Study Questionnaire (see Appendix G) clearly demonstrated that 41% reported discussing the study amongst themselves, this extraneous variable is difficult to control while everyone is living in the same facility. It is recommended that subjects be chosen from different facilities in order to achieve more control of this confound.

A third limitation was the maturation variable (Campbell & Stanley, 1963), which alludes to the processes inherent in the subjects' responses as a function of the passage of time. This, of course, can

be seen in any experiment and is not idiosyncratic to the current study.

A fourth limitation was the effects of repeated testing (Campbell & Stanley, 1963), which could have affected the subjects' responses, as they may have grown tired of repeatedly answering the same questions. Rather than test after each and every session, it is suggested that only pre, mid and post group responses are used in order to reduce possible repeated testing effects.

A fifth limitation could have been effects from any of the artifacts of experimentation (Matheson et al., 1978) which may have swayed results in favor of the desired predictions. These artifacts, however, are unlikely and not evident. Future researchers need to be aware of such artifacts and do the best they can to recognize, if not eliminate, such artifacts.

Since statistical differences were seen by the fourth treatment session, one could speculate that four treatment sessions are efficacious when utilizing hypnotic interventions in the treatment of addictions. Therefore, it is suggested that further research be done see how many hypnotherapy sessions appear to be the most advantageous to one's recovery process.

It is recommended that instruments other than anxiety and mood measures be given to determine the benefits of hypnotherapy. Self esteem, coping and mastery scales are suggested as other ways in which the benefits of hypnotherapy can be measured. Physiological measurements are also recommended in order to capture a more objective understanding of an ASC.

Conclusions

Since there were statistically significant differences between the three groups in response to the treatment interventions, some comments can be made about the efficacy of utilizing hypnotherapy in the service of maintaining sobriety for the recovering addict.

The results of this study presents the possibility for implementation of an alternative treatment for recovering addicts. Group hypnotherapy (when susceptibility is also considered) helped recovering people feel less anxious and improved their moods; participants in the group hypnotherapy treatment talked about experiencing a sense of mastery/competence. Furthermore, there was evidence to support that a trance induced high is similar to a drug induced high in its ASC properties. Therefore, if ASC can be produced in a healthy, drug free way, and ASC can assist people in

feeling good about themselves and ASC tends to be one of the goals of drug usage, then hypnosis seems to be a treatment technique of choice. Both Schoen and McPeake and his associates conceptually support this type of intervention, and this study helped provide some empirical support for their theoretical underpinnings. Moreover, with the changes in managed health care and the shift toward briefer treatment modalities, short term group hypnotherapy is a feasible treatment alternative to conventional therapies. Since statistical differences were seen by the fourth seesion, one could speculate that four treatment sessions are efficacious when utilizing hypnotic interventions in the treatment of addictions. Teaching addicts self hypnosis may be another avenue to explore as it would provide the adaptive functions of trance yet the capability of mastering ASC when needed. Hopefully, the results of this study will not only lead to replications, but will also give incentive for psychologists to gain sophistication in using alternative treatment paradigms when providing services to their addicted clients.

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Appendix A

Demographics

Control #_____ Date_____

Age_____ Male_____ Female_____ Race_____

Education_____ Martial status_____

Admission Date_____

1. Drugs of choice:

    1st choice: _____

    Length of use: _____

    2nd choice: _____

    Length of use: _____

2. List all drugs used_____

_____

_____

_____

3. Longest amount of "clean time" _____

4. At what age did you first start using drugs?

_____

5. Were other family members also using drugs at the time of your first use?_____ If so, who was using and what substances were being used?

_____

_____

_____

6. How do you remember feeling about yourself at the time of your first use? Did conditions in the home contribute to your use? Please describe

_____

_____

_____

_____

7. Where else have you been for treatment? How long did you stay? _____

_____

_____

8. How long after each treatment did it take before you got high? _____

9. Briefly, in your own words, what is the main reason you got high? _____

_____

_____

_____

10. What is the biggest fear you will have to face on completion of Marathon House? _____

_____

_____

_____

Appendix B

CONSENT TO PARTICIPATE IN A SPECIALIZED GROUP:

I understand that by signing this form I am volunteering to participate in a dissertation project being conducted at Marathon House. Cheryl A. Krupnick, MA, is completing her Doctorate at Antioch New England Graduate School, in Keene, NH. As part of her dissertation, she is studying the benefit of different types of groups in the treatment of addiction.

This study will be conducted according to American Psychological Association (APA) guidelines, maintaining both anonymity and confidentiality and in accordance with Federal Confidentiality guidelines (42 CFR Part 2). All questionnaires will be coded to preserve anonymity. I understand I can choose not to participate at any time. I also understand this study will be conducted under the supervision of John Ahman, Director of Marathon House in Dublin, NH. When the study is done and results are compiled, reports will be made available to me.

_____ _____

Resident Date

_____ _____

Marathon House Staff Date

_____ _____

Cheryl A. Krupnick Date

Appendix C

Post Group Questionnaire

Please circle the number which indicates the degree to which you agree with the following statements. Answer each item based on your reaction to todays group. Answer with the first response which comes to mind.

1.....2.....3.....4.....5.....6

strongly agree | moderately agree | mildly agree | mildly disagree | moderately disagree | strongly disagree

Control # _____ Date_____

1. I felt connected to the group members.

   1.....2.....3.....4.....5.....6

2. I liked the group experience.

   1.....2.....3.....4.....5.....6

3. My mood improved as a result of participation in the group.

   1.....2.....3.....4.....5.....6

4. I had thoughts about my early childhood while in the group.

   1.....2.....3.....4.....5.....6

5. I had moments that I "drifted off" during the group.

   1.....2.....3.....4.....5.....6

6. I thought of things other than what I was directed to think about.

1.....2.....3.....4.....5.....6

7. My sense of time was different while in the group.

1.....2.....3.....4.....5.....6

8. Participating in this group was a positive experience for me.

1.....2.....3.....4.....5.....6

9. I was attentive during the group.

1.....2.....3.....4.....5.....6

10. I looked forward to the group exercise.

1.....2.....3.....4.....5.....6

11. I was disappointed in the group exercise.

1.....2.....3.....4.....5.....6

12. My level of trance felt strong.

1.....2.....3.....4.....5.....6

13. At this moment, I have a desire to use my drug of choice.

1.....2.....3.....4.....5.....6

14. I felt _____ when I came into the group.

15. After the group, I feel _____

_____

16. Please check any items which described your experience today:

_____relaxed, comfortable

_____numbed

_____emotionally heightened

_____alert

_____peaceful/calm

_____floating/dreamy

_____feeling distant

_____escaped reality momentarily

_____confused

_____feeling good

_____self absorbed

_____slowed pulse/respiration

17. Please list all feelings, states, or sensations you experienced today that are not mentioned in the above checklist.

_____

_____

_____

_____

_____

_____

18. When "high" on drugs or alcohol, I usually feel:

_____relaxed, comfortable

_____numbed

_____emotionally heightened

_____alert

_____peaceful/calm

_____floating/dreamy

_____feeling distant

_____escaped reality momentarily

_____confused

_____feeling good

_____self absorbed

_____slowed pulse/respiration

19. Please list all feelings, states, or sensations you experience while under the influence that are not mentioned in the above checklist.

_____

_____

_____

_____

Appendix D

End of Study Questionnaire

Control # _____ Date_____

1) While you participated in this study did you find yourself talking to anyone else at Marathon House (staff or residents) about your group experience?

Yes____ No_____

2) If yes, could you share what you talked about and any ideas which were generated as a result of these discussions? _____

_____

_____

_____

_____

_____

_____

_____

Appendix E

RATING SCALE (Group A)

As you monitor this group, please observe the residents and check off the appropriate boxes as they apply.

Monitor_____ Date_____

Criteria:	Yes	No
Faces look relaxed	___	___
Body posture is not tense	___	___
Breathing looks even	___	___
Concentration is noted	___	___
Eyes are closed	___	___

Appendix F

RATING SCALE (Group B)

As you monitor this group, please observe the residents and check off the appropriate boxes as they apply.

Monitor_____ Date_____

Criteria:	Yes	No
Muscles were tensed	___	__
Muscle tension was held	___	__
Muscles were then relaxed	___	__
Deep breaths were inhaled	___	__
Deep breaths were exhaled	___	__

Appendix G

Subjects Feelings Prior to the Group Experiences and after the Group Experiences as Reported on Appendix C (Questions # 14, 15, 17).

Feelings

Group A (Hypnotherapy)

Pre	Post
skeptical	relaxed
content	calm
relaxed	content
angry	confused
tense	blank
upset	upset
scared	more relaxed
anxious	drifted
happy	better
disouraged	more confident
insecure	less tension
angry	great
hurt	at peace
calm	alert
unsettled	less pain
upset	peaceful
frustrated	shaky
physical pain	in a dream trance
powerlessness	dazed
disconnected	floating
scattered	weeping
blah	dreamy
physically sore	weeping
homesick	felt heavy
ease	felt small
comfortable	more sure of self
strained	ready for challenges
stressed out	very calm
curious	good about self
eager	better able to cope
happy	more self assured
	less sore/achy
	more receptive
	more at ease
	sleepy, lethargic
	somewhat disoriented

Appendix G

Group A Feelings (continued)

Pre	Post
	drowsy
	reverted to childhood
	more in focus
	relieved
	sense of well being
	sense of peace
	peace in self
	more alert
	dropping sensation
	falling
	can't remember
	flying backward
	tired
	slight headache
	introspective
	hopeful
	nostalgic
	motivated
	scattered thoughts
	hurt but safety
	very serene

Appendix G

Group B (Muscle Relaxation)
Feelings

Pre	Post
nervous	calmer
tense	more relaxed
upset	less tense
apprehensive	disappointed
anticipation	peaceful
very tense	comfortable
exhausted	sleepy
achy muscles	so relaxed
sad	muscles loosened
confused	better
lonely	mellow
worried	mood changed
tired	still tired
worn out	depressed but calmer
jittery	sad
depressed	resigned
empty	calmer
scared	great
very angry	very comfortable
fair	very much at peace
uncomfortable	good
good	relaxed
sore	more content
frustrated	more relaxed
overwhelmed	collected
alive	still exhausted
uneasy	bigger piece of shit
pissed off	totally alienated
fairly happy	frustrated
piece of shit	aggravated
	tired
	bored
	loss
	sadness
	warm
	out of breathe
	tense
	muddled
	jumpy thoughts
	warmth of muscles
	could not rest mind
	still achy
	in touch with God
	out of breathe

Appendix H

Subjects Feelings after the Group Experiences as Reported on Appendix G and Delineated into Subtitles

Group A (Hypnotherapy)	Group B (Muscle Relaxation)
Relaxation indicators	
relaxed	calmer
calm	relaxed
less tension	less tense
peaceful	comfortable
very serene	peaceful
sleepy	mellow
lethargic	resigned
very calm	sleepy
more at ease	more content
	muscles loosened
	released tension
	warmth of muscles
	very much at peace
	depressed but calmer
Trance indicators	
drifted	
drowsy	
disoriented	
dropping sensation	
falling sensation	
can't remember	
dazed	
floating	
flying backward	
dreamy	
felt heavy	
felt small	
confused	
blank	
in a dream trance	
reverted to childhood	