CHEMICAL DEPENDENCY AND RELAPSE PREVENTION:

HAVING FUN INSTEAD OF ABSTINENCE

by

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ABSTRACT

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Effectiveness of chemical dependency treatment is signified by prevention of relapse in the recovering person. Lifestyle changes to support ongoing sobriety have become the focus of relapse prevention treatment. To thrive in recovery, persons must learn and participate in activities that give a *natural high*, reduce stress and bring pleasure. To disown or disregard the innate human desire for mood alteration, is a "set up" for relapse. Instead of abstinence in recovery the focus shifts from exogenous chemical use to having fun in order to stimulate endogenous neurotransmission and the *natural high.* Recent trends toward alternative medicine have opened our awareness to the myriad ways that health can be achieved. As the knowledge of neurotransmission is applied to relapse prevention, ways of measuring what works and success of that application must be established.

This research study endeavored to show a positive correlation between a recovering person's ability to have fun and successful relapse prevention as measured in number of

months clean and sober. Having fun is a highly subjective experience and a difficult dynamic to measure. A combination of two tests were used to measure the recovering person's perceptions of having fun: the Multidimensional Sense of Humor Scale and Mood Related Pleasant Events Schedule. Statistical analysis on the data collected revealed that there was a positive and significant correlation between MSHS scores and sobriety in the subjects studied in this research.

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Chapter 1

Introduction

Psychoactive Drug Use

Since prehistoric time, humans have used psychoactive substances to change mood, relieve stress, and experience pleasure. Studies of evolutionary biology have hypothesized that human desire to alter mood has genetic origins (Frye, 1986.) Frye postulates that humans evolved to produce and utilize endogenous chemicals (similar to drugs of abuse) in order to adapt to adverse conditions. Subsequent human discovery and use of exogenous psychoactive substances rapidly led to erratic behavior and societal problems (Milkman & Sederer, 1990.) Over the centuries, human desire to use psychoactive drugs has become more sophisticated in conjunction with the environmental complexities of today's world. Advanced technology has contributed refined and extremely powerful drugs in massive supply. Modern transportation makes dangerous chemicals readily and easily available in all parts of the world. Human lifestyles of intense stress create high demand for relief, relaxation and mood alteration. Accelerated and ongoing use of psychoactive drugs has developed into an epidemic of chemical dependency with increased tolerance, loss of control and devastating consequences. Indeed, in 1992 (the most recent year that statistics are available) the overall cost to our society for alcohol/drug abuse was $246 billion (National Institute of Health, 1998). There is no way to measure a total of emotional costs suffered by addicts and their families.

Chemical Dependency

Chemical dependency is a multidimensional disorder with biological, psychological, social, cultural and spiritual components. Many internal and external systems interact to culminate in the supposed cause of an individual's addiction (Milkman, 1990.) Genetic

and environmental factors contribute to the individual's desire for mood alteration. Individuals who have become addicted repeatedly used psychoactive drugs to alter their brain chemistry. They become dependent upon the psychoactive drug to provide stress relief, to relax and socialize, to feel excitement and to have fun. Drugs of abuse are classified into three main groups: central nervous system depressants, central nervous system stimulants and hallucinogens. Addicted individuals are drawn to a "drug of choice" based on their need to achieve satiation (depressants), arousal (stimulants) or fantasy experience (hallucinogens) (Cohen, 1985, Milkman & Sunderwirth, 1983, and Hopson, 1988.)

Addictive Behaviors

The 1980's popularized research on the topic of endorphins and made "runner's high" a household phrase (Hopson, 1988). The 1990's have "upped the ante" to popularize extreme sports. A rush similar to the high associated with use of cocaine or methamphetamine is sought through activities such as skiing or bicycling down near-vertical slopes, free-solo rock climbing, bungee-jumping or hang-gliding. No exogenous chemical need be consumed. The body naturally releases strong stimulant chemicals with the survival "fight or flight" response (Milkman & Sunderwirth, 1983). Studying neurotransmission and biochemical reactions originated with research on chemical dependency. More recently the focus of such studies has turned to the addictive potential of behaviors. Milkman and Sunderwirth (1983) define addiction as "self induced changes in neurotransmission that result in problem behaviors" (Milkman & Sunderwirth, 1983, p. 38). We have come to understand that activities can be mind-altering, carry the risk of addiction, and are associated with loss of control and continuation despite negative consequences (Sunderwirth, 1990). These activities

include such behaviors as gambling, promiscuous sex, compulsive spending and crime.

Cravings

Cravings for the very chemical that causes devastating consequences are the mysterious spontaneous evil that recovering persons long to be free of. Alcoholics Anonymous uses the words "cunning, baffling and powerful" (AA World Service, 1976, p. 68). Scientific research has now reduced this mysterious phenomenon, craving, to a chemical depletion of opiatelike neurotransmitters which moderate an individual's emotions within the brain's pleasure center (Milkman & Sunderwirth, 1983). The desired feeling determines the activity or chemical, which is craved. The craving is the neurochemical signal being sent from hungry receptor sites within the brain demanding that the individual obtain satiation, arousal or fantasy experience.

Relapse Prevention

Management of cravings is a major difficulty in relapse prevention (Gorski, 1986). Cravings occur long after psychoactive drugs have cleared the body by detoxification or metabolism (Doweiko, 1993). In fact cravings are known to recur throughout recovery, and this is to be expected given the classical conditioning that occurs with repeated psychoactive drug use (Jung, 1994). Internal and environmental cues have been found to precede cravings which can lead to relapse (Jung, 1994, and Shiffman, 1992). Negative emotional states such as anger or depression account for greater than 33% of relapse for alcoholics, smokers, gamblers and overeaters (Marlatt & Gordon, 1985). Social situations, interpersonal conflict and peer pressure have been identified as frequent environmental causes for relapse (Jung, 1994). Cravings are generated as a perceived need to relieve stress, socialize, recreate or have fun. The critical problem for recovering individuals is to satisfy cravings and maintain abstinence from the substance/behavior

that brings devastating consequences.

Psychological Health and Humor

The healing potential of humor only recently became a topic for conventional research. In 1979 Norman Cousins published Anatomy of an Illness, which was followed by a barrage of literature and scientific studies on the therapeutic value of humor (Zhe, 1991). These studies have shown that laughter is a muscle relaxant, improves oxygenation and circulation, boosts the immune system, increases neurochemical transmission for alertness and releases endorphins for pain control (Rader, 1999). Developing a working definition of humor and devising an instrument to measure humor have been challenging to scientists (Thorson, Powell, Sarmany-Schuller, & Hampes, 1997). Thorson et.al. state that humor includes the ability to have fun, a sense of playfulness, being able to laugh, comic release of tension, recognizing life's absurdities, being able to amuse self and others, and enjoy funny situations. They set out to develop an instrument to capture and measure these very dynamics. The Multidimensional Sense of Humor Scale (MSHS) was developed by Thorson and associates to measure humor as a means of coping (Thorson, Powell, Sarmany-Schuller, & Hampes, 1997). The MSHS instrument will later be described in the methodology section of this study.

Having Fun

Research has shown that fun activities such as meditation, falling in love, aerobic exercise, painting, listening to or making music, cuddling a pet, laughing and wilderness hiking can produce psycho-neurochemical responses to alter consciousness (Weil & Rosen, 1983). Having fun is a very subjective experience. The dictionary definition of fun contains similar phrases as those listed above for humor. A fun activity for one individual could conceivably be a dreaded task for the next person. Furthermore, fun can

be had in a variety of ways, which include components of relaxation, recreation, experiencing pleasure and socialization.

Relaxation

Relaxation is a soothing activity which decreases tension; it is relief from work, effort or a release from rigid or strict standards (Webster, 1991). Relaxation includes being entertained. Another synonym is leisure which means "freedom from demands of work or duty" (Webster, 1991, p. 775). Stress reduction is implied in relaxation and stress management activities would be methods to enact relaxation.

Recreation

Recreation is defined as refreshment by means of a pastime, physical activity or creative activity (Webster, 1991). The word is derived from create, which means to evolve from one's imagination. Creativity is generative, brings forth energy and renews or refreshes (Webster, 1991). God was probably having fun on those six days when he was creating heaven and earth.

Pleasure

Pleasure is defined as enjoyment or satisfaction from something that is to one's liking; gratification; delight (Webster, 1991). Pleasure involves arousal and stirring up of emotions; it assumes that sensation is occurring. A further look in the dictionary for the word sensual reveals: "sensual pleasure" and "arousing . . . gratifying the senses or appetites" (Webster, 1991, p. 1221).

Socialization

According to Webster, socializing is "associating or mingling sociably with others" (Webster, 1991, p. 1270). A synonymous word frequently used in Alcoholics Anonymous is fellowship which means friendly relationship; companionship; camaraderie; sense of belonging (AA World Service, 1976). Socializing helps people

feel connected, staves off loneliness for most, and enables a context in which many people have fun.

In conclusion, having fun can mean many things to many people; we enjoy a wide array of events to cause ourselves fun. Since having fun is a subjective experience, it is a difficult dynamic to measure. Researchers have developed tools to measure happiness and satisfaction of life. One tool even has an amusing title; the "Hassles and Uplifts" test attempts to measure people's ability to cope with life's frustrations by enjoying uplifts, or in another word, fun (Budd & Heilman, 1997). Another tool has been developed to take into consideration how often the subject has engaged in fun in the past month and how much fun the subject perceived from the events. This tool is the Mood Related Pleasant Events Schedule (MRPES). The MRPES is a 49 item test developed by D. J. MacPhillamy and P.M. Lewinsohn to measure frequency and enjoyment of pleasant events (Fischer & Corcoran, 1994). The MRPES instrument will later be described in the methodology section of this study.

Having Fun as the Focus of Relapse Prevention

Research on effectiveness of treatment has shown that treatment per se is less influential than experiences, conditions and lifestyle changes that occur for the person in the months after treatment (Mackay & Marlatt, 1991). It is therefore imperative that focus on teaching and supporting such lifestyle changes occurs in relapse prevention therapy. To thrive in recovery, persons must learn and participate in activities that give a natural high, reduce stress, and bring pleasure. To disown or disregard the innate human desire for mood alteration is a "set up" for relapse. Being sober (somber or serious) becomes an oxymoron because being sober must include having fun. Thus the concept of "total abstinence" is not totally correct. Instead of abstinence in recovery the focus shifts

from exogenous chemical use to having fun in order to stimulate endogenous neurotransmission and the natural high. There is a wide array of events to cause ourselves fun. Recent trends toward alternative medicine have opened our awareness to the myriad ways that health can be achieved. As the knowledge of neurotransmission is applied to relapse prevention, ways of measuring what works and success of that application must be established. The purpose of this research study was to show that successful relapse prevention is closely associated with having fun.

Statement of the Problem

The purpose of this study was to determine the degree of correlation between a recovering person's ability to have fun as measured by scores on the MSHS and MRPES and the recovering person's amount of relapse prevention success as measured in number of months clean and sober.

The variables investigated were "ability to have fun" and "amount of relapse prevention success."

The operational definition of "ability to have fun" was established via scores on the Multidimensional Sense of Humor Scale (MSHS) and the Mood Related Pleasant Events Schedule (MRPES).

The operational definition of "amount of relapse prevention success" was measured by the subjects' self-reported number of months living clean and sober.

The subjects in this study were 35 outpatient clients participating in chemical dependency Continuing Care programs at Gundersen Lutheran in the winter of 1999.

Data collection was carried out by the researcher personally presenting a research packet to each client in attendance at the program. Clients were given the option to participate voluntarily. The packet contained a cover letter, instruction sheet and the

tests. Participants turned in the research materials to the researcher upon leaving the building.

The research hypotheses for this study were as follows:

H-1 There is a positive correlation between the recovering subjects' MSHS and MRPES scores (measuring ability to have fun) and the relapse prevention success as measured in number of months of sobriety.

H-0 There is no correlation between the recovering subjects' MSHS and MRPES scores (measuring ability to have fun) and the relapse prevention success as measured in number of months of sobriety.

Chapter 2

Literature Review

Psychoactive Drug Use

Human use of psychoactive substances predates written records. Review of the literature on ancient man's use of mood altering chemicals reveals that people throughout the world utilized specific psychoactive drugs according to cultural traditions and native availability (Tabakoff, 1990). According to Ray and Kser, alcohol in the form of mead (a form of beer made from fermented honey) was commonly used in 8000 B.C. and wine was used in 6400 B.C. (Ray & Ksir, 1987). In 3000 B.C., Central Asians and Chinese used marijuana in folk medicine practices. Archeological findings in Peru and Bolivia indicate that 4000 years ago Inca natives of the high plains chewed coca leaves for the effects of cocaine (Munoz, 1991). Ancient Aztecs drank a potent liquor called pulque (Milkman & Sunderwirth, 1987). The use of peyote is known to be a pre-Columbian Native American practice. Ancient Greek and Chinese pharmacies used opium for pain relief and noted that it gave a powerful sensation of pleasure (Munoz, 1991). In 1700 B.C., Babylonian law in the Code of Hammurabi restricted sales of wine because of associated riotous behavior (Harper, 1904). Hindus used cannabis for its anesthetic value. Brahmans tried to restrict the far-reaching use of cannabis in India by limiting it to religious ceremony (Nahas, 1973). Nahas also reports that in fourteenth century Egypt, hashish use was widespread and problematic. Attempts to control social consequences were documented by the government order to uproot all cannabis plants and condemn all users to have their teeth extracted (Nahas, 1973). The book of Proverbs, in the Old Testament, clearly describes the powerful effects of alcohol to include pleasure,

tolerance, pain and addiction (Milkman & Sunderwirth, 1987). Indeed, humans have a long history of using mood-altering chemicals to relieve stress/pain and induce pleasure.

Why have humans been engaged with psychoactive chemical use? Studies of evolutionary biology have hypothesized that human desire to alter mood has genetic origins (Frye, 1986). In 1974, a scientific breakthrough discovery occurred with the isolation and identification of peptide molecules within neurochemistry. These neuropeptides, famously known as enkephalins and endorphins, are similar to morphine (Hughes, 1975). Literally thousands of articles praise the power of endorphins and enkephalins in popular and scientific literature. The discovery of endogenous psychoactive chemicals opened new doors to understanding human use of exogenous mood altering chemicals. Frye (1986) uses the sociobiologic paradigm of evolution by natural selection to explain drug-using behavior. Frye postulates that use of exogenous mood altering chemicals mimics the experience of endogenous chemical reactions which have historically increased the individuals chances of survival (Frye, 1981). Frye states: "the ability to withhold unpleasant sensations from oneself may permit the individual to take steps to overcome unpleasant stress-producing stimuli" (Frye, 1986, p. 268). A similar perspective is described in Optimism: The Biology of Hope (Tiger, 1979). Tiger observes that humans have a more complicated brain than lower life forms, thus humans would have more ability to perceive and comprehend environmental hazards and problem situations. Furthermore, Tiger explains in his theory, humans possess an ability to censor threatening and depressing thoughts in order to preserve a sense of hope and persevere with problem solving. Utilizing an instinctual form of denial has been a coping skill. This evolutionary theory attempts to account for the presence of endogenous morphine

and lends a neurochemical explanation for denial.

Humans have been engaged with psychoactive chemicals in order to alter perception. Initially the altered perception may have been a coping mechanism for survival. Subsequent exogenous psychoactive drug use has resulted in an ongoing desire for more of the psychoactive effect. Over the centuries, human desire to use psychoactive drugs has evolved to a sophisticated appetite. Contributors to this phenomenon have been refined potency of drugs, ready access to multiple drugs and lifestyles of intense demand for instant gratification. The progression of chemical use is obvious. Alcohol, the most common mood altering chemical has long been used to experience pleasure, to induce sleep and control pain in a consistent and predictable manner. Mood altering chemical use in our modern world changed drastically with the development of the hypodermic needle, the dawn of pharmaceutical mass production and a rampant black market for disbursement of pharmaceuticals and street drugs (Doweiko, 1993). The media glamorizes drug use by lending an aura of mystery and excitement to the drug culture. There is also an implied "society high," a status that accompanies the use of expensive mood altering recreational drugs (Doweiko, 1993). The easy manufacture of potent psychoactive drugs in clandestine amateur laboratories has dawned an age of epidemic drug use.

Chemical Dependency

Review of the literature on the broad topic of chemical dependency reveals a multitude of studies that attempt to explain a cause for the disorder. Explanations include metabolic deficiencies, behavioral-social learning, deficient willpower, moral deprivation, psychological ego deficits and central nervous system chemical imbalances (Schaffer and Milkman, 1985).

The dominant theory endorsed by chemical dependency treatment programs has been the "classic disease concept of alcoholism" (Fingarette, 1988). The disease model has been criticized because it minimizes personal and social responsibility. Schaffer (1985) postulates that even though chemical dependency precipitates disease processes, it is not clear that a single underlying disease process is the cause of chemical dependency. Schaffer states that chemical dependency is more than a disease concept; it is a social phenomenon that mimics contagious diseases. Most current literature on chemical dependency recognizes the disorder to be multidimensional, including biological, psychological, social, cultural and spiritual components.

Recent advances in scientific understanding of neurotransmission have stimulated research investigations into the neurochemistry of addiction. Milkman and Sunderwirth eloquently describe neurochemistry in their book, Craving for Ecstasy: "[the brain] may be described as the most complex entity in the universe. Its fifty billion or so nerve cells, called neurons, communicate with each other through trillions of interconnections. This talking is referred to as neurotransmission, and its language is chemistry" (Milkman & Sunderwirth, 1987, p. 6). The biochemistry of neurotransmission determines all perception, emotion and behavior. Alteration in biochemistry by ingestion of exogenous psychoactive chemicals results in altered perception, mood alteration and behavioral changes, i.e. the intoxicated state.

The brain eventually restores neurotransmission to a baseline (homeostatic) level in order to maintain predictable function and ensure the organism's survival. Homeostatic neurotransmission is accomplished by various enzymatic changes (Goldstein & Goldstein, 1968). Homeostasis is also established via the neuron's self-regulatory

capacity to change sensitivity to either excessive or minimal neurotransmitter concentration (Cohen, 1988). In the case of chemical dependency these mechanisms of homeostasis account for the progressive changes (that occur with ongoing heavy chemical use) experienced as symptoms of increased tolerance, dependence and addiction (Sunderwirth, 1990). Individuals who have become addicted used psychoactive drugs to alter their brain chemistry. Homeostatic mechanisms require that the individual repeat and escalate the drug use in order to obtain similar neurotransmission and sensation. The over-extension of homeostatic mechanisms cause brain chemistry changes that are not readily reversible. The alteration of enzyme levels and neuron sensitivity are partially responsible for the addictive process (Sunderwirth, 1990). The individual develops increased tolerance, loss of control, dependence upon the drug for stress / pain relief and ongoing use despite devastating consequences.

An individual's personality and preferences strongly influence the choice of drug that is used. There are three main classes of mood-altering chemicals: central nervous system depressants, central nervous system stimulants and hallucinogens. Milkman and Frosch (1977) found a relationship between personality and drug of choice. People who prefer to handle stress by relaxing or isolating tend to prefer central nervous system depressants. Persons who cope with stress via physical or intellectual activity prefer drugs of the stimulant class. And persons who reduce tension by daydreaming and using imagery report preference for hallucinogenic type drugs. Milkman and Frosch termed these three styles for using drugs as "satiation" (depressants), "arousal" (stimulants), and "fantasy" (hallucinogens).

The satiation effect is similar to endogenous action of endorphins and enkephalins; satiation induces a decrease in neurotransmission i.e. a numbing effect. Addicts of the satiation effect generally avoid stimulation and prefer "mellowing out" sensations. Exogenous drugs of satiation (depressants) include alcohol, opiates, and tranquilizers.

The arousal type of gratification is similar to endogenous adrenaline – the chemical responsible for the "fight or flight" response. Arousal increases neurotransmission and a "high" is experienced as power, control, high energy or excitability. Exogenous drugs of arousal (stimulants) include cocaine and amphetamines.

The fantasy effect is similar to endogenous neurotransmitter action of dopamine, norepinephrine and serrotonin. These chemicals are experienced in dreamlike, rapid imaging, illogical time/space relationships and a surreal feeling. Exogenous drugs of fantasy include the hallucinogens peyote, marijuana, LSD and ecstasy.

In each case, it is the *effect* that the individual seeks out and obtains from the drug of their choice. It is actually the *effect* that the individual becomes psychologically dependent upon (Milkman & Sunderwirth, 1983). Some research has described a poly-addictive group of chemical users who indulge in excesses of all types. Nick-named "garbage can junkies", these addicts seek mood alteration of all types in variety – satiation, arousal and fantasy. The polychemical addict seeks all mood alteration *effects* and is not particular to what drug it may take to induce an effect (Westermeyer, 1979).

In the contemporary clinical setting, alcoholics and drug addicts rarely use only one drug or one type of drug. It is, however, very common that addiction occurs with the chemically dependent person able to identify a *drug of choice* which truly means their *effect of choice.*

Addictive Behaviors

The advances in neurochemistry opened doors to understanding the action of exogenous and endogenous drugs upon neurotransmission. Research on neurotransmission of addictive drugs lead to a more recent focus upon the addictive potential of certain activities. Milkman and Sunderwirth published an article entitled "The Chemistry of Craving" in 1983, and in it they state: "The term addiction was once reserved for dependency on drugs. Today it is applied to a range of compulsive behaviors as disparate as working too hard and eating too much chocolate" (p. 36). During the 1980's multitudes of studies concentrated on the effects of exercise upon endorphin levels. Soon it became common knowledge that activities could induce mood changes and "natural high" was a household phrase. Risk-taking behaviors soon came to be understood as having addictive potential because neurochemistry revealed its secrets. Extreme sports have become overwhelmingly popular, e.g. skiing or snowboarding near-vertical avalanche prone slopes, free solo rock climbing, and skydiving or para-gliding. Each of these can induce a powerful natural "rush" which is similar (chemically and experientially) to using cocaine or crystal methamphetamine. A new definition of addiction was introduced: self-induced changes in neurotransmission that result in behavior problems (Milkman & Sunderwirth, 1987).

How do these activities become addictive and cause behavior problems? The process runs parallel to that of chemical dependency. The desired high is experienced with the activity and then the effects "wear off" (homeostasis). The activity must be repeated in order to "get high" again. Repetitive activity loses novelty and thus demands ever-increasing intensity to induce an equitable high (increased tolerance). The increased risk associated with activity of greater intensity results in intermittent negative consequences.

Here lies the addictive potential of activities; ongoing participation at the level of risk associated with loss of control results in the phenomenon of "continuation despite negative consequences."

Addictive behaviors can also be classified into the same three "drugs of choice" groups: satiation, arousal and fantasy. Satiation activities induce the "mellowed, self-soothing, numbed" effect. Satiation activities may include binge eating, spending, overworking, sexual activity, television watching or internet engagement. Arousal activities involve stimulation and perhaps, risk and fear. Examples include driving racecars, gambling, the extreme sports, sexual risk taking and crime. Fantasy activities may include movies, computer games, daydreaming, role-playing games such as Dungeons and Dragons; fantasy experiences such as those enjoyed by the *USS Enterprise* crew in Star Trek's hologram.

Cravings

It seems paradoxical that the human, with capacity for logic, knowledge and forethought of consequences, would desire the very object that results in evil outcomes. Cravings are paradoxical. Desire for the *effect* of one's drug of choice is natural, explainable and can be expected. Humans have innate desire for pleasure. The brain interprets desire for pleasure into desire for what is known to be the deliverer of pleasure. Then the brain orchestrates a plan and actions to achieve that which it desires.

Neurochemistry of cravings has been an interesting topic of scientific research in recent decades. Literature focuses on the intricate mechanisms and multiple chemicals involved in the synaptic junctions of nerve endings (Milkman & Sunderwirth, 1982; Cohen, 1988). These studies show that ingestion of mood altering chemicals alters neurochemistry at the post-synaptic junctions. The neurochemical alterations result in

depletion of endogenous "satisfying" neurotransmitters thus resulting in an inability to reach homeostasis (Milkman & Sunderwirth, 1982). The person who uses mood-altering chemicals imposes a biochemical challenge to the very cells of their body. Compensatory chemicals are produced, other cellular functions are inhibited; a "new" homeostasis is established. As time and mood altering chemical use continues the body endeavors an ever-escalating compensatory process, desperately trying to attain homeostasis.

Studies of endorphins and enkephalins reveal that the largest distribution of the receptors for these neurotransmitters is in the limbic system of the brain (Milkman & Sunderwirth, 1992). The limbic system consists of a group of structures in the brain that mediate emotions and homeostasis (Webster, 1991). With the advances in neurochemistry we have come to understand that cravings have a chemical logic. The brain's pleasure center perceives a depletion in the chemicals that formerly were in adequate supply. Craving is a neurochemical signal, a request for homeostasis, and a demand for satiation, arousal or fantasy experience.

Classical conditioning occurs with repetitive chemical use (in conjunction with certain sights, smell, or other environmental cues) resulting in sensations of pleasure. As with Pavlov's dogs, the associated sights, smells or other environmental cues come to elicit the conditioned response of craving [salivating] for the chemical which brings on pleasure (Jung, 1994).

Albeit logical and reasonable, cravings are haunting, perplexing and duplicitous. To a person who has desire for both pleasure (interpreted as *effect* from the drug of choice)

and safety from negative consequences, a dilemma ensues. people in recovery gradually learn to manage this dilemma by developing relapse prevention skills (Gorski, 1990).

Relapse Prevention

The literature on chemical dependency treatment acknowledges that there is no one superior treatment approach (Miller, 1990). In fact some chemically dependent persons recover without receiving any treatment; longitudinal studies have documented such natural remissions (Donovan, Jessor, and Jessor, 1983; Vaillant, 1983). There are many myths about chemical dependency treatment, which have been held by professionals and the general public. Miller (1990) has dispelled some of the myths via a comprehensive review of treatment research; conclusions revealed that 1) some persons recover without treatment, 2) treatment (of various types) really works, 3) there are substantial differences in the effectiveness of different treatment approaches, 4) no one treatment approach can be proven "the best" for all chemically dependent people and 5) hospital, inpatient or intensive treatment is not necessarily more efficacious than less expensive treatment approaches (Miller, 1990). Studies have found that in the first four years after treatment an estimated 90% of recovering persons will relapse (National Institute of Alcohol Abuse & Alcoholism, 1989).

Recent growing awareness that relapse prevention is effective in blocking or at least limiting tendencies toward relapse has shifted some focus off treatment and toward aftercare (Doweiko, 1993). An aftercare program is designed with the assumption that treatment does not end upon discharge from the formal treatment program. Involvement in aftercare is found to be an essential predictor associated with decreased probability of relapse and subsequent hospitalization or medical treatment (Mackay & Marlatt, 1991). Regular participation in aftercare provides therapeutic social support, accountability and

opportunity for timely intervention upon potential problems. The goal of aftercare is relapse prevention – the focus is not so much cessation of drinking / using but more on maintaining behavior change (Mackay & Marlatt, 1991).

Relapse prevention is a relatively new and perplexing area of addiction research. It poses two natural questions: "Why do people relapse?" and "Why do people not relapse?" (Vaillant, 1990). Multifactorial considerations must be applied in studies of relapse. According to Chiauzzi (1990) four elements contribute to relapse; personality traits, substitute addictions, a narrow view of recovery and warning signals. Other researchers have classified risks for relapse as internal or external cues, based on observations that such stimuli precede cravings and relapses (Jung, 1994; Siffman, 1992). Individuals can identify high-risk situations as their personal stimulus factors, otherwise called their "red flags." To combat environmental triggers, Shiffman proposed that behavioral rehearsals would help clients learn to avoid the stimuli leading to relapse (Shiffman, 1992). Extensive research carried out by Marlatt and Gordon (1985) revealed that pre-lapse negative emotional states occurred in 38% alcohol relapses, 37% nicotine relapses, 19% heroine relapses, 47% gambling relapses and 33% over-eaters relapses. Marlatt and Gordon also identified external cues leading to relapse as interpersonal conflict, social pressure, physical setting and visual or olfactory cues. Recent studies on relapse have shown that the most frequent precipitant (53%) was both intrapersonal and interpersonal factors contributing to negative mood (Hodgins, el Guebaly & Armstrong, 1995). Hodgins et.al. found very interesting gender differences with relapse studies. Women were found to be more sensitive to interpersonal conflict and social influences, in fact the most often precursor to relapse for women was identified as a rift in a significant

relationship (Hodgins, el Guebaly & Armstrong, 1995). Jung (1994) proposes that cravings will lead to outcomes of lapse, relapse, or nonuse of alcohol depending upon the individual's coping responses. Thus social learning theory holds hope for the recovering person; there is value in possessing a repertoire of learned coping responses to apply when cravings occur.

Why do people not relapse? Longitudinal studies on sustained recovery reveal that better prognosis is associated with structure in a person's life (Vaillant, 1990). Such structure is established via compulsory supervision such as probation; accountability is provided with scheduled work hours. Structure is also established in a recovering person's life by routine weekly AA meeting attendance, outpatient aftercare contacts, scheduled sober recreation and daily reading of recovery literature. Structure is also provided in the form of monitored antabuse administration.

Two other influences upon sustained remission from the disease of chemical dependency include substitute dependencies and new relationships (Vaillant, 1990). Substitute dependencies have been observed with smoking and weight gain (which also carries threats to one's health). Substitute dependencies that promote wellness have been observed with compulsive trout fishing, running and other physical activities (Weil & Rosen, 1983; Hopson, 1988; Brant, 1999). New relationships help the recovering person to get emotional support without the debt and guilt associated with old relationships (Vaillant, 1990). New relationships with other recovering persons (instead of former drinking / using buddies) also promotes a lifestyle supportive of recovery.

Prudent relapse prevention treatment would incorporate all that has been learned in why people relapse and why people don't relapse.

Psychological Health and Humor

In recent years, the benefits of humor to health and well-being have become widely acknowledged. Hans Selye, the "father of stress" detailed the negative effects of negative emotions upon body chemistry and health status (Cousins, 1979). Modern scientific appreciation of humor was made famous with Norman Cousins' book, Anatomy of an Illness, published in 1979. Cousins researched the antithesis of Selye's work and discovered the benefits of positive emotions upon health status. Since then multitudes of research have been conducted to evaluate humor's effects on pain (Adams, 1992). Humor can be credited as a creative act that helps one transform pain or deviance into constructive growth (Siporin, 1984). Humor has been studied as a treatment method for mental illness, hypertension, cancer and chronic debilitating disease (Holdin, 1992). Medical scientists have carried out physiological studies to evaluate the effects of laughter. Dr. Rader defines these physiological benefits derived from laughing: muscles tone and relax to ease tension, circulation of blood increases, oxygenation improves, the immune system is strengthened, neurochemical transmission increases to cause alertness and experience pleasure (Rader, 1999). Dr. Fry eloquently describes the effect of laughter; "Mirth is accompanied by perturbations throughout the body. Our very biology, our physical being is touched. We are strummed like a guitar" (Fry, 1975, p. 47).

Humor is now incorporated into care provided in pediatrics wards and oncology units of hospitals; humor is recognized as valuable in programming elder care services. Nursing care, which has long been holistic, included recreation as early as the 1800's. The term "therapeutic recreation" emerged in the literature in the 1950's. During the 1960's and 1970"s therapeutic recreation gained momentum to become an organized profession (Carter, Van Andel, Robb, 1985).

The Latin root of the word humor is *umor* which means fluid. In his book, Lighten Up, Metcalf defines humor as "a set of survival skills that relieve tension, keeping us fluid and flexible instead of allowing us to become rigid and breakable in the face of relentless changes" (Melcalf & Felible, 1992, p. 9). There is a creativity component in humor that enables and empowers people to distance themselves from tragedy. Humor lubricates perspective into an attitude adjustment. Humor changes bodily fluids – the biochemical soup within a person, changes with humor even though life circumstances remain stressful. This is the tragic-comic paradox: "who perceives the irony, absurdity or outright comedy of his or her predicaments has achieved a wider more flexible more uplifting and therefore more desirable outlook on life..." (Mindness, 1976, p.335). Developing sense of humor and applying humor to one's life circumstances promotes psychological health.

No description of the benefits of humor can be as convincing as the story of Dr. Patch Adams. Dr. Adams recognized the healing power of humor in his "double-role" practices of medicine and clowning. Dr. Adams was disillusioned with the traditional practice of medicine, recognizing the limitations that propriety placed on the healing process. He courageously broke with tradition, used humor, made close personal connections with patients, and became even more convinced of humor's healing power in his clinical practice. In 1971 Dr. Adams opened a free hospital, sustained by donations (no government funds or third party reimbursements) to serve anyone who needed health care. The hospital was, and continues to be a success. Dr. Adams' story was documented in his book, Good Health is a Laughing Matter (Adams, 1992) and has been made famous by the well-loved movie, Patch Adams.

Humor continues to be a topic of great interest to scientists because of its value in healing and psychological health. Recent studies have focused on defining, identifying and measuring humor in order to assess its value in human adaptation. Thorson, et al have studied the use of humor with elderly people as they face the aging process, encroaching health problems and death (Thorson, Powell, Sarmany-Schuller, Hampes, 1997). The subtle shift of focus from "healing potential" toward a more prophylactic use of humor as "wellness preservative" indicates further appreciation for the value of humor. Recent trends toward alternative medicine have opened our awareness to the myriad ways that health can be achieved. Application of humor to one's lifestyle can be viewed as a technique of health maintenance. "Joy and laughter are helpful to emotional and spiritual well-being. To make others laugh is a talent and the business of comics, but to be able to laugh ourselves is a necessity" (Kahn, 1975, p. 90).

Having Fun

Fun can be defined as something that provides mirth, pleasure, or amusement. Having fun may include humor however fun is broader and more holistic. Fun has components of relaxation, recreation and pleasure. Recent advances in psychoneurochemistry have promoted an understanding of fun in biochemical terms. The human ability to perceive experiences is based on neurochemical activity. Release of certain chemicals in the brain, and then neuroreception of those chemicals cause human sensations and perceptions. In Chocolate to Morphine, Weil and Rosen (1983) detail the neurochemical responses that alter consciousness when people engage in various pleasurable activities. Subsequently, the topic of pleasure or fun, as understood in psychoneurochemical terms, has received much attention in the scientific literature.

The natural biochemical metabolic processes occurring on the cellular/molecular level within persons has been called "being lived" by a recreation therapist, Dr. Geba (1985). In this conceptual framework, "being lived" means the processes of circulation, respiration, secretion, homeostasis, etc. These processes occur naturally, ensure life flow and occur without conscious participation. According to Geba's framework, humans also have a cultural and symbolic realm of life that he terms "living life." At this level, humans make choices based on culture, cognitive, psychological and emotional processes (Geba, 1985). This conceptual framework is pertinent; psychoneurochemistry is truly the integration of "being lived" and "living life." Human choice i.e. "living life" allows a person to create change or control upon the "being lived" processes. Milkman and Sunderwirth would call this "self induced changes in neurotransmission" (Milkman & Sunderwirth, 1983, p. 38). Humans exert control or change by choosing to ingest certain nutrients or psychoactive chemicals. Humans also induce control or change by engaging in activities of "having fun."

The perception of having fun is highly subjective and dependent upon multiple variables. Milkman and Sunderwirth classified people into three groups according to type of sensation they are seeking, satiation, arousal and fantasy (Milkman & Sunderwirth, 1983). The specifics of these dynamics are described above in this study. Obviously the type of sensation being sought will have great bearing upon the activity to be perceived as *fun.* There are other variables to consider in order to understand perception and preference for fun.

Personal history has significance to one's desire or perception of what activity can be fun. Memories from childhood experiences impact an individual's desire to repeat or

avoid activities. For example, a fear of heights resulting from a childhood fall may prohibit one from extracting pleasure from rock climbing. Other influential aspects of personal history are family values, culture, gender, and personality type. These aspects influence choices, experiences and memories one accumulates. Family and cultural values such as the Protestant work ethic can influence an individual to feel guilt while at play (fun) thus nullifying pleasure. In contrast, a different family work value may promote the sense of having fun at work; pleasure is sensed with a job well done or satisfaction in service work for others (Zelinski, 1997). Family and societal expectations for gender roles contribute to one's personal development, the activities/behaviors encouraged, and the associated perceptions of having fun. Personality make up is another significant aspect. Challenging limitations and trying something new is stimulating for some, but dreadful for others. Anticipation and expectations based on past experiences of fun naturally set a precedent thus contributing to whether fun will be had or the activity gets perceived as disappointing and boring. Introverted personality types tend to need time alone to "recharge their batteries" and prefer fun of solitary nature. Extroverts seek fun in social settings and the attention of others to feel stimulated. Multiple components of personal history contribute to attitudes toward fun. Research studies on such attitudes have been carried out with patients facing terminal illness. This is a comment from a fourteen-year-old boy who had cancer. "Most parts of you are healthy. I think when you forget to take care of the healthy part and just keep working on the sick part, more of you starts to get sick faster" (Metcalf & Felible, 1992, p. 94).

Focusing on the positive is a healthy approach to having fun. The way in which an individual approaches "having fun" determines if, how, when, what, where and with whom fun can be had.

Social/environmental context is another great determinant of fun. Research has shown that people laugh more if laughter accompanies a presentation. This is evident in the show-business practice of using "canned laughter" with sit-coms (Chapman & Foot, 1976). Comics approach their audience with the goal of creating community – everyone came to have a good time. Comics face the challenges of walking through their own fears, finding what we all have in common and celebrating the absurdity (Metcalf & Felible, 1992). Many comedians grew up in the environment of an alcoholic family. This stressful milieu was training ground; such youngsters possess uncanny talent for sensing that even subtle tension is escalating. They develop a style of humor delivery and sensitivity to timing so they relieve tension at just the right moment. Treatment for chemical dependency includes education about family roles. This family role is called, "the mascot." The mascot child's job in the family is to relieve stress and that becomes this child's most highly developed coping skill.

Paradoxical humor can be experienced in the context of coping with trauma or tension. This is considered gallows humor; as sadness, stress or anxiety rise so does the *need* for fun/laughter. In this sad and serious context laughter might be interpreted as inappropriate. Laughter, as a social lubricant, is known to relieve such tension. This is the medium from which gallows humor springs to produce jokes about tragic topics such as death. Context can be the most powerful ingredient contributing to what makes a

situation fun or funny. The statement, "I guess you would've had to have been there" explains context without further need for analysis.

Socializing is a great part of having fun for many people; we are social animals. People like to "hang out together." People like to party. American sports and entertainment industries are banking on this. The tavern league is counting on this too, that's why happy hour is so popular. The social setting providing drugs (including alcohol) has been a very large part of people having fun for centuries.

Then there are the alcoholics/addicts. Chemicals cease to provide fun for them (and their families.) For the majority of alcoholics/addicts socialization has been paired with the chemical use. Fun without chemicals is a totally foreign concept! Socialization with other recovering people becomes an important healthy way for alcoholics/addicts to have fun. "Within the safety and warmth of community friendships can be nurtured, especially if the community consists of people who have similar problems and solutions" (Metcalf & Felible, 1992, p. 210). The recovering community offers a *cocoon* for newly clean and sober persons to exorcise their pain, begin to heal and establish trust with others. It is important to have relationships for sharing feelings, staving off loneliness, gaining hope and *having fun.*

Having fun may include relaxation as the process of relaxation may be the end result of having fun. The literature supports the value of relaxation methods such as biofeedback, meditation and massage therapy. Documented positive effects include improved immune status, increased sense of energy, improved quality of sleep, decreased blood pressure and subjective reports of pleasure, creativity, and a greater sense of hope (Kasl, 1994). A common denominator in all the relaxation techniques is *presence.* The

individual pays attention to the senses – touch, smell, visualizing, sound, etc. The individual notices the sensual physical pleasure and subsequent emotional response. Relaxation allows the individual to *be* in the here and now. "Quality leisure in your life is dependent on the ability to be totally involved in the activity.... leisure in the now produces a feeling of vivid attentiveness, as well as a sense of real peace with the world" (Zelinsky, 1997, p.143). *Presence* and awareness are involved in quality relaxation. When we are having fun and relaxing we notice it – "are we having fun yet?"

Recreation is a way to have fun – it implies action – in the form of doing, playing or creating. Recreation is similar to the season of spring because it has new life, it's refreshing, it's spontaneous and has energy. Recreation refreshes the human organism and promotes health in the whole person. It accentuates the positive. Recreation says "yes" to life. Children know about recreation better than adults do and we are healthiest if we keep the child-like ability to play within as we age. "Play is the heart of being creatively alive. Playing and having fun are great ways to stimulate our minds. When we are having fun we tend to be relaxed and enthusiastic" (Zelinsky, 1997, p.154).

Having fun is engrossing and when we're truly having fun, we lose all sense of time. Different people enjoy different activities in order to have fun. When an individual finds their niche for fun, it's not hard to "get into it." Having fun is the difference between being alive and having a life.

Having Fun as the Focus of Relapse Prevention

"What are you doing to have fun?" This question is routinely asked of recovering clients in relapse prevention counseling. Clinical observation of recovering alcoholics/addicts confirms that those who are having fun seem to have better quality sobriety with greater serenity, fewer cravings and lower relapse potential. One challenge

of recovery is getting to know oneself (because chemicals numb and annihilate feelings, making one a stranger to one's self.) Getting to know oneself includes learning what is fun and how to have fun. In the throes of alcoholism/addiction, the chemical is the addict's stress management program. Happy hour is the addict's attempt at recreation. Chemical use is the only social lubricant the addict possesses (Metcalf & Felible, 1992). Persons successful in recovery do not just abstain from chemicals – they can't afford to "just say no" and deny the need for fun. They also learn to have fun without chemicals. Humans have innate desire to alter mood, relieve stress and experience pleasure. Desire for pleasure is a steadfast need, waiting to be satisfied, and if denied, will persist as a potential threat to its abstinence. This truth is revealed in The Prophet: "oftentimes in denying yourself pleasure you do but store the desire in the recesses of your being. Who knows but that which seems omitted today, waits for tomorrow? Even your body knows its heritage and its rightful need and will not be deceived" (Gibran, 1975, p. 72).

Relapse prevention literature classifies the therapeutic methods that are focused toward "having fun" as *affective modes* of treatment. Affective modes of treatment direct clients to alter consciousness and achieve awareness, using non-chemical methods. In other words, affective modes teach clients to "get high" naturally without psychoactive substances (Frye, 1990). Activities that induce the natural high may include meditation, biofeedback, progressive relaxation, dance, music, art, drama, writing, aerobic exercise and charismatic group therapy. A contemporary example of this is observed with long distance runners who have not only discovered the biochemical value of running but have also joined into a charismatic group. A recovering alcoholic named David Hobler, who is a marathon runner, has organized Runners in Recovery meetings. In 1999, prior to the

Boston Marathon, 250 runners participated; Runners in Recovery also met before the New York City and Honolulu marathons in 1999. David Hobler has said, "To me, the calming hormones released during an hour's run are the equivalent of drinking a pint of vodka" (Brant, 1999, p. 76). The Runners in Recovery meetings are designed to celebrate recovering peoples' battles of addiction and joys of sobriety.

Affective modes of treatment recognize that humor, having fun and feeling joy are skills to be learned. Healthy people do not have stress free lives or fantastic good luck; healthy people are those who've learned how to use their resources to meet their needs. In his book, Lighten Up, Metcalf eloquently states that people develop humor skills as they face their worst sorrows. "By choosing to develop our capacity for humor, fun, and laughter, we exert a direct biochemical effect on our overall wellness by making our fears manageable and sustaining our hopes" (Melcalf & Felible, 1992, p. 13). Various affective treatment techniques have been studied scientifically. Review of the research literature supports the value of such techniques as hypnosis, biofeedback, meditation and auricular acupuncture. Most literature supporting these treatment modes is anecdotal and based on case studies. There is little empirical research that evaluates effectiveness of such techniques as a treatment method for chemical dependency. Empirical studies are difficult to carry out in this realm. Chemical dependency treatment is most often multimodal; the affective modes are used as an adjunct in psycho-educational treatment (Kominars, 1996). It is quite difficult to conclusively show that the adjunctive affective mode is the causal factor in treatment success. Empirical research fails to reveal that any *one* single treatment method is superior (Mackay & Marlatt, 1991).

Another difficulty is determining the definition of "successful treatment" in the clinical setting, recognizing that "lack of relapse" is not the only or even the best measure of positive treatment outcome. Clinically, it makes sense that if sober persons are having fun, then they have higher quality in their sober lives than if being sober means being somber. At present, no controlled empirical study has been carried out on "having fun" as a method for relapse prevention, or as a measure of quality sobriety. It is therefore necessary that "having fun" be studied as a valuable component for recovery. Having fun as the *focus* of relapse prevention has the potential to not only improve care provided to alcoholics and addicts, but also to improve the quality of their sobriety.

Chapter 3

Methodology

Subjects

The subjects for this study met Diagnostic and Statistical Manual IV criteria for at least one chemical dependency diagnosis. All subjects were involved in outpatient relapse prevention treatment at Gundersen Lutheran, a medical center in LaCrosse, Wisconsin. Participants were selected via cluster sampling method; all clients were involved in one of the five Continuing Care Groups that met on a weekly basis. The participants were volunteers in the research study. They were assured anonymity and that their participation or decision to not participate would have no effect on their treatment. All subjects received written instruction as to the procedure of data collection. The decision to participate by filling out the simple tests provided implied consent. A total of 35 subjects participated. All the subjects completed research data in the winter of 1999.

Instruments

Two instruments were used to collect self-report data for this correlational study. Copies of these instruments appear in the Appendices. At the end of each of these tests are brief demographic questions; three questions were asked: age, sex and length of time clean and sober in number of months.

Pilot testing was conducted by review for feedback from the medical director, administrative director, clinical supervisor and clinical practitioners at Gundersen Lutheran Behavioral Health. Review was also conducted by the Marriage and Family Therapy program director at University of Wisconsin-Stout.

The Institutional Review Board of Gundersen Lutheran granted approval of the research study, by expedited review. University of Wisconsin-Stout, Institutional Review Board,

also granted approval of the research.

Actual pilot-testing of the instrument was then executed with ten recovering clients to establish clarity of language, ease of reading, understanding and scoring, and relevancy of items.

Multidimensional Sense of Humor Scale

The MSHS is a 24 item Likert format of self-report which is organized into four Factor Scales: Factor I identifying elements of humor creativity; Factor II dealing with the concept of using humor to cope; Factor III attitudes toward humorous people; and Factor IV attitudes toward humor. Literature about the MSHS reports the scale has been widely tested and "has shown acceptable psychometric properties, a consistent factor structure, construct validity, high <'s of reliability, ease of administration and convenience in scoring" (Thorson, Powell, Sarmany-Schuller & Hampes, 1997.) The construct validity has been established by testing hypotheses of humor's relatedness to other traits. Multiple tests of concurrent validity were conducted on each factor of the test with other such tests as: Edward's Personal Preference Scale, Intrinsic Religious Motivation, Revised Death Anxiety Scale, Lefcourt's Coping Humor Scale, Situational Humor Response Questionnaire, Svebak's Sense of Humor Questionnaire, Eysenck Personality Inventory and the State-Trait Cheerfulness Inventory (Thorson, Powell, Sarmany-Schuller & Hampes, 1991).

Mood Related Pleasant Events Schedule

The MRPES is a 49-item measurement of frequency and enjoyment of pleasant events. The MRPES has two subscales: the Pleasant Social Interactions subscale and the Competence and Independence subscale. The MRPES is derived from a 320 item Pleasant Event Schedule. Reliability established on the PES is excellent, with internal

consistency alpha coefficients of .96, .98 and .97 for the frequency enjoyment and product scores, respectively (Fischer & Corcoran, 1994). Internal consistency is not available on the MRPES. Test-retest reliability on the MRPES was .69 at one month, .49 at two month and .50 at three month intervals, suggesting adequate reliability (Fischer & Corcoran, 1994). Validity data on the 320 item PES shows excellent construct and concurrent validity. The MRPES may show a slight irrelevant response set (most likely a "yea-saying" response set) and scoring procedures are available to minimize this limitation (Fischer & Corcoran, 1994).

Procedures

The researcher gained support of this study from all co-facilitators of the Continuing Care Groups at Gundersen Lutheran Behavioral Health. The packets of research materials were prepared and presented by the researcher, in person, at the time that the group was meeting for a regular therapy session. Contents of the packet were reviewed and voluntary participation was explained; all clients were reassured that their decision to participate or not participate would not affect their treatment. Participants were reassured that all study data would remain anonymous. Participants were instructed to complete all components of the packet according to the instructions on the instruments. The completed MSHS and MRPES were put into the large envelope marked "research data" and turned in to researcher before leaving the building.

Unknowns

Extraneous variables to be considered would be unknown contributing causes for sustained abstinence, e.g. participant incarceration, motivation for abstinence due to pregnancy, etc. The multidimensional nature of chemical dependency and all the variables that contribute to abstinence make controlling all extraneous variables

inconceivable. Validity of the test data is dependent upon honesty of the subjects' self-report; this study assumes subject honesty.

Limitations

This study was conducted with subjects who were in "early recovery" and may not represent all recovering people. The subjects of this study were involved in a program for relapse prevention and therefore generalizing to the population of recovering persons not involved in such a network may warrant consideration. The subjects were diagnosed as chemically dependent and had abstinence from chemical use as their goal; results of this study may have limited value if applied with populations of chemical users/abusers with controlled chemical use as their goal. Geographic limitations exist; the research subjects were only from Midwest states of Wisconsin, Minnesota and Iowa.

Data Analysis

Data analysis was accomplished by means of the Statistical Package for the Social Sciences (SPSS) with frequency counts and percentages of gender for the total group of respondents. Frequency counts, percentages, mean, median and standard deviation was computed for the age of respondents and the months of reported sobriety for the total group of respondents. The above data was calculated with T test inferential statistical analysis. Scale of measurement for test data (scores for MSHS, total and subscales, and MRPES scales) included the correlational matrix and scatterplot descriptive data using inferential statistical method of Pearson r coefficient. A multiple linear regression study was carried out with test data used as independent variables and number of months of sobriety computed as the independent variable. Forced entry method was used for calculation and the inferential statistical method used was the analysis of variance (ANOVA).

Chapter 4

Results

Rate of response was very adequate due to the method of data collection and having research packets turned in on the same date of presentation. The number of participants who turned in correctly completed research packets was 27; therefore N=27 and rate of response from the original sample of 35 was 77%. There were 8 tests that were disqualified from the study because of incomplete responses.

Data for this study was gathered via two brief tests and 3 questions that provided demographic information. The Multidimensional Sense of Humor Scale, which is a 24 item likert scaling tool, contains 4 subscales: I Humor Creation and Performance, II Uses of Humor for Coping, III Social Uses of Humor, and IV Attitudes Toward Humor and Humorous People. The Mood Related Pleasant Events Schedule is a 49 item scaling measurement, containing three scores: 1) Frequency score, 2) Enjoyment score, and 3) Product (of frequency and enjoyment) score. The three questions of demographic data provided respondent age, sex and length of sobriety in number of months.

Data analysis was accomplished by means of the Statistical Package for the Social Sciences (SPSS) with frequency and mean distribution.

Descriptive Statistics of Sample

The sample consisted of 27 respondents.

Sex of respondents, frequency and percentages are shown in Table 1.

Table 1 Respondent Sex, Frequency, Percent

		Frequency	Percent
Valid	1 MALE	19	70.4
	2 FEMALE	8	29.6
	Total	27	100.0

Age of respondents, frequency and percentages are shown in Table 2. The range in age of respondents was 18 to 60 years old.

Table 2 Respondent Age, Frequency, Percent

		Frequency	Percent
Valid	18 18 YEARS OLD	3	11.1
	20	2	7.4
	24	1	3.7
	26 26 YEARS OLD	1	3.7
	28	1	3.7
	34	2	7.4
	35 35 YEARS OLD	1	3.7
	37	2	7.4
	41	2	7.4
	42	1	3.7
	43	1	3.7
	44	1	3.7
	45 45 YEARS OLD	1	3.7
	47	3	11.1
	48	2	7.4
	51	1	3.7
	56	1	3.7
	60 60 YEARS OLD	1	3.7
	Total	27	100.0

Statistical data on age of respondents:

mean = 37.37 median = 41.00 standard deviation = 12.22

Number of months sober for each respondent, frequency and percentages are shown in Table 3. The respondents' time clean and sober ranged from 1 month to 28 months. Statistical data on the time of sobriety in months:

mean = 9.89 median = 7.00 standard deviation = 8.21

Table 3 Respondent Sobriety, Frequency, Percentages

			Frequency	Percent
Valid	1	1 MONTH SOBER	1	3.7
	2		2	7.4
	3		3	11.1
	4		3	11.1
	5		1	3.7
	6	6 MONTHS SOBER	3	11.1
	7		2	7.4
	8		2	7.4
	9		1	3.7
	11		1	3.7
	12		1	3.7
	16	16 MONTHS SOBER	1	3.7
	18		1	3.7
	20		1	3.7
	22		1	3.7
	25		1	3.7
	27		1	3.7
	28	28 MONTHS SOBER	1	3.7
	Total		27	100.0

Cross analysis of sex and number of months sober are described in Table 4.

Table 4: Cross analysis of sex and months sober

	GENDER GENDER OF RESPONDENT	N	Mean	Std. Deviation	Std. Error Mean
MON_SOB NUMBER OF MONTHS RESPONDENT HAS BEEN SOBER	1 MALE	19	9.37	7.69	1.76
	2 FEMALE	8	11.13	9.78	3.46

Two-tailed t-test for equality of means was not significant. This means that any difference in length of sobriety between sexes is not statistically significant.

Cross analysis of sex and age of respondents are shown in Table 5.

Table 5: Cross analysis of sex and age of respondents

	GENDER GENDER OF RESPONDENT	N	Mean	Std. Deviation	Std. Error Mean
RESPONDENT AGE	1 MALE	19	37.42	12.24	2.81
	2 FEMALE	8	37.25	13.01	4.60

Two-tailed t-test for equality of means was not significant. This means there is no significant difference in age between males and females subjects.

Descriptive Statistics of Test Scores

The Multidimensional Sense of humor Scale and its 4 subscales are shown with mean median and standard deviation in Table 6.

Table 6: MSHS Scores, means, medians, and standard deviations

		MSHS_TOT MULTI SENSE OF HUMOR SCALE: TOTAL SCORE	MSHS_I MULTI SENSE OF HUMOR SCALE: CREATION & PERFORMANCE	MSHS_II MULTI SENSE OF HUMOR SCALE: USING HUMOR FOR COPING	MSHS_III MULTI SENSE OF HUMOR SCALE: SOCIAL USE OF HUMOR	MSHS_IV MULTI SENSE OF HUMOR SCALE: ATTITUDE RE: HUMOR/PEOPLE
N	Valid	27	27	27	27	27
	Missing	0	0	0	0	0
Mean		73.04	19.85	21.81	14.48	16.89
Median		74.00	19.00	22.00	14.00	18.00
Std. Deviation		14.81	5.67	5.00	3.63	3.49

The Mood Related Pleasant Events Schedule Frequency, Enjoyment and Product scores are shown with mean, median, and standard deviations in Table 7.

Table 7: MRPES scores mean, median and standard deviation

		MRPES_FR MOOD RELATED PLEASANT EVENTS SCHEDULE: FREQUENCY SCORE	MRPES_EN MOOD RELATED PLEASANT EVENTS SCHEDULE: ENJOYMENT SCORE	MRPES_PR MOOD RELATED PLEASANT EVENTS SCHEDULE: PRODUCT SCORE
N	Valid	27	27	27
	Missing	0	0	0
Mean		1.4448	1.5111	2.2219
Median		1.4700	1.5300	2.2000
Std. Deviation		.2392	.2980	.6568

Cross analysis of sex and the multiple tests scores are shown in Table 8.

Table 8: Cross analysis of sex with the multiple test scores

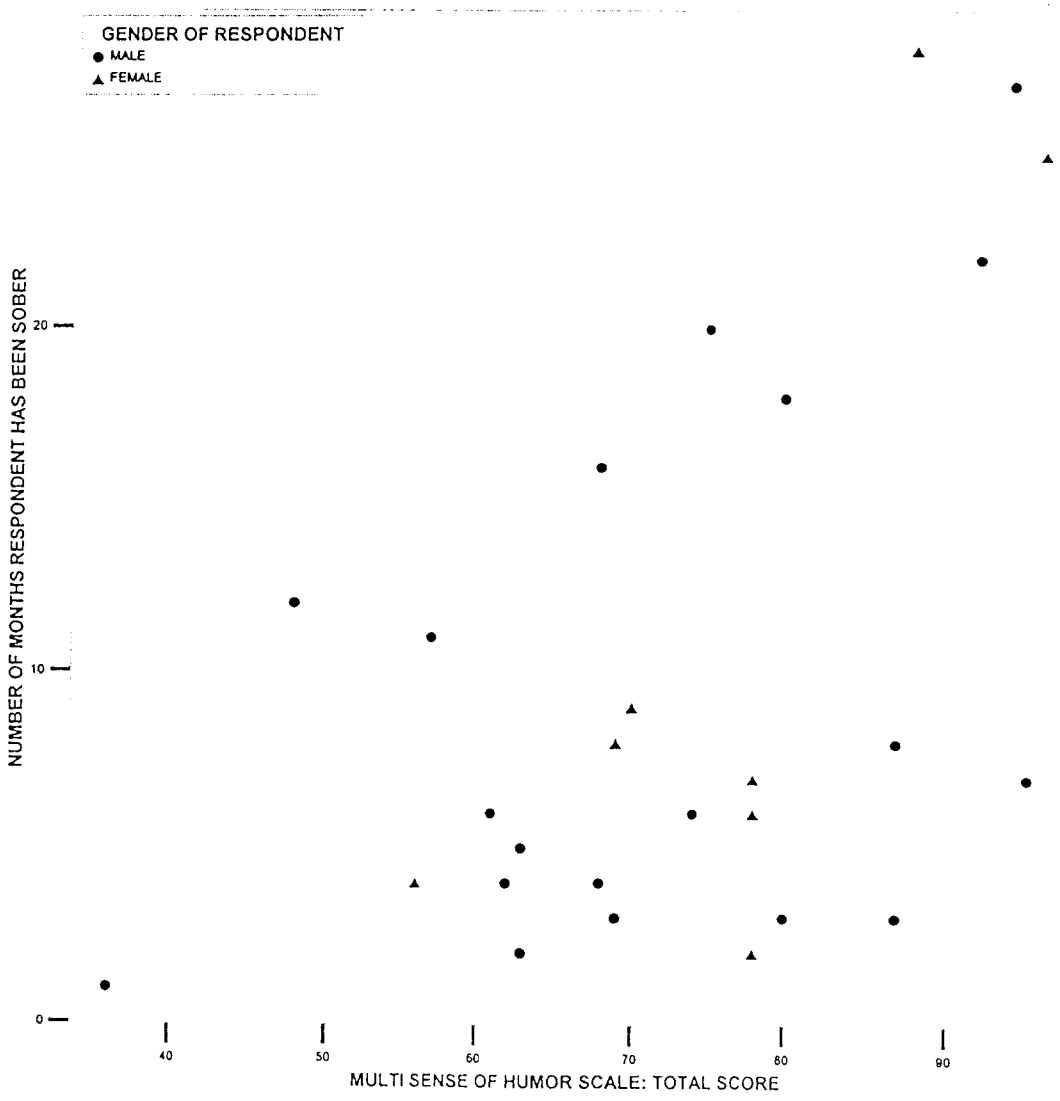
	GENDER GENDER OF RESPONDENT	N	Mean	Std. Deviation	Std. Error Mean
MSHS_TOT MULTI SENSE OF HUMOR SCALE: TOTAL SCORE	1 MALE	19	71.53	15.85	3.64
	2 FEMALE	8	76.63	12.18	4.31
MSHS_I MULTI SENSE OF HUMOR SCALE: CREATION & PERFORMANCE	1 MALE	19	19.16	6.18	1.42
	2 FEMALE	8	21.50	4.11	1.45
MSHS_II MULTI SENSE OF HUMOR SCALE: USING HUMOR FOR COPING	1 MALE	19	21.53	5.36	1.23
	2 FEMALE	8	22.50	4.28	1.51
MSHS_III MULTI SENSE OF HUMOR SCALE: SOCIAL USE OF HUMOR	1 MALE	19	14.05	3.69	.85
	2 FEMALE	8	15.50	3.51	1.24
MSHS_IV MULTI SENSE OF HUMOR SCALE: ATTITUDE RE: HUMOR/PEOPLE	1 MALE	19	16.79	3.79	.87
	2 FEMALE	8	17.13	2.85	1.01
MRPES_FR MOOD RELATED PLEASANT EVENTS SCHEDULE: FREQUENCY SCORE	1 MALE	19	1.4495	.1827	4.191E-02
	2 FEMALE	8	1.4337	.3556	.1257
MRPES_EN MOOD RELATED PLEASANT EVENTS SCHEDULE: ENJOYMENT SCORE	1 MALE	19	1.5337	.2879	6.604E-02
	2 FEMALE	8	1.4575	.3349	.1184
MRPES_PR MOOD RELATED PLEASANT EVENTS SCHEDULE: PRODUCT SCORE	1 MALE	19	2.2479	.6272	.1439
	2 FEMALE	8	2.1600	.7645	.2703

Two-tailed t-test equality of means was not significant. This means there is no statistical difference between test scores for males and females.

Hypotheses Results

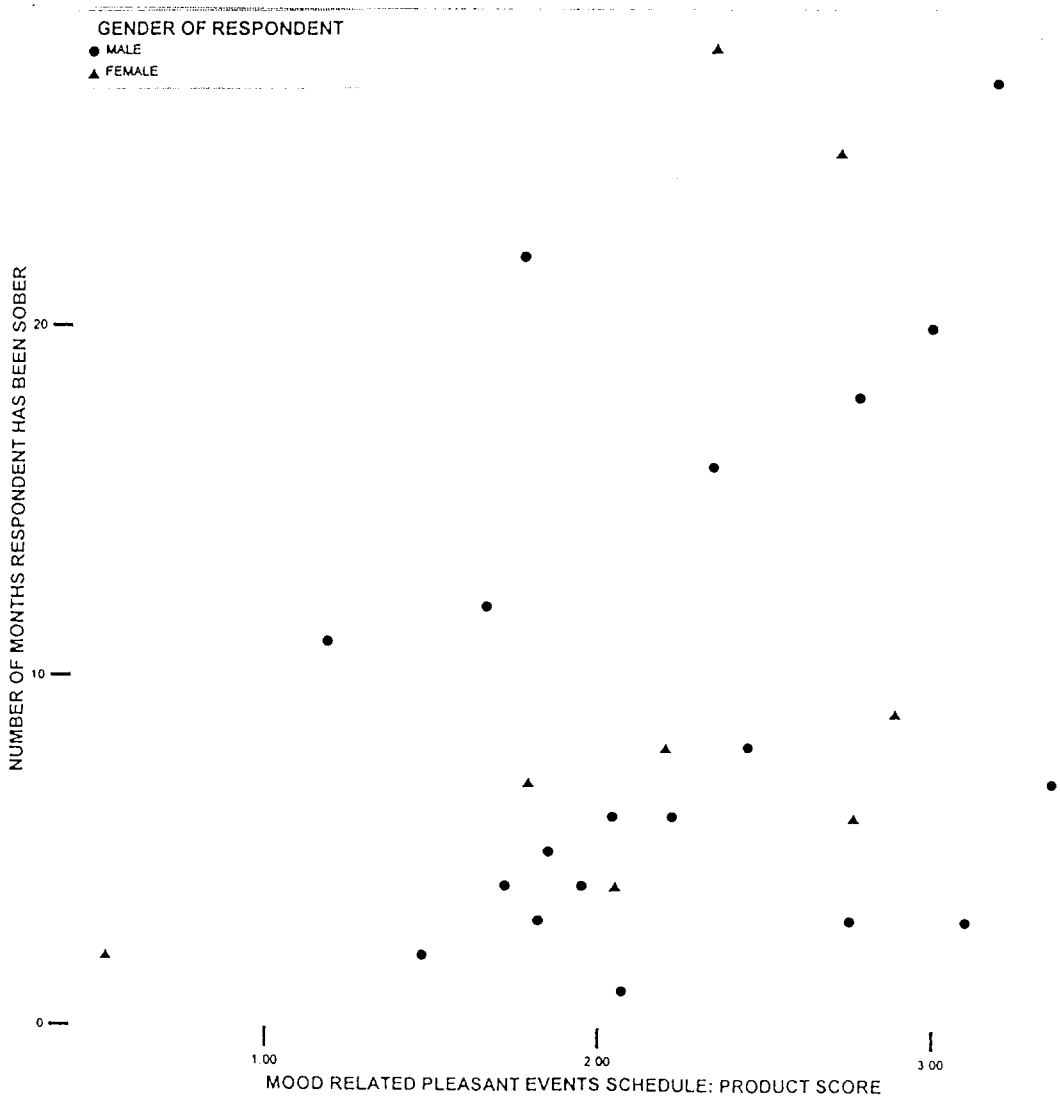
The hypotheses to be tested were correlational in nature. A descriptive table in the form of a scatterplot is shown for MSHS Total scores and Number of months sober in Table 9. Pearson r inferential statistics show a positive correlation of .509 with two-tailed significance determined at .007 level of confidence. This is a strong correlation, considering the elements of this study. The correlation is moderate even with a small research sample of 27. The scatterplot does distinguish male and female by shape of the dots, however there is no statistical significance for males vs. females in the correlation.

Table 9: Scatterplot of MSHS Total Score and Months of Sobriety



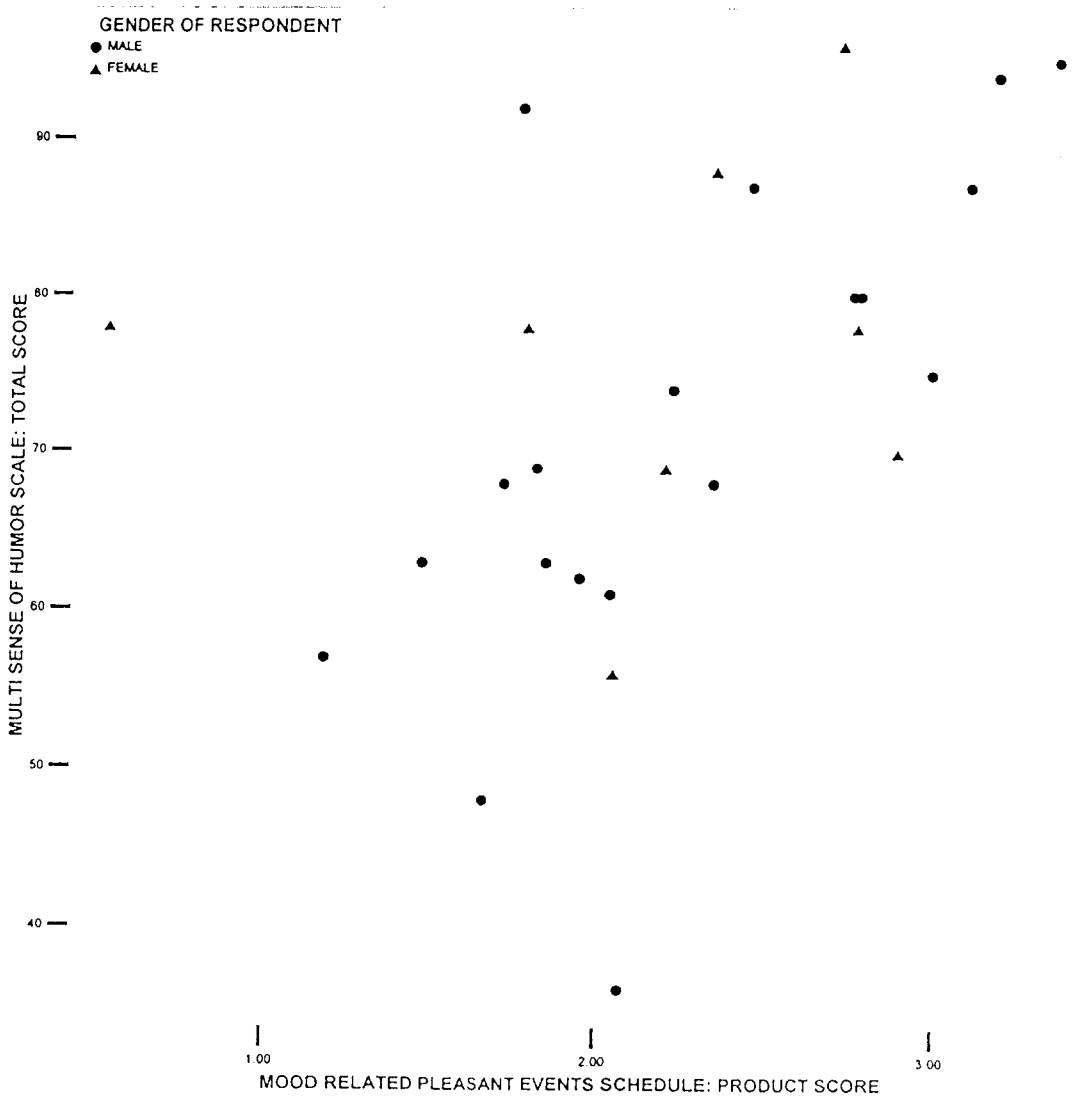
A descriptive table in the form of a scatterplot is shown for the MRPES Product score and number of months sober in Table 10. Pearson r inferential statistics show only a slight positive correlation of .342; furthermore the level of confidence is not significant because two-tailed Pearson r shows .081. This correlational study is a disappointment because the MRPES is not able to show a relationship with success at relapse prevention. Again, the scatterplot distinguishes male and female by shape of dots; however there is no statistical difference between sex and the correlation.

Table 10: Scatterplot of MRPES Product Score and Months Sobriety



An additional scatterplot descriptive table is shown to depict relationship between the two tests, the MSHS and the MRPES. This correlation was tested to satisfy the author's curiosity regarding these two tests and their amount of relatedness. The correlation was moderately positive at .490 with a confidence level of .010 significance with the two-tailed Pearson r.

Table 11: Scatterplot of MSHS Total and MRPES Product scores



Correlational Matrix

A correlational matrix was developed to demonstrate correlations for each of the test scores, number of months sober, and age of respondents. Pearson r inferential statistics were used to determine significance and confidence level .01 (indicated by **) or confidence level .05 (indicated by *). The most promising score/number of months sober correlation is the MSHS Subscale I. The correlation is moderately positive at .534 and the significance is determined to be .004 level of confidence. Overall it appears that the MSHS was a positive measure in this study and there is some significant correlation with sobriety on three of the four MSHS subscales as well as the MSHS total score.

Table 12: Correlational Matrix of Respondents age, sobriety and all test scores

		AGE AGE OF RESPONDENT	MON_SOB NUMBER OF MONTHS RESPONDENT HAS BEEN SOBER	MSHS_TOT MULTI SENSE OF HUMOR SCALE: TOTAL SCORE	MSHS_I MULTI SENSE OF HUMOR SCALE: CREATION & PERFORMANCE	MSHS_II MULTI SENSE OF HUMOR SCALE: USING HUMOR FOR COPING	MSHS_III MULTI SENSE OF HUMOR SCALE: SOCIAL USE OF HUMOR	MSHS_IV MULTI SENSE OF HUMOR SCALE: ATTITUDE RE: HUMOR/PEOPLE	MRPES_FR MOOD RELATED PLEASANT EVENTS SCHEDULE: FREQUENCY SCORE	MRPES_EN MOOD RELATED PLEASANT EVENTS SCHEDULE ENJOYMENT SCORE	MRPES_PR MOOD RELATED PLEASANT EVENTS SCHEDULE PRODUCT SCORE
AGE AGE OF RESPONDENT	Pearson Correlation	1.000	.275	-.222	-.035	-.121	-.197	-.507**	.277	-.095	.018
	Sig. (2-tailed)	.	.164	.266	.864	.548	.324	.007	.162	.637	.930
	N	27	27	27	27	27	27	27	27	27	27
MON_SOB NUMBER OF MONTHS RESPONDENT HAS BEEN SOBER	Pearson Correlation	.275	1.000	.509**	.534**	.469*	.411*	.193	.333	.272	.342
	Sig. (2-tailed)	.164	.	.007	.004	.014	.033	.335	.090	.171	.081
	N	27	27	27	27	27	27	27	27	27	27
MSHS_TOT MULTI SENSE OF HUMOR SCALE: TOTAL SCORE	Pearson Correlation	-.222	.509**	1.000	.880**	.868**	.913**	.621**	.284	.455*	.490*
	Sig. (2-tailed)	.266	.007	.	.000	.000	.000	.001	.151	.017	.010
	N	27	27	27	27	27	27	27	27	27	27
MSHS_I MULTI SENSE OF HUMOR SCALE: CREATION & PERFORMANCE	Pearson Correlation	-.035	.534**	.880**	1.000	.672**	.815**	.302	.208	.382*	.416*
	Sig. (2-tailed)	.864	.004	.000	.	.000	.000	.125	.298	.049	.031
	N	27	27	27	27	27	27	27	27	27	27
MSHS_II MULTI SENSE OF HUMOR SCALE: USING HUMOR FOR COPING	Pearson Correlation	-.121	.469*	.868**	.672**	1.000	.702**	.431*	.478*	.491**	.572**
	Sig. (2-tailed)	.548	.014	.000	.000	.	.000	.025	.012	.009	.002
	N	27	27	27	27	27	27	27	27	27	27
MSHS_III MULTI SENSE OF HUMOR SCALE: SOCIAL USE OF HUMOR	Pearson Correlation	-.197	.411*	.913**	.815**	.702**	1.000	.505**	.216	.399*	.424*
	Sig. (2-tailed)	.324	.033	.000	.000	.000	.	.007	.280	.039	.027
	N	27	27	27	27	27	27	27	27	27	27
MSHS_IV MULTI SENSE OF HUMOR SCALE: ATTITUDE RE: HUMOR/PEOPLE	Pearson Correlation	-.507**	.193	.621**	.302	.431*	.505**	1.000	-.040	.192	.142
	Sig. (2-tailed)	.007	.335	.001	.125	.025	.007	.	.843	.338	.480
	N	27	27	27	27	27	27	27	27	27	27
MRPES_FR MOOD RELATED PLEASANT EVENTS SCHEDULE: FREQUENCY SCORE	Pearson Correlation	.277	.333	.284	.208	.478*	.216	-.040	1.000	.568**	.836**
	Sig. (2-tailed)	.162	.090	.151	.298	.012	.280	.843	.	.002	.000
	N	27	27	27	27	27	27	27	27	27	27
MRPES_EN MOOD RELATED PLEASANT EVENTS SCHEDULE: ENJOYMENT SCORE	Pearson Correlation	-.095	.272	.455*	.382*	.491**	.399*	.192	.568**	1.000	.910**
	Sig. (2-tailed)	.637	.171	.017	.049	.009	.039	.338	.002	.	.000
	N	27	27	27	27	27	27	27	27	27	27
MRPES_PR MOOD RELATED PLEASANT EVENTS SCHEDULE: PRODUCT SCORE	Pearson Correlation	.018	.342	.490**	.416*	.572**	.424*	.142	.836**	.910**	1.000
	Sig. (2-tailed)	.930	.081	.010	.031	.002	.027	.480	.000	.000	.
	N	27	27	27	27	27	27	27	27	27	27

It is most interesting to note that the highest significant correlation is drawn between the Humor Creation and Performance subscale of the MSHS with number of months sober. This would motivate the clinician to utilize information derived from the questions of that subscale to highlight relapse prevention techniques in aftercare. The items on that subscale include:

1. Sometimes I think up jokes or funny stories.
5. Other people tell me that I say funny things.
9. I can often crack people up with the things I say.
12. I can say things in such a way as to make people laugh.
15. People look to me to say amusing things.
18. I'm regarded as something of a wit by my friends.
24. My clever sayings amuse others.

Common ingredients in all these items are a level of confidence, an attitude of optimism and creative energy. These components can be used constructively to contribute to ongoing sobriety. The clinician would be wise to apply this information in relapse prevention skill development with recovering alcoholics/addicts.

Linear Regression Study

One further statistical study was developed from the data to ascertain if any *one* score or component of the data was more influential than others upon the dependent variable of sobriety. This test was the multiple linear regression via forced entry method for calculation. Using 7 of the 8 test scores as predictors upon length of sobriety, the linear regression was computed. Unfortunately inferential statistics using analysis of variance (ANOVA) proved the level of confidence to not be significant at .144. An interesting result of this study, however, revealed that the MSHS subscale I, Humor Creation and Performance, came very close to the significance level as the coefficient was .052. This

subscale comes forward again, thus reinforcing the clinical value and potential value for further research with the MSHS. As stated above, items in Subscale I warrant further investigation for application in clinical practice for relapse prevention skill building.

Chapter 5

Summary, Conclusions and Recommendations

Summary

Humans have practiced psychoactive chemical use for many centuries. Theory of evolutionary biology suggests there are genetic origins to human desire for altering consciousness. Advances in psychoneurochemistry have allowed greater understanding of chemical dependency, addictive behaviors and cravings. Modern treatment of chemical dependency places emphasis on relapse prevention and management of cravings. The goal of relapse prevention is to thrive in recovery, with respect for the innate human desire for mood alteration. Instead of abstinence, recommendation is made for focus of relapse prevention treatment to be stimulating endogenous neurotransmission and the *natural high* by having fun. Recent trends in alternative medicine have opened awareness to the myriad ways that health can be achieved. As the knowledge of neurotransmission is applied to relapse prevention, ways of measuring success of that application must be established. The purpose of this study was to determine if a correlation exists between "having fun" and "staying clean and sober." The study was conducted with alcoholics/addicts who were in early recovery and participating in outpatient aftercare. Having fun was measured by two brief tests, the Multidimensional Sense of Humor Scale and the Mood Related Pleasant Events Schedule. Data analysis was accomplished by means of the Statistical Package for the Social Sciences (SPSS). The results of research showed that there was a positive correlation between the recovering subjects' MSHS scores (measuring ability to have fun) and the relapse prevention success as measured in number of months of sobriety.

Conclusions

In conclusion, there is a moderate degree of correlation between a recovering person's ability to have fun and the amount of relapse prevention success. One of the instruments, the MSHS showed moderate positive correlation with sobriety and the confidence level of these statistics proved significant. The other instrument that was used to measure "ability to have fun" did not prove significant correlations.

The hypothesis for this study was established from the author's expectation for a positive correlation, based on clinical observations. Recovering alcoholics who are able to have fun and use humor to cope, seem to have longer sobriety and more contented, quality sobriety. The results of this study reinforce that asking clients, "What are you doing to have fun?" is a pertinent question and needs clinical attention. Conclusions can also be drawn that building humor skills and establishing sober recreation are concerns for clinical assessment and treatment planning.

Conclusions can also be drawn for lack of humor/fun skills posing as a risk for relapse. If a person is having little fun in sobriety then we can conclude that the relapse potential would rise. This is congruent with the clinical phenomenon that has been observed: "untreated depression is the greatest precipitant for relapse."

Based on this study, one can conclude that teaching/learning of humor skills and incorporating fun into relapse prevention aftercare would be beneficial, at least to clients in early recovery.

Recommendations

Further research with a larger population of recovering persons using the MSHS is warranted. This instrument has shown promise in this small specific sample and testing a larger population of recovering persons is recommended to reinforce the findings.

Further research is recommended, with recovering persons to include those with lengthy sobriety (not just early recovery) and to include a broader population of recovering persons who are not currently involved in aftercare. This research would enable understanding the value of humor/ fun with a more general population of recovering persons.

Recommendation is made that future research on person's ability to have fun or use humor would control for the variable of depression. Especially among the chemically dependent population, duo-diagnosis of depression or anxiety with alcoholism or addiction is extremely common. An untreated depression or depression / anxiety that has not been identified would skew the study remarkably.

It would be very interesting to develop a program of humor-skill building in relapse prevention treatment and then carry out pre-test and post-test research, using the MSHS as pre-test and post-test.

Recommendation is made that measures for quality of sobriety (not just length of sobriety in number of months) be defined and then research carried out to measure that relationship with measures of the ability to have fun.

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APPENDICES

APPENDIX A

Cover letter and Instruction Sheet
for Data Collection

Gundersen Lutheran

20 November 1999

Dear Friends in Recovery,

As a treatment provider for chemical dependency, it is our goal to provide high-quality and effective care. We are especially interested in relapse-prevention because recent research shows that aftercare with a relapse-prevention focus is extremely important for predicting success in recovery.

Enclosed you will find two brief tests which have been designed for a research study. This research is being conducted as part of a graduate thesis for master's degree from the University of Wisconsin-Stout. This study is being carried out here at Gundersen Lutheran for persons who are in an early phase of recovery.

You have been selected to participate, as an anonymous volunteer, because you have been involved in our continuing care programs for relapse prevention. Once you've decided to participate, please read the instruction sheet and then proceed to complete the two brief tests. There are no identifiers on these tests and your responses are totally anonymous. The brief paper and pencil tests will take about 15 minutes of your time.

Research of this nature is used to make changes in our treatment program to better meet your needs and to improve the care we can provide to newcomers in recovery. Your participation in this research is a great contribution and is very much appreciated. Results of this study will be made available for your review within the next 6 months.

Thank you,

Ronda Lettner

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Relapse Prevention and Lifestyle Changes

Background and Purpose of Study
This research studies relapse prevention treatment. The goal of this study is to collect data about lifestyle changes that people make while enjoying success in recovery from chemical dependency.

Description of the Research
This study will consist of each participant filling out two brief tests and stating (in number of months) how long you have been clean and sober.

Risks and Discomforts
There is no risk to you in filling out these two tests. The tests will take approximately 15 minutes of your time. Your identity will remain totally anonymous.

Voluntary Participation
Your participation in this study is entirely voluntary. You may choose not to participate without any adverse consequences to you.

Benefits
Although the results of this study may be of benefit to other recovering people in the future, and treatment methods may be improved because of these research results, there is no direct benefit to you by participating in this study. Your contribution for participating in this research is greatly appreciated and results of this study will be made available to you within the next 6 months.

Questions or Concerns
If you have any questions, concerns or complaints, please direct them to Ronda Lettner at 796-8646. This study has received approval of the Institutional Review Boards of both Gundersen Lutheran and the University of Wisconsin-Stout. Contact persons at each of these institutions are available upon request.

Instructions
Please fill out the two tests according to the directions on each. Please be sure to answer the last question by stating the number of months you have been clean and sober. Please be sure that the tests are stapled together before you hand them in today.

APPENDIX B

Multidimensional Sense of Humor Scale

We are conducting a study of attitudes and would appreciate your help. This is an anonymous survey; please don't put your name on the questionnaire. If answering these items threatens you in any way, please just turn in a blank questionnaire. Please go through these items quickly, marking the response that is appropriate for you going from left to right: "strongly disagree," "disagree," "neutral," "agree," or "strongly agree."

	Strongly Disagree				Strongly Agree
1. Sometimes I think up jokes or funny stories.	_	_	_	_	_
2. Uses of wit or humor help me master difficult situations.	_	_	_	_	_
3. I'm confident that I can make other people laugh.	_	_	_	_	_
4. I dislike comics.	_	_	_	_	_
5. Other people tell me that I say funny things.	_	_	_	_	_
6. I can use wit to help adapt to many situations.	_	_	_	_	_
7. I can ease a tense situation by saying something funny.	_	_	_	_	_
8. People who tell jokes are a pain in the neck.	_	_	_	_	_
9. I can often crack people up with the things I say.	_	_	_	_	_
10. I like a good joke.	_	_	_	_	_
11. Calling somebody a "comedian" is a real insult.	_	_	_	_	_
12. I can say things in such a way as to make people laugh.	_	_	_	_	_
13. Humor is a lousy coping mechanism.	_	_	_	_	_

	Strongly Disagree				Strongly Agree
14. I appreciate those who generate humor.	_	_	_	_	_
15. People look to me to say amusing things.	_	_	_	_	_
16. Humor helps me cope.	_	_	_	_	_
17. I'm uncomfortable when everyone is cracking jokes.	_	_	_	_	_
18. I'm regarded as something of a wit by my friends.	_	_	_	_	_
19. Coping by using humor is an elegant way of adapting.	_	_	_	_	_
20. Trying to master situations through uses of humor is really dumb.	_	_	_	_	_
21. I can actually have some control over a group by my uses of humor.	_	_	_	_	_
22. Uses of humor help to put me at ease.	_	_	_	_	_
23. I use humor to entertain my friends.	_	_	_	_	_
24. My clever sayings amuse others.	_	_	_	_	_

Thanks for answering these weird questions. Now, please indicate below your age and sex:

___years

__male

__female

APPENDIX C

Mood Related Pleasant Events Schedule

Mood Related Pleasant Events Schedule
MRPES

This schedule is designed to find out about the things you have enjoyed during the past month. The schedule contains a list of events or activities that people sometimes enjoy. You will be asked to go over the list twice, the first time rating each event on how many times it has happened in the past month and the second time rating each event on how pleasant it has been for you. Please rate every event. There are no right or wrong answers.

Below is a list of activities, events and experiences. HOW OFTEN HAVE THESE EVENTS HAPPENED IN YOUR LIFE IN THE PAST MONTH? Please answer this question by rating each item on the following scale:

0 = This has not happened in the past 30 days.
1 = This has happened a *few times* (1-6) in the past 30 days.
2 = This has happened *often* (7 or more) in the past 30 days.

Place your rating in the space to the far left of the item, under the column headed "Frequency." Important: Some items will list more that one event; for those items, mark how often you have done any of the listed items. Please be sure to rate **every** item.

Frequency	Enjoyment	
_____	_____	1. Being in the country
_____	_____	2. Meeting someone new of the same sex
_____	_____	3. Planning trips or vacations
_____	_____	4. Reading stories, novels, poems or plays
_____	_____	5. Driving skillfully
_____	_____	6. Breathing clean air
_____	_____	7. Saying something clearly
_____	_____	8. Thinking about something good in the future
_____	_____	9. Laughing
_____	_____	10. Being with animals
_____	_____	11. Having a frank and open conversation
_____	_____	12. Going to a party
_____	_____	13. Combing or brushing my hair
_____	_____	14. Being with friends
_____	_____	15. Being popular at a gathering
_____	_____	16. Watching wild animals
_____	_____	17. Sitting in the sun
_____	_____	18. Seeing good things happen to my family/friends
_____	_____	19. Planning or organizing something
_____	_____	20. Having a lively talk
_____	_____	21. Having friends come to visit
_____	_____	22. Wearing clean clothes
_____	_____	23. Seeing beautiful scenery
_____	_____	24. Eating good food
_____	_____	25. Doing a good job
_____	_____	26. Having spare time

Frequency	Enjoyment	
____	____	27. Being noticed as sexually attractive
____	____	28. Learning to do something new
____	____	29. Complimenting or praising someone
____	____	30. Thinking about people I like
____	____	31. Kissing
____	____	32. Feeling the presence of the Lord in my life
____	____	33. Doing a project in my own way
____	____	34. Having peace and quiet
____	____	35. Being relaxed
____	____	36. Sleeping soundly at night
____	____	37. Petting, necking
____	____	38. Amusing people
____	____	39. Being with someone I love
____	____	40. Having sexual relations with a partner
____	____	41. Watching people
____	____	42. Being with happy people
____	____	43. Smiling at people
____	____	44. Being with my husband or wife
____	____	45. People showing interest in what I have to say
____	____	46. Having coffee, tea, a cola, etc., with friends
____	____	47. Being complimented or told I have done well
____	____	48. Being told I am loved
____	____	49. Seeing old friends

Now please go over the list once again. This time the question is, HOW PLEASANT, ENJOYABLE OR REWARDING WAS EACH EVENT IN THE PAST MONTH? Please answer this question by rating each event on the following scale:

0 = This was *not* pleasant (neutral or unpleasant)

1 = This event was *somewhat* pleasant (mildly - moderately pleasant)

2 = This event was *very* pleasant (strongly - extremely pleasant)

Important: If an event has happened to you more that once in the past month, try to rate it on the average. If an event has not happened to you during the past month, then rate it according to how much fun you *think it would have been.* (Give it a score according to how pleasant you probably would have experienced it.)

Place your ratings in the space immediately to the left of each item, under the column headed "Enjoyment." Please make sure that you rate **every** item.

Thank you for completing the MRPES.

Now please state how long you have been clean and sober in number of months: I've been clean and sober for_____months.