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The Effect of Leisure Awareness on Attitude and Behavior of the Substance Abuser

Agnes M. Tom
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THE EFFECT OF LEISURE AWARENESS ON ATTITUDE
AND BEHAVIOR OF THE SUBSTANCE ABUSER

by

Agnes M. Tom

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

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VITA

The author, Agnes M. Tom, is the daughter of John Tom and Rosina (Kan) Tom. She was born November 15, 1948, in Hong Kong.

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CHAPTER I

INTRODUCTION

In recent years, professionals from various disciplines (sociology, anthropology, education, and psychology) have shown increasing interest in leisure and related topics. Crandall, Altengarten, Carson, Nolan and Dixon (1977) compiled a general bibliography of leisure publications and listed three hundred leisure-related references which provided a broad overview of published works in the field of leisure reflecting the diversity of disciplines engaged in the study of leisure. This increased interest in the subject of leisure has resulted in the publication of a journal that deals exclusively with leisure research, The Journal of Leisure Research.

Leisure research is of particular importance to the field of counseling since enhancing the growth and development of the individual is a major emphasis in counseling. A satisfactory leisure life style promotes the general well being of the individual. A survey by London, Crandall and Seals (1977) on job and leisure satisfaction provides evidence to support this idea. They found that questions on leisure activities were better predictors of how subjects

perceive the quality of their lives than questions on job-related items. That is, leisure satisfaction was positively correlated with subjects' perception of the quality of their life.

While leisure has the potential to provide greater fulfillment to one's life, there is a recognition that leisure is problematic for many people. Ferenczi (1918) described the "Sunday neurosis" as an inability of individuals to make use of their days off resulting in an increase in symptomatology. Many people that are unemployed or retired, cannot adjust to a life of total leisure. Instead, leisure is viewed as a marginal period of recreational time, which can only be legitimately enjoyed in conjunction with the experience of work (Haworth & Smith, 1976). Mendel (1971) viewed the increased leisure time gained through shorter work weeks as leading to psychological depression. He advocated preventive psychiatry using changed child-rearing and educational practices for individuals to develop more adaptive uses of leisure time before problematic issues arise in adulthood.

The difficulties of leisure experienced by the "normal" population are frequently compounded for individuals with emotionally based disorders since they may experience deficits in other areas, such as social or vocational areas. Because of this, a growing trend in rehabilitation is to

focus on the needs of the total person (Epperson, Witt, & Hitzhusen, 1977). Professionals are increasingly helping individuals to spend their available free time more meaningfully.

More specific to the present investigation is the substance abusers' use of leisure time since their past enjoyment of leisure involved drug-related activities. Few empirical studies addressed the issue of drugs and leisure. Some correlational studies are available which focus on alcoholism and leisure (Berg & Neulinger, 1976; Sessoms & Oakley, 1969). Hartlage (1969a) reported that avocational guidance (counseling focusing on appropriate use of free time) during inpatient treatment in alcoholic centers may lead to a reduced relapse rate and thus, less frequent hospitalizations. Neulinger (1974) summarized the need for empirical studies on leisure and drugs in the following areas: (1) the role that maladaptive use of leisure has in contributing to drug abuse; (2) the role of leisure as a potential preventive or therapeutic measure; and (3) the role of moderate drug use during free time activities for enjoyment or to heighten states of awareness (p. 154).

Shank and Kennedy (1976) reported that there was an overload of conceptual approaches to leisure counseling in comparison to the evidence of its effectiveness as a

counseling technique. They recommended that research studies need to analyze the process and antecedents of leisure counseling to establish a foundation for its claims of effectiveness as well as to provide more information that could lead to its improvement.

Purpose of the Study

The present investigation addressed some of the issues discussed by Neulinger (1974) and Shank and Kennedy (1976). The study focused on the meaning of leisure for substance abusers and through their participation in the leisure awareness program attempted to increase their awareness of the value of leisure for their emotional and psychological growth. Leisure and free time may pose a unique problem to the successful rehabilitation of substance abusers. Lacking viable alternatives as substitutes for their drug addiction may create undue stress which could ultimately result in a return to the drug life style after a period of abstinence. Developing an awareness of choices and opportunities available can help to provide a greater sense of mastery over aspects of the substance abuser's environment. The importance of leisure in rehabilitation was evident in previous studies cited (Berg & Neulinger, 1976; Hartlage, 1969a; and Sessoms & Oakley, 1969). Developing a more adaptive leisure life style would be a

beneficial adjunct to the total rehabilitation of the substance abuser.

This study evaluated the effectiveness of a leisure awareness program in bringing about attitudinal and behavioral changes among substance abusers. Selected personality and attitudinal variables were investigated to evaluate possible changes resulting from the experimental treatment. These variables included measurements of self concept, mood and leisure interest patterns. In addition, the investigation contributed more empirical data on the role of leisure in improving the substance abuser's ability to maintain a drug free life style.

Null Hypotheses

1. There is no significant difference between the treatment (Experimental and Control II) and no treatment (Control I) groups with respect to (a) self concept; (b) mood adjustment; (c) level of leisure activity; (d) attitudes toward leisure ; and (e) leisure interest patterns.

2. There is no significant relationship between external and internal locus of control with respect to the attitudinal and behavioral measures.

3. There is no significant relationship between Phase I and II with respect to the attitudinal and behavioral measures.

Definition of Terms

Leisure Time

The term leisure is derived from the Latin licere, which means "to be permitted". In Brightbill's (1960) book on leisure, he found that the center of learning--the school, is derived from the Greek skole and the Latin word schola, which means not "school" but "leisure". He stated that "Greeks believed the purpose of work was to obtain leisure, without which there could be no culture" (p. 3). For the purpose of the present investigation, the concept of leisure is closely identified with leisure time. Leisure time is defined as a block of unoccupied time, discretionary or free time (Brightbill, 1960; Neulinger, 1974). Leisure is the time beyond that which is required for existence and subsistence. Leisure is a time for relaxation, a time to choose what one wishes to do or not do.

Leisure Awareness Program

The program, designed by the author, focused on increasing the participants' awareness of the therapeutic aspects of leisure. The program stressed several areas that in the past have been problematic for substance abusers: (1) the stereotypes of leisure behavior that prevent the individual from engaging in a specific activity (i.e., only rich people play tennis); (2) the lack of active, concrete

planning of leisure activities; (3) the lack of suitable leisure alternatives when one or two choices are unavailable; (4) the development of leisure interests that minimize financial expenditure; (5) the development of leisure values that are of importance to individual participants rather than conforming to group pressures; (6) the enjoyment of some leisure or free time alone; and (7) the learning of skills that facilitate a more relaxed attitude toward stresses of daily living.

The program included value clarification exercises, structured techniques to increase subject's awareness of leisure alternatives, relaxation exercises and homework assignments (see Appendix A for detailed description). The duration of the program was four weeks, each session was approximately 1½ to 2 hours each week.

Substance Abuser

A substance abuser is an individual who has been admitted to the Drug Dependence Treatment Center at North Chicago Veterans Administration Medical Center, a residential drug program for veterans. Admission to the program is based on careful screening by staff members to ascertain the individual's suitability to participate in a residential drug program such as the DDTC which is a highly structured, long term milieu-behavioral treatment oriented program.

Assumptions

1. The leisure awareness program is a viable way to promote improved attitudes toward leisure among participants.
2. Participants have different levels of need for leisure and different modes of fulfilling these needs.
3. The leisure awareness program is not designed to evaluate the value of past leisure activities but to encourage a reassessment of individual leisure life styles and to introduce possible alternative modes of leisure activities if needed.

Limitations of the Study

1. Since the population is drawn from a Veterans Administration Medical Center near a midwest metropolitan city, the results may or may not be applicable to other demographic regions.
2. The generalizability of results may be limited to those who have participated in similar residential drug treatment programs.
3. Since all the subjects reside at the same hospital facility, subject interaction outside of the experimental treatment is not possible to control. The uncontrolled environmental variables may have an impact on the results.

Organization of the Study

Chapter One has provided an introduction to the study which included a brief background, purpose, hypothesis, definition of terms, assumptions and limitations. Chapter Two will review studies on personality characteristics of substance abusers particularly in relation to their leisure needs. In addition, a discussion of the psychology of leisure will be presented. Chapter Three will provide an outline of the design of the study and a description of the subjects, procedures and instrumentation involved. Chapter Four will present the statistical analysis of the data and a discussion of the results. Chapter Five will include a summary, conclusions, and recommendations for further research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The psychology of leisure is in its early stages of development. There is some overlap between theories of play and leisure. Perhaps, leisure can be understood as a more global term with play as one aspect of leisure. The developmental theories of personality emphasize the importance of play for the adequate development of the individual. Gunn (1977) viewed play as not only a supportive and adjunctive role to work, education, growth and development, but also as a necessary and vital part of need-fulfilling behavior. Since leisure has different meanings for people, its subjective meanings have created difficulties in deriving an objective and operational definition of the term. The formulation of a consistent theory of leisure is premature unless there is general agreement on the meaning of leisure. Given these limitations, the section on psychology of leisure presents different perspectives on the subject in an attempt to provide greater clarity to the field.

Many investigators have focused on various personality dimensions of substance abusers (opiate and non-opiate users) in an attempt to differentiate personality types among users. This review discusses three specific personality characteristics: locus of control, self concept, and mood states. Craig (1979a, 1979b) suggested the importance of these characteristics in the understanding of substance abuse; these selected variables are investigated in the present study.

Research on the correlation of leisure and substance abuse is limited. In the final section, a discussion of some of the pertinent findings in previous investigations on the relationship of leisure and substance abuse is presented. Some of these studies investigated the relationship between sensation seeking and novelty seeking behavior on drug activity; other studies focused on the therapeutic uses of leisure. The review describes some of the trends and directions that these recent findings have on the treatment of substance abuse.

Psychology of Leisure

Developmental Perspective

This section presents a brief overview of developmental theories of personality and their influence on attitudes toward the use of leisure time. Maier (1965)

synthesized the works of three developmental theorists, Erik H. Erikson, Jean Piaget, and Robert R. Sears and provided practical applications of their ideas to the phases of child development. He defined five phases of development: (1) establishing primary dependence, (2) establishing self-care, (3) establishing meaningful secondary relationships, (4) establishing secondary dependency, and (5) achieving balance between dependence and independence. A brief description of each developmental phase and its implication for leisure follows:

Phase I. Establishing Primary Dependence. (approximate ages -- birth to 2 years) During the first phase of the developmental process, the child is totally dependent on a significant adult. Child care involves providing nurturance, food, clothing and shelter--essential ingredients in the child's survival. The child learns to accept the dependency, a sense of basic trust develops (Maier, 1965, p. 289). Neulinger (1974, p. 117) suggests that this phase is important in the development of a basic attitude of openness, optimism and confidence, that allows one fully to experience leisure time activities.

Phase II. Establishing Self-Care. (approximate ages -- 2 to 4 years) During this phase, the child attempts to gain mastery over the environment. Child care involves encouraging the child to attempt independent activities by

providing safe alternatives for the child's actions as well as prohibiting actions that may be detrimental to the child's welfare. The child learns to cope with frustrations, whether internally or externally provoked, and channels his/her desires toward more adaptive actions. As the child's speech becomes more developed, the child can be taught to label individual experiences, actions or feelings for what they are; and gradually to learn to differentiate them. For instance, if a child is angry, he/she can be encouraged to express the angry feelings without aggressively acting out the anger. In this way, the child learns to experience control over his/her own feelings and to develop alternative modes of expressing these feelings (Maier, 1965, p. 290). Play enables a child to master developmental tasks. Maier suggests that if the child is provided with ample opportunity for unhampered play, particularly during the early phases of development, the child may deal more effectively with his/her problems. The implications for the formation of leisure attitudes are that this phase may determine the amount of time and energy a person feels can be devoted to leisure. The degree that the person views leisure as essential or nonessential is influenced by the attitudes developed during this phase (Neulinger, 1974, p. 117).

Phase III. Establishing Meaningful Secondary Relationships. (approximate ages -- 4 to 8 years) During this phase, the child goes beyond the immediate environment. Child care from significant adults involves not only making judgments about what is safe for the child but also trying to understand the child's feelings and actions (Maier, 1965, p. 291). The child is more cognizant of the supporting and controlling functions of the adults within his/her environment. In play, the child acts out fantasies which everyday life may restrict. During this phase, the emphasis in play is exploration, winning, having fun, or being with others. Neulinger (1974, p. 118) suggests that the choice of specific leisure time activities may be determined during this phase.

Phase IV. Establishing Secondary Dependence. (approximate ages -- 8 to 12 years) During this phase, the child is concerned with establishing deeper personal relationships. He/she derives a sense of security in being a member of a family, a school class or play group. Much energy is expended in the development of plans, rules and regulations for group or individual activities. The child is concerned with competition, achievement and self-esteem issues (Maier, 1965, p. 283). Neulinger suggests that during this phase the child engages in activities for intrinsic as well as extrinsic rewards. Attitudes toward

work and leisure is determined in part by the values the child develops during this phase. For example, if work is valued as an end in itself, work and leisure pursuits may be closely related to each other (Neulinger, 1974, p. 119).

Phase V. Achieving Balance Between Dependence and Independence. (approximate ages -- 12 to 18 years) This phase begins in early adolescence, the individual is dependent on the family but is no longer considered a child. This is the time of exploration, experimentation with the many alternatives and ideas available to him/her. During this phase, "the individual's basic pattern of thinking and reasoning has been established" (Maier, 1965, p. 141). Choice of leisure pursuits is influenced by the individual's peer group relationships, the school, friends and significant events during this phase. The attitudes toward work and leisure are determined by the interaction of the many variables involved in all the phases (Neulinger, 1974, p. 120).

Psychodynamic Perspective

Over fifty years ago, Ferenczi (1926) suggested that leisure time could become a psychological problem. Depression, anxiety and tension were common manifestations of a maladaptive adjustment to leisure. Ferenczi attributed the inability to use one's inner resources and the need for

external resources to structure free time as the main reasons for these symptoms.

Martin (1969) wrote extensively on the topic. He considered the term "leisure" as too subjective a concept and preferred the word "free time", a more objective, quantifiable term. His ideas, based on psychodynamic premises, were similar to Ferenczi's conceptions. He agreed with Ferenczi's suggestion that free time can be an adaptive problem. With the movement toward shorter work weeks and earlier retirement, Martin expressed his concerns about the psychological and emotional unpreparedness of many individuals for increased free time. He described the creative adaptation to free time as lying within our inner resources. Two inner resources, innate capacity for effort and the innate capacity for relaxation, played a basic role in creative adaptation. An innate capacity for effort was inherently rewarding. "It is in all competition, play and interplay that consciously and unconsciously serves the purpose of improving and not proving ourselves" (Martin, 1969, p. 150). The second inner resource was relaxation. "Relaxation is that innate capacity of the whole conscious personality to open up freely to all stimuli and impressions from the inner and outer world" (Martin, p. 150). He recommended that to ensure a strong ego and greater creativity, these two inner resources must be fully

developed. Through creative adaptation to free time, work and leisure complemented each other (Martin, 1961).

Gussen (in Martin, 1967, p. 55) believed that the purpose of leisure time was threefold: (1) to help maintain the adaptation and the synthesizing functions of the ego; (2) to develop capacities for using leisure time to achieve better adaptation, to strengthen the synthetic function of the ego, and to widen the conflict-free ego sphere; and (3) to further the potentiality of individuals in a society which depends on these potentials to meet its changing needs and structure.

Ferenczi, Martin and Gussen shared a common belief in the adaptive role of leisure--its role in furthering the development of ego functions. Martin stressed the creative adaptive function of leisure, while Gussen emphasized the role of leisure in providing acceptable outlets for libidinal and aggressive drives.

Trait and Attributional Approaches

Seppo (1976) delineated the differences between the trait and the attributional approaches to leisure and personality. He suggested that a subjective definition of leisure underlies the examination of the relationship between personality and leisure.

Leisure is a person's own perception and inference of quantity and quality of activities. Therefore, leisure becomes a subjective perception of an actual and imagined activity a person participates in at a given time. Through the subjective definition of leisure, whether consciously or unconsciously, leisure encompasses maintenance and enhancement of personal, physical, mental, and social well being (p. 4).

In the trait approach, personality is the most important source of behavioral variance. Personality factors are more important than situational events in determining a person's choices whether during work or leisure. In the attributional approach, both internal (personality) and external (situational) factors can affect a person's subjective definition of leisure and thus his/her leisure behavior (Seppo, 1976).

Although the viewpoints presented in this section provide different perspectives, all stressed the importance of leisure time and the adaptive function of constructive leisure for the psychological well being of the individual. Shallcross' (1978) findings substantiated this idea. In an exploratory investigation on the conceptualization of leisure and a leisure ethic, he concluded that openness to a leisure ethic may be related to: (1) more satisfying interpersonal relationships; (2) openness to new ideas and relationships; (3) greater sense of mastery and internal control over one's behavior; and (4) higher levels of cognitive functioning. Martin's (1967) statement described

the close association between use of free time and psychological growth, he stated that "mental health is recognized by how an individual uses his/her free time since this determines and measures the extent of his/her personality growth and self-fulfillment" (p. 20).

Personality Characteristics of Substance Abusers

Locus of Control

The construct, locus of control, was developed within the theoretical framework of social learning theory. Locus of control refers to the degree to which individuals perceive and expect that reinforcements and rewards are contingent upon their personal actions (internal locus of control) or are the function of luck, fate, chance, or the actions of powerful others (external locus of control). Rotter (1966) developed a paper-and-pencil measurement to assess the personality dimension which he termed--locus of control. In general, an internal locus of control is associated with general psychological well being, while an external locus of control is associated with psychological maladjustment (Joe, 1971; Lefcourt, 1966; Phares, 1976).

In Segal and Merenda's study (1975) on the relationship between locus of control (as measured by the Internal-External (I-E) Locus of Control Scale, Rotter, 1966), sensation-seeking (as measured by the Sensation-Seeking

Scale (SSS), Zuckerman, 1972), and degree of drug use, the results indicated that the I-E Locus of Control Scale and the SSS were significant predictors of drug use or non-drug use. That is, a higher degree of internal locus of control was associated with non-drug use while a higher degree of external locus of control was associated with drug use. In addition, Segal and Merenda found higher levels of sensation-seeking (higher scores on the SSS) in the drug use group. They suggested that drug users may have a greater need for arousal, adventure, and a greater need to overcome boredom than non-drug users. On the basis of these findings, they recommended that drug prevention efforts need to focus on activities or programs which challenge and engage substance abusers toward satisfying sensation-seeking needs. Thus, innovative programs must be designed that will enable drug users to develop alternatives to drugs.

In general, findings from previous studies on the locus of control and substance abuse have yielded inconclusive and contradictory results. Several investigators (Berger & Koocher, 1972; Berzins & Ross, 1973; Calicchia, 1974; Henik & Domino, 1974; Smithyman, Plant, & Southern, 1974) found that substance abusers have a higher degree of internal locus of control. Other studies reported substance abusers have a higher degree of external locus of control

(DeLeon, 1973; Obitz, Oziel, & Unmacht, 1973; Segal & Merenda, 1975), while Platt (1975), found no differences in locus of control between offender drug addicts and non-offender drug addicts. The lack of consistent results indicated a need for further research on the relationship between locus of control and substance abuse.

Berzins and Ross (1973) compared the scores of two groups of subjects (600 hospitalized drug addicts and 800 college students) on the I-E Locus of Control Scale and found drug addicts to have a stronger belief in personal control (higher degree of internal locus of control). They suggested that a higher degree of internal locus of control among drug addicts may be a consequence of substance abuse. That is, substance abusers may develop a generalized belief that they control reinforcement or rewards through drug use. Their continued drug use may enable them to feel that they have achieved control over anxiety, conflicts, impulses, mood, physical and mental states, if only for a brief time period. Berzins and Ross differentiated drug-engendered internal locus of control from the conventional socially learned internal locus of control, the latter being related to an individual's perception of being able to affect the environment through one's own actions. Furthermore, they suggested that drug-engendered internal locus of control may hinder successful treatment of substance abusers since

these individuals tend to forget personal failures and are more resistant to social influence (Berzins & Ross, 1973; Efran, 1963). These two factors may make the substance abuser with drug-engendered internal locus of control less amenable to traditional therapy.

Self-Concept

The second personality variable of importance to this study was the self-concept of the substance abuser. The self-concept has been frequently viewed as a central factor in addiction (Carmichael, Linn, Pratt, & Webb, 1977; Lindblad, 1977; Riccitelli, 1967; Salaznek, 1977; Samuels & Samuels, 1975). Lindblad (1977) investigated the self-concept of white, middle class substance abusers using the Tennessee Self-Concept Scale (TSCS). He found the scores of the substance abusers on the TSCS reflected significantly more negative self-attitudes than their matched controls. Drug addicts were eight times more likely to have negative self-attitudes than were the non-drug addict group. Porteus (1972) compared current heroin users, methadone maintenance patients and drug-free addicts on the TSCS. He found no differences between methadone users and drug-free addicts, however, current heroin users obtained TSCS scores which reflected a lower self-esteem level when compared to the other two groups. Manganiello (1978) reported similar findings of low self-esteem on the TSCS and a higher degree

of external locus of control when compared with non-addict controls. He suggested the utility of the locus of control and self-concept variables as addiction criterion or rehabilitative variables for the understanding, treatment, and prevention of opiate addiction.

In a comparison of the similarities and differences in self-concepts of alcoholics and drug addicts, Carroll, Klein, and Santo (1978) found results that indicated both groups to be more similar than dissimilar with respect to self-concept (using the TSCS). Only three subscales (True/False ratio, Psychosis, and Personality Disorder) yielded significantly higher scores among alcoholics.

Fitts (1972) recommended the use of the TSCS as a criterion or predictor variable because of its usefulness in measuring possible rehabilitative changes. Bradley and Redfering (1978) found the Self-Acceptance subscale on the TSCS has value as a predictor of successful rehabilitation. The results suggested the TSCS may be a useful instrument to measure possible attitudinal changes resulting from the leisure awareness program. In general, substance abusers have a more negative self-concept than non-users. In addition, substance abusers that maintained their addiction have a lower self-concept than drug-free addicts and methadone maintenance patients. Perhaps the ability to control addiction through abstinence or methadone maintenance

enabled these individuals to address other areas of their lives (personal, vocational, etc.) which may contribute to a more positive self-concept.

Mood States

Some of the salient features of the substance abuser's personality have been investigated using the Minnesota Multiphasic Personality Inventory (MMPI). Substance abusers have been found to score high in psychopathy (Pd) and mania (Ma) as measured by the MMPI. Traits associated with Pd and Ma subscales are immaturity, impulsiveness, restlessness, hostility, impatience, and feelings of insecurity or inadequacy (Craig, 1979a).

Patalano (1978) investigated the personality dimensions and psychosocial characteristics of drug abusers who entered a drug-free residential program. The sampled population consisted of 40 white males, 40 white females, 40 black males, and 40 black females between the ages of 15 and 28 years old. The male drug abusers scored significantly higher than females on four subscales of the MMPI (K--Test-taking attitude, D--Depression, Hy--Hysteria, and Pt--Psychasthenia), manifesting greater signs of depression, lack of interest in things, denial of happiness or personal worth, inability to work, and somatic symptomatology. In addition, white subjects (male and female) obtained significantly higher scores than black subjects on four subscales

of the MMPI (D, Hy, Pt, and Si--Social Introversion) which meant that greater depression, hysteroid features, self-doubt, anxiety, and social withdrawal symptoms were found among white subjects. Findings indicated that substance abusers have numerous psychological difficulties and that differences between white and black subjects represented more severe personality problems among white subjects.

The personality traits described by the studies using the MMPI, particularly their influence on the mood of substance abusers were of interest to this investigation. A mood adjustment scale, the Profile of Mood States (POMS, McNair, Lorr, & Droppleman, 1971) has been selected to measure any possible mood changes resulting from the experimental intervention. Gilbert, Parker and Claiborn (1978) used the POMS and found that three different relaxation strategies were able to produce variations in subjects' mood responses. Their findings suggested that the POMS is a useful instrument to assess possible mood changes (i.e., changes in level of depression, anxiety, tension, etc.) resulting from the leisure awareness program.

Studies on Leisure and Drugs

Although studies on leisure and drugs were limited, various aspects of leisure have been the subject of

investigation in recent years. The section on leisure and drugs discussed some of these relevant findings.

Berg and Neulinger (1976) investigated possible differences in attitudes toward leisure among a group of alcoholics and non-alcoholics. A questionnaire, A Study of Leisure, was developed which yielded five dimensions of attitudes toward leisure: (1) affinity to leisure; (2) society's role in leisure planning; (3) self-definition through leisure or work; (4) amount of perceived leisure; and (5) amount of work versus vacation desired. A semantic differential consisting of 16 adjective pairs associated with the concepts leisure and work, and a ranking of nine need variables (i.e., order, affiliation, achievement, understanding, activity, nurturance, sex, autonomy, and sentience) were included in the questionnaire. The results indicated that alcoholics (as compared to non-alcoholics) have a negative perception of leisure, and that they perceived leisure as less active and less pleasant. In addition, alcoholics preferred free time activity that stressed the need for order and neatness. Similar results were described by Sessoms and Oakley (1969) who found that passivity best described the alcoholics' approach to leisure and recreation. These studies suggested that possible avenues of exploration in an ongoing counseling relationship with the alcoholic may need to focus on the

use of leisure time, structured versus unstructured activities, a more active orientation toward leisure, etc.

In a survey of drug users (Steffenhagen, 1973), the most frequently cited reasons for drug use were boredom, curiosity, fun and the need for new experiences. Findings from several studies indicated that the reasons cited have some validity (Kohn, Barnes, & Hoffman, 1979; Kohn, Barnes, Fishlinky, Segal, & Hoffman, 1979; Sutker, Archer, & Allain, 1978). Sutker, Archer, and Allain (1978) investigated interrelationships between sex, drug use patterns, and personality variables in a group of chronic users of illicit drugs. The following instruments were used for data collection: (a) Sensation-Seeking Scale (SSS); (b) Minnesota Multiphasic Personality Inventory (MMPI); (c) Shipley Institute of Living and a structured interview. Differences in sensation-seeking levels (SSS measures individual differences in preferred optimal level of stimulation) were significantly related to drug use patterns with high and medium SSS groups reported earlier and more varied use of drugs than low sensation-seekers. The authors suggested that differences in treatment modalities may be needed for the high sensation-seekers versus the low sensation-seekers. For example, low sensation-seekers may need relaxation and social skills training as alternatives for reduction of unpleasant internal states; high sensation-

seekers may need activities that provide stimulating alternatives to drug use.

In addition to assessing drug abusers on the Sensation-Seeking Scale and the State-Trait Anxiety Inventory, Kaestner, Rosen, and Appel (1977) investigated possible ethnic differences among the subjects. The results indicated that the white subjects scored higher on the SSS than either the black or Hispanic groups. Sensation-seeking and anxiety correlated significantly with the kinds of different drugs used by white subjects. Sutker, et al. (1978) found ethnic differences that support Kaestner, et al. results. The black subjects (Sutker, et al.) were characterized by lower levels of sensation-seeking, less psychopathology, use of fewer drug categories, and later drug use than the white subjects. These studies suggested that ethnicity is an important variable to consider in drug research.

Other aspects of leisure were investigated by Kohn, Barnes and Hoffman (1979). They explored the relationship between history of drug use and experience seeking among 269 male inmates at a correctional facility. The following instruments: Novelty-Experience Scale and Desire-for-Novelty Scale (Pearson, 1970; scales measure four aspects of novelty seeking: "internal cognitive", "external cognitive", "internal sensation", and "external sensation"), and Reducer-Augmenter Scale (Vando, 1969) were selected to

measure experience seeking. They reported that drug use was more likely to occur among individuals who were attracted to unusual states of consciousness and physically thrilling activities, who lacked curiosity, and were bored or dissatisfied with their lives. In a later study, Kohn, Barnes, Fishlinky, Segal & Hoffman (1979) used the same scales (Novelty-Experiencing Scale, Desire-for-Novelty Scale, and Reducer-Augmenter Scale) to compare 32 methadone clients with a group of 32 matched normal controls. The results indicated that methadone clients scored higher than controls on variables that measured boredom, desire for change and attraction to physically thrilling activities. The investigators suggested that the obtained differences may be due to predisposing characteristics that contributed to their drug addiction. However, Bradley and Redfering (1978) suggested that a high level of sensation-seeking behavior can contribute to a more successful rehabilitation outcome. They investigated the relationship between motivation for drug abuse, successful rehabilitation, and personality/demographic variables. Twenty subjects who completed USAF Drug Abuse Rehabilitation Program were administered the 16 PF Questionnaire, TSCS, and the SSS. Results indicated that high scorers on the SSS may be better prospects for successful rehabilitation. A positive correlation was found between those subjects that progressed

most rapidly through the drug rehabilitation program and their high scores on the SSS.

Some positive effects have been attributed to the use of marijuana. One study that sampled a college population found a relationship between frequency of marijuana use with creativity and adventuresomeness (Grossman & Goldstein, 1980). Scores on creativity and adventuresomeness were positively correlated with frequency of marijuana usage. This replication of Grossman, Goldstein and Eisenman's (1971) study found similar results. In addition, a new variable, "internal sensation novelty seeking" (as measured by the internal sensation subscales of Pearson's, 1970 novelty seeking scale) was positively correlated with frequency of marijuana use. Grossman and Goldstein suggested that the marijuana user has a greater desire for internal sensation seeking experience. "Marijuana with its fantasy-facilitating properties and internally pleasurable effects would well be valued by this type of person" (p. 1017). They content that the higher need for internal sensation seeking influenced these individuals to try other drugs rather than the assumption that marijuana led to other drug activities. Perhaps high levels of sensation seeking behavior can be a positive attribute when used in an adaptive manner (creativity, etc.) but a negative attribute when the substance abuser attempts to satisfy

that need through excessive drug use. An outgrowth of successful treatment may be a shift from an internal to a more external sensation novelty seeking orientation. Although this aspect of treatment outcome has not been investigated, a longitudinal study within a residential drug treatment program to assess some of the variables described by Grossman and Goldstein could be of value in the understanding of the relationship between novelty seeking behavior and addiction.

Hartlage (1969b) developed a questionnaire that matched individual interests with appropriate avocational activities. The Computer Research Avocational Guidance Program was written to aid in finding basic interest patterns of respondents, and then matching these interests with appropriate activities or outlets. Hartlage (1969a) used the Computer Research Avocational Guidance Program to provide a sample population of alcoholics with a list of "personality-matched" avocational activities. Wolf (1969) suggested a similar but more extensive undertaking, factorizing an individual's characteristics (needs, desires, capabilities, as well as shortcomings and weaknesses) to obtain a unique profile. With this profile, a comprehensive list of activities or occupations could be generated in order to select activities or occupations that would optimize that individual's interests and capabilities.

Hartlage's work in this area will perhaps make Wolf's hypothetical ideas an eventual reality.

Although Lewinsohn and Graf did not use a drug population for their study, their findings on the relationship between engaging in pleasant activities and mood was felt to be of value in the present investigation. Three groups (depressed, non-depressed psychiatric, and normal controls) completed activity schedules and mood ratings for thirty consecutive days. An activity list was generated for each subject from his/her responses on the Pleasant Events Schedule (MacPhillamy and Lewinsohn, 1971). In addition, the subjects completed the Depression Adjective Check Lists (Lubin, 1965) that measured their mood level. Results indicated that engaging in pleasant activities (events which an individual labelled as "most pleasant" when rating items on the Pleasant Events Schedule) was positively correlated with mood level. Lewinsohn and Graf's (1973) study suggested that increases in activity level influenced the mood level of the subjects. It seemed that a focus on improving leisure awareness may have an effect on the mood level of the subjects. This relationship will be further explored in the present investigation.



Summary

This review of literature provided a selected survey of pertinent studies relevant to the present investigation. In the first section, the psychology of leisure, described different perspectives on the meaning and purpose of leisure from a developmental, psychodynamic, trait and attributional approaches. Although each approach emphasized different ideas, there was a consensus among the authors of the need and value of leisure. The contribution of leisure to improved mental health was emphasized.

In the second section, the personality characteristics of substance abusers were reviewed with the emphasis on personality variables of relevance to the present investigation. Studies that related to the locus of control, the self-concept, and mood states of substance abusers were discussed. In general, studies found that substance abusers have a low self-concept as compared to the normal population and elevated mood levels (high levels of anxiety, tension, depression, etc.). The personality construct, locus of control, continues to be a complex dimension to understand. The review presented some of the contradictory findings described in the studies using the locus of control measurement.

In the final section, a review of relevant studies that related to leisure and substance abuse was described.

The studies indicated that there may be differences in the substance abuser's leisure preferences. Some of the studies suggest differences in need for stimulation and excitement among substance abusers and that these differences may be a factor in addiction. There seemed a need to focus on antecedent variables that could lead to a more positive self-concept among substance abusers. In addition, the studies indicated that substance abusers need to evaluate their leisure life style since this may contribute to the addiction.

The review of literature has provided evidence that a multi-dimensional model of drug dependence is a more meaningful approach to the understanding of substance abuse and addiction. Nathan and Lansky (1978) suggested that

the mechanism of dependence, the etiologic process, the personality structure of alcoholic and drug-dependent individuals and their motivation for and response to treatment all depend on far more than intrapsychic and physiologic factors alone. To this end, the literature now supports a more sophisticated view, that of a complex individual system interacting with personal history and environmental factors to yield an addiction (p. 714).

The present investigation ascribed to the multi-dimensional model of drug dependence. The focus on leisure awareness for substance abusers in the present study was an attempt to investigate one dimension of the complex factors and patterns that may contribute to drug addiction. Developing more adaptive alternatives to deal with leisure time may

have an impact on the overall treatment of drug addiction. There is a need to shift from more traditional measures of drug treatment outcomes (e.g., drug abstinence, employment) to perhaps less traditional outcomes (e.g., changes in leisure attitudes, novelty seeking behavior) since factors that lead to addiction are complex and varied. This shift to less traditional outcome measures may provide valuable information on the treatment variables that could contribute to the substance abuser's understanding and remediation of his/her drug problems.

On the basis of the review of literature and background for this study, the investigator has conjectured that subjects who participate in the leisure awareness program will differ from the subjects who do not participate in the program with respect to: (a) self concept (TSCS); (b) mood adjustment (POMS); (c) level of leisure activity (Behavioral Checklist); (d) attitudes toward leisure (LAD); and (e) leisure interest patterns (LAB). Furthermore, subjects with an internal locus of control will differ from subjects with an external locus of control on the dependent variables (self concept, mood adjustment, leisure activities, attitudes and interest patterns). And finally, subjects in Phase I of the drug program will differ from subjects in Phase II with respect to the dependent

variables. These research assumptions generated the null hypotheses for the investigation.

CHAPTER III

METHODOLOGY

This chapter describes the research design of the study which includes the following: (1) subjects, (2) procedure and experimental design, (3) instrumentation, and (4) statistical analysis. The investigation began October, 1980, and was completed December, 1980. A variety of didactic and experiential techniques were utilized in the leisure awareness program. Data obtained through the use of repeated measurements allowed analysis of change as a function of the experimental intervention.

Subjects

Participants were 37 male patients admitted to the Veterans Administration Medical Center, North Chicago, Illinois with a primary diagnosis of substance abuse. Subjects are currently in treatment at the Drug Dependence Treatment Center (D.D.T.C.) because of their drug addiction and were in either Phase I or II of the drug program. Phase I patients were unemployed and they have been in the program 1 to 6 months. Phase II patients were employed or seeking employment and have been in the program more than 6

months. Phase II patients have a less structured program but reside at the facility and participate in many of the same activities.

The subjects were divided into three groups: (1) thirteen subjects in the Experimental group; (2) twelve subjects in the Control I group; and (3) twelve subjects in the Control II group. Subject and treatment were randomized. Table 1 presents a numerical description of the distribution of the subjects in each group and their Phase I and II status. Each group had an equal proportion of Phase I subjects (10) and since there was an uneven number of Phase II subjects, each group contained at least two Phase II subjects with the additional subject randomly assigned.

The ages of the subjects were distributed into six categories. The mode for the sample population was "30--34" with most of the subjects within the first three categories. The frequency distribution is shown in Table 2.

The race of the subjects was divided into two subgroups: 17 white subjects and 20 black subjects; no other racial groups were found within the population. The relative frequency of the white subjects was 45.9% and the relative frequency of the black subjects was 54.1%.

The distribution of the subjects by marital status showed that almost 50% of the sample population was single. These frequencies are shown in Table 3.

TABLE 1

Frequency Distribution of Subjects by Group Identification and Phase

Group Identification	Phase I		Phase II	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
1. Experimental	10	27.0	3	8.1
2. Control I	10	27.0	2	5.4
3. Control II	10	27.0	2	5.4
Total	30	81.1	7	18.9

TABLE 2

Frequency Distribution of Subjects by Age

Age Category	Absolute Frequency	Relative Frequency
1. 25 and Under	11	29.7
2. 26--29	10	27.0
3. 30--34	13	35.1
4. 35--39	1	2.7
5. 40--44	0	0
6. 45 and Over	2	5.4
Total	37	100.0

TABLE 3

Frequency Distribution of Subjects by Marital Status

Marital Status	Absolute Frequency	Relative Frequency
1. Single	18	48.6
2. Married	5	13.5
3. Cohabitation	2	5.4
4. Divorced	6	16.2
5. Separated	6	16.2
6. Widowed	0	0
Total	37	100.0

The distribution of the subjects by highest level of education attained clustered in three categories. The original question had six levels of education: (1) some grade school; (2) completed grade school; (3) some high school; (4) completed high school--GED; (5) some college; and (6) completed college. One of the reasons that may have contributed to almost 50% of the sample population completing high school or GED was the drug treatment program's strong emphasis on obtaining a high school or GED diploma. The educational resources for remedial education were located within the hospital setting and the patients were encouraged to participate. These results are shown in Table 4.

TABLE 4

Frequency Distribution of Subjects by Education

Education	Absolute Frequency	Relative Frequency
1. Some grade school	0	0
2. Completed grade school	0	0
3. Some high school	8	21.6
4. Completed high school/GED	18	48.6
5. Some college	11	29.7
6. Completed college	0	0
Total	37	100.0

Design

The experimental design was a randomized, three group design (Kerlinger, 1973, p. 338). A diagram of the design is shown on Table 5.

The letter R placed before the diagram indicates that the subjects are randomly assigned to the experimental and control groups. In the first condition (Experimental), treatment (X) was applied after a subject has been pre-tested (Y_b). In the second condition (Control I) pre and post measures (Y_b , Y_a) were obtained, Control I did not receive treatment (- X). In the third condition (Control II), treatment (X) and post measures (Y_a) were obtained, no pre-test was administered. One of the positive features of this experimental design was that possible interaction effects due to subject sensitization to pre-test has been controlled.

TABLE 5

Experimental Design

R	Y_b	X	Y_a	(Experimental)
R	Y_b	-X	Y_a	(Control I)
R		X	Y_a	(Control II)

Note. From Foundations of Behavioral Research by F. N. Kerlinger, New York: Holt, Rinehart, and Winston, Inc., 1973.

Procedure

The investigator received permission from the Veterans Administration Medical Center, North Chicago, Illinois Research Committee and the Director of D.D.T.C. program to conduct the investigation. The study was under the auspices of the Psychology Service at NCVAMC. An outline of the investigation was approved prior to the initiation of the study.

The Drug Dependence Treatment Center staff provided helpful information on the problems substance abusers experience during their leisure time. The design of the leisure awareness program addressed some of these problems (e.g., boredom, lack of money, etc.). The staff discussed the investigation with the patients in the drug program and elicited their participation. A list of the volunteers was given to the investigator. Prior to the first meeting with the subjects, the investigator used the list of names to randomly assign the subjects to one of three groups. Each group consisted of 10 subjects from Phase I and 2 subjects from Phase II. Due to the uneven number of Phase II subjects, the Experimental group received an additional participant. Six subjects left the D.D.T.C. program during the study, a total of 31 subjects completed the entire six week investigation.

At the initial meeting with all the subjects, a brief introduction was given concerning the purpose of the investigation. Any questions relating to the study were answered by the investigator. Subjects were requested to sign the Consent Form (see Appendix B) prior to filling the questionnaires. The maximum amount of time needed to complete the questionnaires was approximately one hour. The following section described the procedures for each group:

Experimental Group: Subjects were pre-tested using the following instruments: Leisure Attitude Dimension (LAD), Leisure Activity Blank (LAB), Internal-External (I-E) Locus of Control, Profile of Mood States (POMS), Tennessee Self Concept (TSCS), and a demographic questionnaire. In addition, The Behavioral Checklist was given to each subject to measure daily use of unstructured time. The Behavioral Checklist was collected on a weekly basis throughout the study. One week following the pre-test procedures, all subjects began participation in the Leisure Awareness Program. At the completion of the leisure program, all subjects were post-tested utilizing the dependent measures (LAD, LAB, POMS, TSCS and the Behavioral Checklist).

Control Group I: Subjects were pre-tested utilizing the demographic questionnaire, LAD, LAB, I-E Locus of Control, POMS, and TSCS. In addition, all subjects were given the Behavioral Checklist to measure daily use of

unstructured time. Subjects in this control group did not participate in the Leisure Awareness Program but were post-tested utilizing the dependent measures (LAD, LAB, POMS, TSCS, and the Behavioral Checklist) when the Experimental and Control II groups completed the leisure program. The subjects were informed that they had an opportunity to participate in a leisure awareness program at the conclusion of the study. They were told that the design of the investigation required that one group be excluded from the treatment program.

Control Group II: Subjects were not pre-tested on the dependent measures. Prior to the participation in the Leisure Awareness Program, subjects completed the demographic questionnaire and the I-E Locus of Control. In addition, subjects were given the Behavioral Checklist to measure daily use of unstructured time. At the completion of the leisure program, the subjects in Control II were post-tested utilizing the dependent measures.

Instrumentation

Leisure Attitude Dimension: LAD is a scale utilizing a semantic differential to measure the psychological meaning of the leisure concept. The LAD consisted of 12 bipolar adjectives such as good-bad, boring-exciting, or full-empty. Half of the pairs were reversed at random to counteract

response bias tendencies. Items were scored from 1 to 7, 7 represented the most positive and 1 the least positive attitude toward leisure. The present investigator constructed the scale deriving many of the items from Neulinger's (1974) research on leisure attitudes (see Appendix C which includes the LAD, demographic questionnaire and Behavioral Checklist).

Behavioral Checklist: The checklist measured the subject's frequency of participation and attitude (like, indifferent and dislike) toward specific leisure activities that were available within the drug program. Items were scored--Like (3), Indifferent (2), and Dislike (1)(see Appendix C for detailed description).

Leisure Activity Blank: LAB consisted of a set of 120 recreation activities that was developed by McKechnie (1975). The instrument measured individual's past leisure activity patterns and their intended future involvement in these activities. Norms for the LAB were derived from an adult sample drawn from Marin County, California.

The test-retest reliability of the LAB used a sample population of 93 undergraduates at Arizona State University ranged from .71 to .92 for the LAB Past scales and from .63 to .93 for the Future scales. One aspect of the LAB's reliability was the scale's internal consistency which ranged from .81 to .93 for the LAB Past scales and .76 to

.94 for the LAB Future scale. McKechnie reported that the LAB in its current state of validation has been released for research purposes only. The range of utility for the LAB has not been fully explored. Research on personality variables that underlie the LAB patterns was suggested as an important next step in validating the instrument (McKechnie, 1975).

Internal-External (I-E) Locus of Control Scale:

Developed by Rotter (1966) is a 29-item, forced-choice test to evaluate a subject's belief about the nature of the world. More specifically, the test measures a subject's expectations about how reinforcement is controlled. Internal locus of control refers to individuals who believe that reinforcements are contingent upon their own behavior, capacities, or attributes. External locus of control refers to individuals who believe that reinforcements are not under their personal control but rather are under the control of powerful others, luck, chance, fate, etc. (Joe, 1971).

Rotter (1966) reported the test data results on the I-E scale obtained from various sample populations (high school students, undergraduate psychology students, etc.). These findings indicated that the internal consistency estimates of reliability ranged from .65 to .79. The test-retest reliability measures ranged from .49 to .83 for periods from one to two months.

To evaluate the construct validity of the I-E Locus of Control Scale, Seeman and Evans (1962) focused on subjects' behavior during an important life situation and to what extent these subjects attempt to control their environments. They investigated the behavior of patients in a tuberculosis hospital. These authors found that patients who scored high on the internal dimension tended to question the physicians and nurses more and were more knowledgeable about their own condition. James, Woodruff and Werner (1965) studied the relationship between locus of control and smoking. They found that smokers who quit smoking were more "internal"--as measured by the I-E Locus of Control Scale. Other investigators (Fontana, Klein, Lewis, & Levine, 1968; Joe, 1971) have reported results that suggest a relationship between I-E Locus of Control and adjustment. In general, individuals at the extreme ends of the locus of control continuum may be more mal-adjusted than individuals in the middle range.

Profile of Mood States: POMS was developed by McNair, Lorr and Droppleman (1970). The inventory measures six affective states: (1) Tension-Anxiety; (2) Depression-Dejection; (3) Anger-Hostility; (4) Vigor-Activity; (5) Fatigue-Inertia; and (6) Confusion-Bewilderment. The POMS has 65 five-point adjective ratings that were derived from

a total of 100 different adjective scales by means of several factor analytic studies.

The internal consistency estimates of reliability for the six mood scales of the POMS were near .90 or above. The test-retest reliability was derived from two studies. The first study tested subjects before the initial therapy session and after four weeks of therapy; the second study used the time period between intake and treatment to assess the stability of POMS scores without the intervention of treatment. For the first study (McNair and Lorr, 1964), the test-retest reliabilities for the six factors which corresponded to the six affective states (Tension-Anxiety; Depression-Dejection; Anger-Hostility; Vigor-Activity; Fatigue-Inertia; and Confusion-Bewilderment) ranged from .61 to .69 using a sample population of 150 VA outpatients. In the second study (McNair & Lorr, 1964), the estimate test-retest stability without the intervention of treatment ranged from .65 to .74. McNair, Lorr and Droppleman (1970) suggested that the obtained stability coefficients for these two studies are possibly the maximum stability to be expected for mood scales. They concluded that the results of the reliability studies provide evidence of a fair degree of consistency given the nature of mood states.

The predictive and construct validity of the POMS has been investigated in four areas of research: (1) brief

psychotherapy studies; (2) controlled outpatient trials; (3) studies of response to emotion-inducing conditions; and (4) studies of concurrent validity coefficients and other POMS correlates. In one of these studies, Lorr, McNair, Weinstein, Michaux and Raskin (1961) compared the results of psychotherapy alone with those of four other treatment groups: psychotherapy plus meprobamate; psychotherapy plus chlorpromazine; psychotherapy plus phenobarbital; and psychotherapy plus placebo. They found a highly significant ($p < .001$) improvement on Tension-Anxiety, Depression-Dejection, Anger-Hostility, and Fatigue-Inertia for the total sample of 180 VA outpatients. In addition, no significant change on any of the six mood scales were found for the control group of 45 normals that did not receive any treatment when retested after a similar time interval. Other studies have also found that one or more of the POMS factor scores were sensitive to change associated with psychotherapy (Haskell, Pugatch, & McNair, 1969; Lorr & McNair, 1964).

Tennessee Self Concept Scale: TSCS was developed by Fitts (1965) to measure the self-concept. The TSCS consisted of 100 self-description items, of which 90 assess the self-concept and 10 assess self-criticism (the self-criticism items are Minnesota Multiphasic Personality Inventory (MMPI) Lie scale items. For each item the

respondent chose one of five response options labelled from "completely false" to "completely true". The Clinical and Research Form (C & R) was used for the present investigation rather than the Counseling Form since the C and R Form was considered by Fitts to be more appropriate for research and clinical assessment. The C and R Form utilized the same items as the Counseling Form but derived additional scores to measure variables such as a measure of response style; a measure of conflict; etc. that may be of interest to the researcher or clinician.

The test-retest reliability coefficients of all major scores on both forms (C and R, Counseling) ranged from .60 to .92. Congdon (1958) utilized a shortened version of the TSCS and obtained reliability coefficient of .88 for the Total Positive Score (Total P Score reflects the overall level of the respondent's self-esteem). Fitts (1965) reported that the distinctive features of individual TSCS profiles were found to be still present for many of the subjects when retested after a one year interval.

Validation procedures on the TSCS suggested the test's usefulness in discriminating between groups (psychiatric patients vs. non-patients; specific types of psychiatric disorders; and delinquents) using the Empirical Scales of the TSCS. The six subscales of the Empirical Scales were empirically derived by item analysis; inclusion of items

was based on which items differentiated one group of subjects from all other groups. Additional evidence for the validity of the instrument was found in studies that obtained changes in the respondent's self-concept as a consequence of certain life experiences. For instance, Ashcraft and Fitts (1964) found that psychotherapy increased the subjects' self-esteem level as measured by the TSCS. Decreased self-esteem levels were found when subjects experienced stress and failure (Gividen, 1959).

Null Hypotheses

1. There is no significant difference between the treatment (Experimental and Control II) and no treatment (Control I) groups with respect to (a) self concept (TSCS); (b) mood adjustment (POMS); (c) level of leisure activity (Behavioral Checklist); (d) attitudes toward leisure (LAD); and (e) leisure interest patterns (LAB).

2. There is no significant relationship between external and internal locus of control with respect to the attitudinal and behavioral measures.

3. There is no significant relationship between Phase I and II with respect to the attitudinal and behavioral measures.

Statistical Analysis

The following data were coded onto computer cards for analysis: (1) group identification (Experimental, Control I and II groups); (2) Phase I or II; (3) completion of six week investigation; (4) demographic data; (5) I-E Locus of Control; (6) LAD, LAB, POMS, TSCS and Behavioral Checklist, pre-test and post-test scores.

The following procedures were utilized to analyze the data: (1) Distributional characteristics of the independent and dependent variables were examined. Frequencies were obtained for the nominal variables since these variables assume a limited number of values. Con-descriptive calculations were used for interval scale variables (TSCS scores, LAB, etc.) that assume a large number of values. (2) The major hypothesis -- the effect of leisure awareness program on the dependent measures (scores on the LAD, LAB, POMS, TSCS, and Behavioral Checklist) and the independent variables (treatment vs. no treatment) was tested using the one-way multivariate analysis of variance (MANOVA) for repeated measures to compare the pre-test and post-test scores of the three groups. The multivariate analysis of covariance was used to compare the post-test scores of the Experimental, the Control I and II groups with the pre-test scores as the

covariates. (3) Hypotheses 2 and 3 were tested using one-way analysis of variance on the post-test scores to evaluate I-E locus of control and Phase level differences. (4) Non-parametric correlational statistics were performed on the variables with ordinal rankings (age, education, family income, leisure time, I-E locus of control, and Phase level) to investigate their correlations with the post-test scores. (5) Demographic variables were evaluated using MANOVA methods to analyze the possible relationships to the dependent measures.

Multivariate Analysis of Variance

The multivariate analysis of variance (MANOVA) and the multivariate analysis of covariance were selected to test the main hypothesis since the characteristics of the dependent measures were too complex to be analyzed by a single test. The MANOVA can simultaneously analyze a number of variables within a general construct in order to characterize their differences among the experimental groups. For instance, the TSCS is a general construct which measures different aspects of the self concept, the MANOVA weighs the different aspects of the TSCS and assigns weights that maximize the variability between groups relative to the variability within groups. The probability, on the null hypothesis, of the observed mean difference between pre-test and post-test scores for all the TSCS

variables is simultaneously obtained by an exact multivariate test of significance. In addition, univariate F-tests are performed on each variable separately. The separate F-tests are not statistically independent since a single probability statement applicable to all variables jointly cannot in general be obtained from the same subjects, they are correlated in some arbitrary and unknown manner. No exact probability that at least one of them will exceed some critical level on the null hypothesis can be calculated. The multivariate tests, however, are based on sample statistics which take into account the correlations between variables and have known exact sampling distributions from which the required probabilities can be obtained (Bock & Haggard, 1968, p. 102). If the null hypothesis is rejected because of the results of the multivariate test of significance, the differences between the treatment effects are estimated and inspected to determine the direction and relative sizes of the effect on each of the dependent variables. Thus, the MANOVA using multivariate methods is a more realistic treatment of the complexities of attitudes and behaviors than univariate methods of analysis.

A further analysis, the multivariate analysis of covariance can be performed. The multivariate analysis

of covariance evaluates whether the significant differences found in the MANOVA are due to individual differences among subjects on pre-test scores or to the effects of the experimental treatment.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter reports the findings obtained through the analysis of the data. The primary objective of the study was to investigate the effects of the experimental intervention--leisure awareness program on attitudinal and behavioral variables of substance abusers as measured by Leisure Attitude Dimension (LAD), Leisure Activity Blank (LAB), Profile of Mood States (POMS), Tennessee Self Concept Scale (TSCS), and the Behavioral Checklist. Demographic data, I-E Locus of Control scores, and Phase level were analyzed to explore their relationship to the dependent measures (LAD, LAB, POMS, TSCS, and Behavioral Checklist). The findings were presented according to the objectives described. The Statistical Package for Social Sciences (SPSS) was used to tabulate and statistically analyze the data.

Results

Hypothesis 1: There is no significant difference between the treatment and no treatment groups with respect to (a) self concept (TSCS); (b) mood adjustment (POMS); (c) level of leisure activity (Behavioral Checklist); (d) attitudes toward leisure (LAD); and (e) leisure interest patterns (LAB).

The statistical procedures used to test Hypothesis 1 was the multivariate analysis of variance (MANOVA) for repeated measures and the multivariate analysis of covariance. The MANOVA was performed on each of the dependent measures--LAD, LAB, POMS, TSCS, and Behavioral Checklist. The results for the Leisure Activity Blank (LAB) indicated that significant differences between pre-test and post-test scores were present among the groups. The LAD, POMS, TSCS and Behavioral Checklist did not reach significant levels on the multivariate tests. However, certain univariate F statistics on the POMS did obtain significant levels.

The multivariate test of significance for LAB $F(28, 74) = 2.318, p < .002$ was significant at the .01 level. Table 6 presents the univariate F tests for each of the 14 LAB variables with their discriminant coefficients. The LAB variables--mechanic, sports, glamour sports, mechanic future and easy living obtained significant levels. The subclass means and standard deviations of the LAB are shown in Table 7. The means and standard deviations for these significant factors indicated that the experimental and Control II groups scored significantly higher on mechanic, sports, glamour sports, mechanic future and easy living than the Control I group that did not receive treatment. Higher scores on these specific LAB variables were related to the effects of treatment.

TABLE 6

Univariate F Tests and Discriminant Coefficients for LAB Variables

Variable	Univariate <u>F</u> Tests			Discriminant Function
	F(2,50)	Mean Square	P Less Than 1	Coefficients
1. Mechanic	7.528	444.12	0.001***	0.442
2. Crafts	0.077	2.83	0.926	-0.693
3. Intellect	0.364	14.28	0.696	-0.264
4. Slow Living	0.006	0.39	0.994	-0.821
5. Sports	5.276	114.15	0.008**	0.540
6. Glamour Sports	4.765	185.79	0.013*	0.822
7. Adventure-Future	2.276	232.87	0.113	-0.075

* Significant at the .05 level

** Significant at the .01 level

*** Significant at the .001 level

TABLE 6 (Continued)

Univariate <u>F</u> Tests		Discriminant Function Coefficients		
Variable	F(2,50)	Mean Square	P Less Than 1	
8. Mechanic-Future	4.913	244.64	0.011*	0.143
9. Crafts-Future	0.293	12.29	0.747	-0.632
10. Easy Living-Future	3.942	53.67	0.026*	0.222
11. Intellect-Future	0.287	8.57	0.752	0.047
12. Ego Recognition	1.869	45.13	0.165	0.822
13. Slow Living-Future	0.220	4.69	0.803	0.828
14. Clean Living-Future	0.676	33.43	0.513	-0.473

* Significant at the .05 level

TABLE 7

Means and Standard Deviations on LAB Variables among the Groups

Group Identification	Mechanic	Crafts	Intellect	Slow Living	Sports	Glamour Sports	Adventure Future
Experimental	M 52.00	29.37	32.04	54.87	35.33	28.87	52.08
	SD 8.76	7.32	5.68	6.84	4.46	6.13	8.07
Control I	M 43.75	29.10	33.65	54.95	31.85	23.05	45.65
	SD 6.23	4.93	6.61	8.76	4.42	5.95	12.00
Control II	M 52.66	28.44	32.55	55.22	37.33	26.22	47.44
	SD 7.45	4.21	6.94	9.94	5.59	7.15	10.48

TABLE 7 (Continued)

Means and Standard Deviations on LAB Variables among the Groups

Group Identification	Mechanic Future	Crafts Future	Easy Living Future	Intellect Future	Ego Recognition	Slow Living Future	Clean Living Future
Experimental	M 41.83	26.58	27.45	24.50	22.41	40.91	21.91
	SD 7.21	7.49	3.38	4.80	5.91	5.50	9.13
Control I	M 35.55	25.85	24.35	25.35	19.65	41.30	24.20
	SD 6.73	5.88	3.40	6.10	3.95	4.13	4.95
Control II	M 41.77	24.66	26.55	26.00	22.11	42.11	24.11
	SD 7.34	4.33	4.95	5.63	3.65	2.36	3.25

A further analysis, the multivariate analysis of covariance, is performed on the LAB scores to characterize in greater detail the treatment effects. The multivariate analysis of covariance evaluated the differences between pre-test and post-test scores using the pre-test scores as the covariate. The test of within cells regression yielded no significant results in the overall test of significance using Wilk's lamda criterion, $F(14, 37) = 1.234, p < .294$. This provided further evidence that the significant effects obtained on the MANOVA were due to the experimental condition and not to individual differences in pre-test scores among the subjects. When the dependent measures were adjusted for the pre-test covariates, the multivariate tests of significance using Wilk's lamda criterion resulted in higher significance levels, $F(14, 37) = 3.948, p < .001$. Table 8 shows the univariate F tests when the LAB dependent variables were adjusted for covariates (pre-test scores). Higher significant levels were reached for Glamour Sports, Mechanic Future, and Easy Living in the multivariate analysis of covariance.

The MANOVA on the Profile of Mood States (POMS) resulted in no significant main effect differences among the groups on pre-test and post-test POMS scores using the multivariate test of significance. Univariate F statistics for each of six POMS variables showed that anger and vigor

TABLE 8

Univariate F Tests and Discriminant Coefficients
Adjusted for Pretest Scores for LAB Variables

Variable	Univariate <u>F</u> Tests			Discriminant Function Coefficients
	F(1,50)	Mean Square	P Less Than 1	
1. Mechanic	14.426	850.19	0.001***	0.447
2. Crafts	0.013	0.48	0.908	-0.706
3. Intellect	0.976	37.25	0.328	-0.274
4. Slow Living	0.002	0.12	0.966	0.756
5. Sports	8.257	177.74	0.006**	0.488
6. Glamour Sports	8.356	331.12	0.006**	0.815
7. Adventure-Future	2.951	306.50	0.092	-0.017

** Significant at the .01 level

*** Significant at the .001 level

TABLE 8 (Continued)

Variable	Univariate <u>F</u> Tests			Discriminant Function Coefficients
	F(1,50)	Mean Square	P Less Than 1	
8. Mechanic-Future	9.452	470.07	0.003**	0.132
9. Crafts-Future	0.074	3.05	0.787	-0.511
10. Easy Living-Future	7.802	106.27	0.007**	0.300
11. Intellect-Future	0.088	2.66	0.767	-0.043
12. Ego Recognition	3.492	84.19	0.068	0.735
13. Slow Living-Future	0.000	0.01	0.985	0.793
14. Clean Living-Future	0.542	26.85	0.465	-0.479

** Significant at the .01 level

differed between pre-test and post-test among the groups (see Table 9). The Experimental group showed higher levels of anger and lower levels of vigor than Control I and II; Control II showed lowest levels of anger and highest levels of vigor when means and standard deviations were compared for the three groups. Within group correlation between anger and vigor is -0.383 which meant that there was a negative correlation between the two variables (see Table 10 for within cells correlation of the POMS). Since the multivariate test of significance for the POMS resulted in no significant differences, the significant univariate F tests must be evaluated with caution. As suggested in the previous discussion on the MANOVA, separate univariate F tests are statistically not independent and individual variables may be correlated with each other. There was a possibility that at least one of the univariate F tests became significant through sampling error.

The MANOVA results for LAD, TSCS, and Behavioral Checklist are presented in Tables 11, 12, and 13, respectively. The null hypothesis was not rejected for these dependent measures--LAD, TSCS and Behavioral Checklist. No statistical differences between treatment and no treatment groups were found. The null hypothesis was rejected for aspects of the POMS, with some qualification due to the lack of

TABLE 9

Univariate F Tests and Discriminant Coefficients for POMS Variables

Variable	Univariate <u>F</u> Tests			Discriminant Function Coefficients
	F(2,50)	Mean Square	P Less Than 1	
1. Tension	1.482	45.45	0.237	0.162
2. Depression	2.150	302.33	0.127	0.026
3. Anger	5.216	500.33	0.009**	0.908
4. Vigor	3.236	99.74	0.048*	-0.455
5. Fatigue	0.078	3.17	0.926	-0.359
6. Confusion	0.906	25.34	0.411	-0.397

* Significant at the .05 level

** Significant at the .01 level

TABLE 10

Within Cells Correlations of POMS Variables

Variable	Tension	Depression	Anger	Vigor	Fatigue	Confusion
Tension	5.539					
Depression	0.642	11.858				
Anger	0.567	0.758	9.794			
Vigor	-0.207	-0.259	-0.383	5.552		
Fatigue	0.535	0.504	0.348	-0.364	6.397	
Confusion	0.554	0.804	0.628	-0.231	0.474	5.281

TABLE 11

Multivariate Analysis of Variance for LAD

<u>Source</u>	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>P Less Than</u>
Within Cells	5200.051	50	104.001		
Group	205.869	2	102.935	0.990	0.379

P < .05, No significance

TABLE 12

Multivariate Tests of Significance Using Wilks Lamda Criterion for TSCS

Test of Roots	F	DF Hypothesis	DF Error	P Less Than	R
1 Through 2	0.544	38.00	64.00	0.977	0.512
2 Through 2	0.526	18.00	32.50	0.924	0.475

P < .05, No significance

TABLE 13

Multivariate Analysis of Variance for Behavioral Checklist

<u>Source</u>	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>P Less Than</u>
Within Cells	5087639.00	50	101752.75		
Group	430622.37	2	215311.18	2.116	0.131

P < .05, No significance

significance. The null hypothesis was rejected for the LAB since significant levels were found.

Hypothesis 2: There is no significant relationship between external and internal locus of control with respect to the attitudinal and behavioral measures.

The I-E Locus of Control scores were grouped into three categories for statistical analysis: (a) Low, 0-6; (b) Medium, 7-10; and (c) High, 11-16. Within the three categories, (a) Group 1 (low) consisted of 18 subjects; (b) Group 2 (medium) consisted of 14 subjects; and (c) Group 3 (high) consisted of 5 subjects. The low group was considered to have a more internal locus of control whereas the high group was more external on locus of control. The subjects within the three categories were evaluated on the dependent measures using one-way analysis of variance. No significant differences were found on the LAD, LAB, POMS and Behavioral Checklist. One variable on the TSCS, Self Criticism, $F(2, 28) = 4.608, p < .018$ was significant at the .05 level. This indicated that Group 3, (more external on locus of control) was significantly higher on the Self Criticism scale than Groups 1 and 2. The null hypothesis was not rejected for Hypothesis 2 for two reasons: (1) there was a probability that at least one spuriously significant result occurred among many tests of significance; and (2) the dropouts decreased Group 3 (more external on

locus of control) from 5 to 3 subjects which made statistical analysis less meaningful.

The second analysis performed on the I-E Locus of Control was to evaluate its correlation with the dependent variables. Spearman's ρ (r_s) rank order correlation coefficients were performed on the I-E Locus of Control scores and the dependent measures. Spearman r_s is a descriptive statistic that shows "concordance" or "agreement", the tendency of two rank orders to be similar (Hays, 1973, p. 787). Two dependent variables--Confusion-Bewilderment on the POMS and Personality Integration on the TSCS when paired with I-E Locus of Control scores resulted in significant correlation coefficients; I-E locus of control with Confusion-Bewilderment, $r_s = 0.387$, $p < .042$ and the I-E locus of control with Personality Integration has a significant negative association, $r_s = -0.405$, $p < .024$; both were significant at the .05 level.

Hypothesis 3: There is no significant relationship between subjects in Phase I of the drug program and subjects in Phase II with respect to the attitudinal and behavioral measurements.

The subjects were grouped according to their Phase level and statistically analyzed using the one-way analysis of variance. The results indicated that the LAD, POMS and Behavioral Checklist did not yield significant differences.

One variable on the TSCS, Personality Disorder, $F(1, 29) = 6.739$, $p < .014$ was significant at the .05 level. A comparison of the mean differences on the Personality Disorder variable indicated that Phase II scored higher than Phase I on this variable. Since the Personality Disorder scale is an inverse scale on the TSCS, the lower scores for the Phase I group suggested that they were more similar to individuals diagnosed as having a personality disorder than Phase II subjects. On the Leisure Activity Blank, the subscale, Slow Living, $F(1, 29) = 7.461$, $p < .011$, was significant at the .05 level. Phase I group scored higher on the Slow Living subscale than the Phase II group.

Spearman rho (r_s) rank order correlation coefficients were performed on the Phase level and the dependent measures. Phase level was found to be positively correlated with Self Satisfaction and Personality Integration; Phase with Self Satisfaction, $r_s = 0.3977$, $p < .027$, and Phase with Personality Integration, $r_s = .3977$, $p < .027$ are significant at the .05 level. The results indicated that Phase II level was associated with self satisfaction and personality integration subscales on the TSCS. In conclusion, the null hypothesis was rejected for Hypothesis 3 since several variables yielded significant results.

Demographic Variables

The demographic variables (race, education, marital status, parent's occupation, family income, and daily leisure time) were analyzed to evaluate their relationship to the dependent measures. Two of the demographic variables, race and marital status, presented several significant relationships when statistically analyzed using the analysis of variance.

Table 14 shows the results of the analysis of variance, the ANOVA evaluated the simultaneous effects on the two factors--groups and race on the dependent variable--Mechanic. In Table 15, the Multiple Classification Analysis (MCA) examined the magnitude of the effects of each category of a factor. The ETA value is the common correlation ratio, a measure of association. The BETA, is a partial-correlation ratio. The results in Table 15 indicated that both factors have an effect on the variable--Mechanic, while the interaction effect was not significant. Since no interaction effects were found in the ANOVA, the MCA was used to examine the net effect of each variable when the differences in the other factor was controlled.

In Table 16, the ANOVA showed the effects of two factors, group and race on the dependent variable, Sports. On the Sports variable, race was not a significant factor but groups were significant. The MCA on Table 17 indicated

TABLE 14

Analysis of Variance

Mechanic by Groups and Race of Subject

Source	SS	DF	MS	F	Significance of F
Main Effects	1220.809	3	406.93	8.276	0.001***
Groups	436.201	2	218.10	4.436	0.022*
Race	568.690	1	568.69	11.566	0.002**
2-Way Interactions	7.895	2	3.94	0.080	0.923
Groups Race	7.895	2	3.94	0.080	0.923
Explained	1228.703	5	245.74	4.998	0.003
Residual	1229.230	25	49.16		
Total	2457.933	30	81.93		

* Significant at the .05 level

** Significant at the .01 level

*** Significant at the .001 level

TABLE 15

Multiple Classification Analysis
 Mechanic by Groups and Race of Subject

Grand Mean = 49.74

<u>Variable + Category</u>	<u>N</u>	<u>Unadjusted Dev'n</u>	<u>Eta</u>	<u>Adjusted for Dev'n</u>	<u>Independents Beta</u>
<u>Group</u>					
Experimental	12	3.34		1.37	
Control I	10	-6.64		-5.25	
Control II	9	2.92		4.01	
			0.52		0.42
<u>Race</u>					
White	14	5.54		5.03	
Black	17	-4.57		-4.14	
			0.56		0.51
Multiple R Squared					0.497
Multiple R					0.705

TABLE 16

Analysis of Variance
Sports by Groups and Race of Subject

Source	SS	DF	MS	F	Significance of F
Main Effects	216.342	3	72.11	3.450	0.032*
Groups	159.780	2	79.89	3.822	0.036*
Race	29.939	1	29.93	1.432	0.243
2-Way Interactions	60.536	2	30.26	1.448	0.254
Groups Race	60.536	2	30.26	1.448	0.254
Explained	256.877	5	55.37	2.649	0.047
Residual	522.540	25	20.90		
Total	799.417	30	26.64		

* Significant at the .05 level

TABLE 17

Multiple Classification Analysis
Sports by Groups and Race of Subject

Grand Mean = 35.23					
	<u>Variable + Category</u>	<u>N</u>	<u>Unadjusted</u> <u>Dev'n</u>	<u>Eta</u>	<u>Adjusted for Independents</u> <u>Dev'n</u> <u>Beta</u>
<u>Group</u>					
	Experimental	12	1.36		0.91
	Control I	10	-3.53		-3.21
	Control II	9	2.11		2.36
				0.48	0.45
<u>Race</u>					
	White	14	1.49		1.15
	Black	17	-1.23		-0.95
				0.27	0.21
	Multiple R Squared				0.271
	Multiple R				0.520

that the Control I group's deviation from the grand mean is -3.53, higher than both Experimental and Control II group's deviations. The adjusted mean values of each category shifted when the other factor (race) was adjusted for in the second column which suggested that groups and race were related in the context of the variable Sports.

Table 18 shows the ANOVA of these two factors with the LAB subscale--Ego recognition. Significant results were indicated for the main effects and both of the factors (groups and race). The MCA on Table 19 indicated that Experimental and Control II groups are higher on the subscale than Control I. In addition, the black subjects scored higher on Ego recognition than the white subjects.

The second demographic variable, marital status, was evaluated using the one-way analysis of variance. The analysis of the TSCS with respect to marital status found that several of the TSCS variables obtained significant levels. The evaluation of the other dependent measures, LAD, LAB, POMS and Behavioral Checklist yielded no significant levels. On the TSCS, Physical Self, $F(4, 26) = 2.791$, $p < .047$; Moral-Ethical Self, $F(4, 26) = 4.121$, $p < .011$; Defensive Positive, $F(4, 26) = 3.998$, $p < .012$; and Personality Disorder, $F(4, 26) = 2.820$, $p < .046$ were all significant at the .05 level.

TABLE 18

Analysis of Variance

Ego Recognition by Groups and Race of Subject

Source	SS	DF	MS	F	Significance of F
Main Effects	223.618	3	74.53	3.150	0.043*
Groups	176.438	2	88.21	3.728	0.038*
Race	110.411	1	110.41	4.666	0.041*
2-Way Interactions	109.931	2	54.96	2.323	0.119
Groups Race	109.931	2	54.96	2.323	0.119
Explained	333.549	5	66.71	2.819	0.037
Residual	591.545	25	23.66		
Total	925.094	30	30.83		

* Significant at the .05 level

TABLE 19

Multiple Classification Analysis
Ego Recognition by Groups and Race of Subjects

Grand Mean = 21.65					
<u>Variable + Category</u>	<u>N</u>	<u>Unadjusted</u> <u>Dev'n</u>	<u>Eta</u>	<u>Adjusted for</u> <u>Dev'n</u>	<u>Independents</u> <u>Beta</u>
<u>Group</u>					
Experimental	12	1.85		2.72	
Control I	10	-2.65		-3.26	
Control II	9	0.47		-0.01	
			0.35		0.46
<u>Race</u>					
White	14	-1.36		-2.22	
Black	17	1.12		1.82	
			0.23		0.37
Multiple R Squared					0.242
Multiple R					0.492

Drop-out Subjects

Six subjects left the D.D.T.C. prior to completion of the investigation, the relationship between completion of program and the demographic variables was investigated. Joint frequency distributions--cross-tabulation of cases according to program completion and the following variables: groups, phase, age, race, marital status, education, father's and mother's occupation, family income, daily leisure time, and I-E Locus of Control were tabulated. The small number of subjects within each cell did not permit the data to be statistically analyzed. A minimum of five subjects per cell frequency was needed to test the significance of the relationships. However, a description of the subjects that left the drug program is presented. Table 20 shows a cross-tabulation of the subjects by completion of program and group identification. Of the subjects that left the drug program, five were Phase I subjects and one was in Phase II. In terms of age levels, 50% of these subjects were in the youngest age category (25 and under). In terms of marital status, 50% were single; the other three subjects consisted of one married, one divorced and one separated. The frequency distribution of the six subjects indicated that a substance abuser that is young, single, and has not been in the residential drug treatment

TABLE 20

Joint Frequency Distribution of Subjects by
Completion of Program and Group Identification

	Experimental		Control I		Control II		<u>Total</u>	
	<u>N</u>	<u>Frequency</u>	<u>N</u>	<u>Frequency</u>	<u>N</u>	<u>Frequency</u>		
Termination	1	7.7%	2	16.7%	3	25%	6	16.2%
Completion	12	92.3%	10	83.3%	9	75%	31	83.8%
Total	13	100%	12	100%	12	100%	37	100%

program for an extended period of time is more likely to leave the program.

Discussion

Hypothesis 1

The results of the statistical analysis indicated that the treatment groups (Experimental and Control II) scored higher on the LAB variables: mechanic, sports, glamour sports, mechanic future and easy living. McKechnie (1975) describes the Mechanic variable as activities which include auto repair, billiards, boxing, carpentry, hunting, marksmanship, mechanics and woodworking. The sports variable represents activities such as badminton, baseball, basketball, football, jogging, squash, ping pong, and volleyball. The glamour sports variable includes archery, canoeing, horseback riding, motorboating, motorcycling, mountain climbing, sailing, skiing, and tennis. These three scales which measure past and present involvement in the activity suggest that the treatment groups made significant increases in these areas when compared with the no treatment group. For the future LAB variables: Mechanic-Future and Easy Living, the Mechanic-Future variable is similar to the Mechanic-Past scale but indicates the respondent's future plans; the Easy Living variable describes activities that include social dancing, casino

gambling, horse racing, nightclubs, motorboating, poker, social drinking, and watching team sports. The higher scores for the treatment groups indicated a greater desire to participate in these activities in the near future. McKechnie suggested that people who score high on the future scales (an index of future leisure activities) were more likely to view the future with optimism and anticipation of good health and vigor. Low scorers seemed to anticipate gloomy, depressed, or withdrawn futures.

On the Profile of Mood States, the results indicated significant differences on the anger and vigor variables. The anger-hostility POMS variable describes feelings such as being angry, peeved, grouchy, spiteful, annoyed, resentful, bitter, ready to fight, rebellious, deceived, furious and bad-tempered. The Vigor-Activity variable represents positive moods: lively, active, energetic, cheerful, alert, full of pep, carefree and vigorous. The vigor-activity factor is negatively related to the other POMS factors (McNair, Lorr & Droppleman, 1971). The within cell correlations in Table 10 suggested similar findings, vigor-activity was negatively correlated with the other factors. The higher scores on the variable Anger and lower scores on the variable Vigor for the Experimental group may be accounted for by differences in pre-test scores between the Experimental and Control I groups. A comparison of the

pre-test scores of the two groups indicated that the Experimental group had significantly higher scores on the Anger variable than Control I ($t = 2.18, p < .05$). Although the Experimental group's pre-test and post-test mean difference scores did not reach significant levels, the Experimental group's post-test scores on the Anger variable decreased after treatment. In comparison, the Control I group's pre-test and post-test mean difference scores on the Anger variable increased in the no treatment group. The findings suggested that the treatment effects resulted in lower scores on the Anger variable and that treatment may be more effective with subjects that have high or moderate levels on the Anger variable than with subjects that have low levels of anger. Another factor that may have accounted for the significant differences among the groups was that Control II group's (with treatment) post-test mean scores indicated low levels of Anger and high levels of Vigor. Thus, the extreme scores for the Experimental and Control II groups contributed to the significant results on the Anger and Vigor variables among the three groups.

Hypothesis 2

The evaluation of the I-E Locus of Control in relationship to the dependent variables did not yield significant results. The more internal locus of control group was not differentiated from the more external group on the

dependent measures. In addition, the small number of subjects in the high group (more external locus of control) did not lend itself to adequate statistical testing. However, some descriptive data can be ascertained.

The majority of the subjects were clustered in the low and medium groups with only a small number in the high group. In general, the sample population was more internal than external on the locus of control. The present findings differed from the results reported by DeLeon (1973); Obitz, Oziel, and Unmacht (1973); and Segal and Merenda (1975) which found drug addicts to have a higher degree of external locus of control than non-users. However, the present findings substantiated Berzins and Ross' (1973) investigation that found drug addicts to have a higher degree of internal locus of control than a comparison group of college students. They hypothesized a 'drug-engendered' internal locus of control (described in the review of literature) as a possible explanation for the substance abusers' more internal orientation.

The results of the Spearman rho descriptive statistic found a significant negative association between Personality Integration on the TSCS and the I-E Locus of Control. Since the Personality Integration subscale is a measure of the level or degree of personality integration, there may be a correlation between high scores on the I-E locus of

control and maladjustment. Rotter (1966) had also suggested that high scores toward the external end of the continuum may be due to a defensiveness related to significant maladjustment and perhaps a passivity when faced with environmental difficulties. Although the small number of subjects in the high group prevented adequate statistical testing, the descriptive data indicated that perhaps the dropouts were more maladjusted than the subjects that completed the program--40% of the high group dropped out of the program. If an adequate number of subjects are investigated, such trends could provide possible predictor variables of successful completion in a drug program. Individuals who are more external in locus of control may be less amenable to treatment.

Hypothesis 3

The positive correlation found between Phase level and the two variables--Self Satisfaction and Personality Integration on the TSCS suggested that Phase II subjects have a more positive level of self satisfaction and/or self acceptance. Bradley and Redfering (1978) had found the Self Satisfaction/Acceptance subscale a good predictor of successful drug rehabilitation. Since the Phase II subjects have continued in the drug program for longer periods of time and were near the final stages of their drug rehabilitation, they can be considered 'more successful' than

Phase I subjects. Thus, the higher Self Satisfaction scores found with Phase II substantiated Bradley and Redfering's conclusions.

Self Satisfaction is best interpreted in comparison with the Overall Self Esteem and Identity subscales (Fitts, 1965). Although these two subscales did not reach significant levels, nevertheless, the Phase II subjects' group means were higher than the Phase I on the Self Esteem and Identity subscales. This positive trend suggested that Phase II subjects have more confidence, value their own worth, and like themselves, whereas lower scores on the self esteem and identity subscales suggested a more negative view of oneself. The Phase II subjects' more positive view of themselves may be due to their successful completion of several months in drug treatment and therefore a more optimistic view of their future. Phase II subjects had greater autonomy and responsibility within the drug program than Phase I subjects, this may have contributed to the higher level of self satisfaction. In addition, the significant results found on the Personality Disorder subscale would support the conclusion that Phase II subjects were more adjusted.

Demographic Variables

Two investigations (Kaestner, et al., 1977; and Sutker, et al., 1978) found that ethnicity was an important

variable to investigate in substance abuse. Their findings suggested that white subjects were characterized by higher needs for sensation seeking and greater psychopathology than their black counterparts. In the present investigation, racial differences contributed to significant differences on two LAB variables--mechanic and ego recognition. No significant differences were found on the other dependent measures. The variable Mechanic was described in the previous discussion, the variable Ego recognition describes activities that include acting, modern dance, football, judo, squash, weightlifting, wrestling, and writing poetry. The results of the analysis indicated that specific leisure interests may vary with different racial groups. However, no evidence of greater psychopathology as suggested by the two previous investigations was found when the racial groups were compared using the TSCS and POMS.

Another demographic variable, marital status, was found to be statistically different among the categories on several of the TSCS variables. Of the five categories on marital status (single, married, cohabitation, divorced and separated), the married group scored the lowest on the subscales that measure Physical Self, Moral-Ethical Self, Defensive Positive, and Personality Disorder on the TSCS. These TSCS variables were briefly described by Fitts (1965): (1) Physical Self--the individual's view of his/her body,

state of health, physical appearance, skills and sexuality; (2) Moral-Ethical Self--the individual's view of his/her moral worth, relationship to God, feelings of being a "good" or "bad" person, and satisfaction with one's religion; (3) Defensive Positive--a subtle defensiveness measure; extreme scores at both ends are considered of importance (i.e., high scores indicate a positive self description stemming from defensive distortion; low scores mean the person lacks the usual defenses for maintaining even minimal self-esteem); (4) Personality Disorder (PD)--is one of the six empirical scales derived from item analysis which differentiates one group of subjects from another group; Fitts describes the PD scale as pertaining to people with basic personality defects and weaknesses that were diagnosed as having a personality disorder (PD is an inverse scale, the higher the score the less likely the individual has personality characteristics of the PD group). The results of the present investigation indicated that the married subjects experience a lower self-esteem with respect to how they view their physical appearance and a more negative view of their moral worth. The divorced group was slightly more positive on the four TSCS variables than the married group, and the single subjects obtained the most positive scores on the four subscales. Some of the factors that may account for the results were that subjects

who are married may feel a greater sense of failure; because of their addiction they have been unable to handle the responsibilities of marriage. They may also have family and financial pressures beyond those of subjects who are single.

Summary

The major concern of this investigation was the effect of the leisure awareness program on specific attitudinal and behavioral measures. It was found that the program contributed to positive changes in the subject's interest in specific leisure activities. Although statistically not significant, there was a positive trend toward reducing levels of anger in subjects that had high pre-test scores on this variable prior to treatment. No significant differences were found among the groups on measures of self concept, leisure attitudes or the behavioral checklist. However, the results indicated that the leisure awareness program produced positive changes in leisure interest, and may have a positive effect on mood states.

The second area of concern was the relationship between Internal-External Locus of Control and the dependent measures. No significant differences were found to differentiate subjects that are internal or external on the I-E scale. However, two variables showed significant

correlations with the I-E scale which suggest that a more external locus of control is related to maladjustment. Because of the limited sample size, further research will be needed to obtain more conclusive results.

The third focus of the investigation was the relationship between Phase level and the dependent measures. It was found that Phase level was related to some of the dependent variables. Overall, the Phase II subjects were more adjusted and had higher self-esteem levels than Phase I subjects. Several reasons were presented in the Discussion section to account for the differences.

Post-hoc analysis of the demographic variables found race and marital status to be important factors in the study of leisure and substance abuse. Racial differences suggested that leisure interest patterns may vary between white and black groups. In addition, marital status was related to self concept--the married subjects presented a more negative self concept in respect to feelings about their physical selves and their moral worth as individuals. Finally, a brief discussion of the demographic characteristics of the six drop-outs was presented. Although the sample size was too small to statistically analyze, their frequency distributions showed some trends that could have value as predictor variables of treatment success in future investigations.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study addressed the role of leisure in the lives of substance abusers. For many substance abusers, past leisure life styles were centered on drug-related activities. Developing the ability to deal constructively with one's leisure time without the use of drugs is a beneficial adjunct of drug rehabilitation. The author developed a leisure awareness program that was designed to increase substance abusers' awareness of the importance of leisure.

In the investigation, the primary concern was the effectiveness of the leisure awareness program on specific attitudinal and behavioral variables which measure the self concept, mood adjustment, leisure attitudes and interest patterns of substance abusers. These variables were selected to evaluate possible changes resulting from the treatment. Since little empirical research was available on the topic, the investigation sought to contribute more empirical data on the effectiveness of programs that focused on leisure concerns and substance abuse. In addition, two variables, the Internal-External Locus of Control and the

length of stay in a drug program were evaluated to assess their relationship to the attitudinal and behavioral variables.

The leisure awareness program included value clarification exercises, structured techniques to increase subject's awareness of leisure alternatives, and relaxation exercises. The program was developed to address problematic leisure concerns relevant to substance abusers.

Review of Literature

Leisure has different meanings for people; its subjectivity has created difficulties in the formulation of a consistent theory of leisure. The perspectives discussed in the psychology of leisure presented a brief summary of the developmental, psychodynamic, trait and attributional approaches to leisure. At the present time, much research is needed to ascertain the validity of the approaches reviewed in the psychology of leisure.

Several personality dimensions of the substance abuser were examined: the Internal-External Locus of Control, mood states and the self concept. In general, previous studies described the substance abuser as an individual with a negative self concept who is immature, impulsive, restless, hostile and has feelings of inadequacy. Studies also suggested that white substance abusers were more maladjusted than black abusers.

In the final section, selected studies on leisure and drugs were reviewed. Some authors found that substance abusers have a negative perception of leisure, while others suggested that individuals become addicted as a result of their feelings of boredom, curiosity and need for novel experiences. One personality variable--sensation seeking was found to relate to drug use patterns and that perhaps the sensation seeking variable can be a factor in addiction. The review supported a multi-dimensional model of drug dependence. The focus on leisure examined one aspect of the complex factors that contribute to drug addiction.

Null Hypotheses

For the interested reader, p. 35 describes the research assumptions which generated the following null hypotheses:

1. There is no significant difference between the treatment (Experimental and Control II and no treatment (Control I groups with respect to (a) self concept (TSCS); (b) mood adjustment (POMS); (c) level of leisure activity (Behavioral Checklist); (d) attitudes toward leisure (LAD); and (e) leisure interest patterns (LAB).

2. There is no significant relationship between external and internal locus of control with respect to the attitudinal and behavioral measures.

3. There is no significant relationship between Phase I and II with respect to the attitudinal and behavioral measures.

Subjects

The thirty-seven subjects who were involved in the investigation were admitted to the Veterans Administration Medical Center in North Chicago, Illinois with a primary diagnosis of substance abuse. Subjects are currently in treatment at the Drug Dependent Treatment Center (D.D.T.C.), a residential drug program. The subjects were in Phase I or II of the drug program. Phase I describes individuals that are unemployed and in the early stages of the drug program; Phase II subjects are seeking employment or are currently employed and have graduated from the Phase I status.

Instruments

The measurements used in the study are: Tennessee Self Concept Scale (TSCS), Profile of Mood States (POMS), Leisure Activity Blank (LAB), Internal-External Locus of Control scale, Leisure Attitude Dimension (LAD), and the Behavioral Checklist. The TSCS, POMS, and LAB are standardized instruments measuring self concept, mood states, and leisure activity interest patterns, respectively. The I-E Locus of Control scale is a measure of an individual's perception of how reinforcements or rewards are obtained.

The LAD was derived from Neulinger's (1976) semantic differential scale that measured leisure attitudes. The Behavioral Checklist was developed by the author to measure specific leisure activities and the subject's attitudes toward these activities.

Research Design

After approval from the Research Committee at Veterans Administration Medical Center, North Chicago, Illinois and the Drug Dependence Treatment Center, the investigation was conducted during the months of October through December, 1980. The subjects were randomly assigned to one of three groups: (1) pre-test and post-test on the dependent measures, treatment; (2) pre-test and post-test on the dependent measures, no treatment; and (3) post-test on the dependent measures, treatment. The experimental intervention was the Leisure Awareness Program. The Behavioral Checklist which monitors daily leisure activities during the six week investigation, demographic data and I-E Locus of Control scores were obtained for all the subjects.

The data was analyzed at Loyola University of Chicago utilizing the Statistical Package for the Social Sciences (SPSS). A variety of statistical techniques was used; descriptive statistics, frequency distributions, t-tests, nonparametric correlations, analysis of variance and the multivariate analysis of variance and covariance for

repeated measures. The latter two statistical methods were used to test the main hypothesis--the effectiveness of the Leisure Awareness Program on the dependent measures.

Results

The first hypothesis dealt with the effectiveness of the treatment among the groups. Differences were found on the Leisure Activity Blank and subscales of the Profile of Mood States. For the LAB, overall differences were found between the treatment and no treatment groups. For the POMS, two variables--anger and vigor differed among the groups. Given these differences, the null hypothesis was rejected for the LAB and aspects of the POMS, but was not rejected for the TSCS, LAD and Behavioral Checklist.

The LAB for the treatment groups (Experimental and Control II) showed substantially higher scores on the Mechanic, Sports, Glamour Sports, Mechanic-Future and Easy Living subscale which meant that subjects who participated in the leisure awareness program became more positive toward these leisure activities than the no treatment group. A greater interest in specific leisure activities will inevitably lead to increased participation in the leisure activities. On the POMS, the subscales Anger and Vigor were found to differ among the groups. The results showed the Experimental group to have high scores on the Anger variable and low scores on the Vigor variable, the Control I

without treatment has lower scores on Anger and slightly higher on Vigor than the Experimental group, and the Control II with treatment has the lowest Anger scores and the highest Vigor scores. A possible explanation for the results was suggested by the pre-test scores. A comparison of the Experimental and Control I groups' pre-test scores indicated that the two groups may not have been homogeneous with respect to the two variables--the Experimental group had higher scores on the Anger variable and lower scores on the Vigor variable. Although treatment resulted in a decrease on the Anger variable for the Experimental group, the mean differences between pre-test and post-test scores did not reach significant levels.

In the second hypothesis, the more internal locus of control subjects were compared with the more external locus of control subjects on the dependent measures. The drop-outs reduced the external locus of control subjects to an insufficient size for adequate statistical analysis. Frequency distributions were discussed to note possible trends that may be of value in future studies. Nonparametric correlations resulted in two variables--Confusion-Bewilderment (POMS) and Personality Integration (TSCS) to be correlated with the I-E Locus of Control which suggest that a more external orientation on the I-E Locus of Control was indicative of greater maladjustment. However, given the sample

size and the possibility of spurious results among many tests of significance, the null hypothesis was not rejected for the second hypothesis.

Analysis of the third hypothesis indicated that there was a relationship between Phase level and the dependent measures. When the Phase I and II subjects were compared on the dependent variables, the Phase II group differed from Phase I on certain dimensions. On the TSCS, the Phase II subjects scored higher on the Personality Disorder subscale than the Phase I subjects which indicated that the Phase I subjects were more similar to individuals with Personality Disorder than Phase II subjects. On the LAB, Phase II subjects preferred more active leisure activities than Phase I. On the nonparametric correlations, Phase II was positively correlated with Self Satisfaction and Personality Integration (TSCS variables). The null hypothesis was rejected for the third hypothesis given the significant results.

Post-hoc analysis of the demographic variables found relationships between race and the LAB variables; black subjects scored higher on Mechanic and Ego Recognition than white subjects. In addition, marital status obtained differences among the categories (single, married, cohabitation, divorced and separated) when compared with the TSCS variables. The married subjects scored lowest on physical self,

more-ethical self, defensive positive and personality disorder on the TSCS among the marital categories which meant that they have a lower self concept and a more negative perception about their physical appearance and moral worth. The single group in general scored higher on the four TSCS variables than the other categories which suggested a more positive self concept.

Conclusions

1. Results indicated differences among the treatment and no treatment groups on the Leisure Activity Blank. Subjects in the treatment groups had higher scores on the LAB variables--Mechanic, Sports, Glamour Sports, Mechanic-Future, and Easy Living-Future than the no treatment group, indicating that the leisure awareness program was effective in increasing interests on specific leisure activities.

2. Subjects grouped according to scores on the Internal-External Locus of Control did not differ significantly on the dependent variables. However, two correlations, a positive association on Confusion-Bewilderment (subscale on the Profile of Mood States) with more external locus of control and a negative association between Personality Integration (subscale on the Tennessee Self Concept Scale) and a more external orientation indicated that individuals with a more external locus of control may be less

adjusted than individuals with a more internal orientation on the I-E Locus of Control.

3. Results indicated that Phase I subjects differ significantly from Phase II subjects on specific dimensions of the Tennessee Self Concept Scale and the Leisure Activity Blank. In general, Phase II subjects were more active, well-adjusted and satisfied with themselves than Phase I subjects.

4. Demographic variables, race and marital status, differed on the dependent measures--Leisure Activity Blank and Tennessee Self Concept. Blacks scored higher on Mechanic and Ego Recognition than white subjects; the variables describe leisure activities such as auto repair, woodworking, football, wrestling and dancing. On marital status, the married subjects in general were less adjusted and more dissatisfied with themselves than the other categories (single, cohabitation, divorced, separated).

In conclusion, this study contributed empirical data on the role of leisure and substance abuse. The aforementioned results provided evidence that the Leisure Awareness Program was a viable treatment modality to improve substance abuser's interest in leisure pursuits. In addition, the positive feedback obtained from the participants showed their enthusiasm for the leisure program, they felt that the program enabled them to understand the importance of leisure

and how meaningful leisure pursuits can contribute to maintaining a drug-free life style. Many of the participants were reluctant to terminate and suggested continuing beyond the four week period. Their positive remarks about the program influenced a majority of the control group that were previously excluded from treatment, to sign up for a similar leisure program when the investigation was completed. The results and the feedback from the participants indicated that the objective of the leisure program--to increase the participants' awareness of the therapeutic aspects of the leisure program was accomplished.

Recommendations

This study serves as a basis for further research on leisure and drugs, treatment modalities and outcomes. Specifically, the following are proposed as areas for further research:

1. Increase the size of the sample through investigation of substance abuse populations at other hospitals. This would serve to cross-validate the present study as well as provide further evidence for the validity of the results.
2. Follow-up the subjects that participated in the treatment to investigate the subjects' progress over longer time periods, i.e., 6 to 12 months. Longer time periods

would provide evidence concerning the stability of the changes found in the study.

3. The highly structured routine within a drug program prevented adequate measurement of differences in leisure activities participation; the use of outpatients with substance abuse problems who have greater choice and flexibility concerning the use of their leisure time would provide additional information on the value of the Leisure Awareness Program.

4. Future studies should investigate racial differences along with the major factors of leisure and drugs since definite differences are found between black and white groups.

5. Further investigations of the Internal-External Locus of Control among substance abusers may validate its role as a predictor of successful treatment within a drug program.

6. Improvements in measurements of leisure attitudes and interest are needed. Refinements of leisure scales would enable researchers to have more powerful tools to evaluate treatment differences.

7. The use of sample populations in future investigations such as teenagers with drug-related problems, would increase the generalizability of the conclusions. The

Leisure Awareness Program could serve an educative as well as a rehabilitative function within the community.

8. The use of different group facilitators in future replications of the study would further strengthen the generalizability of the results.

9. Improvements in the design of the Leisure Awareness Program to minimize the effect of possible experimental biases would further strengthen the validity of the results.

10. Future research studies could compare several different models of leisure programs to evaluate the effectiveness of the various techniques. In addition, more specific knowledge of the differential effects of each model may contribute to further refinements in the treatment of different populations.

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APPENDIX A

APPENDIX A

LEISURE AWARENESS PROGRAMSession 1

- I. Introduction
 - A. Group leader introduces self.
 - B. Review time and dates of each sessions.
- II. Overview of program
 - A. Review goals and objectives.
 - B. Group format.
 - C. Group exercises.
- III. Introduction of participants
 - A. Questions about the program.
 - B. Questions about the group leader.
 - C. What they want to gain from the program.
- IV. Lost on the moon exercise
 - A. Purpose
 - 1. To facilitate the group's problem solving ability.
 - 2. To facilitate group cohesion.
 - 3. To develop more cooperative behavior among the participant.
 - B. Brief description of group exercise
 - 1. The exercise consists of a hypothetical situation where several people are lost on the moon. The individual and group tasks are to rank a list of items (i.e., matches, rope, map, etc.) according to their opinion of what is most important to least important for their return to the 'mother' ship.
 - C. Group discussion - suggested questions
 - 1. How did group members interact with each other?
 - 2. What were their feelings about the exercise?

V. Leisure activity lists

A. Purpose

1. To assess participants leisure interests.
2. To evaluate economic obstacles to leisure.
3. To examine participant social needs.
4. To assess the effect of drug addiction on leisure pursuits.

B. Description of exercise

1. Individuals are requested to make a list of twenty things in life they like to do.
2. List choices on blackboard.
3. Members will assist group leader to mark which items would cost less than \$3.00 to participate in.
4. Members are requested to re-examine their list and code the following:
 - a) things they do alone (A)
 - b) things they do with people (P)
 - c) things they do alone and with people (B)

C. Group discussion - suggested questions

1. If they were to choose their first choice among the list, what would it be?
2. Describe the pleasures and benefits derived from the activity chosen.
3. How would they convince a friend to try that activity?
4. How did drug addiction affect their leisure pursuits?
5. Has drug activities influenced a more passive or active orientation?

D. Homework assignment

1. During a 24 hour period, pick any day; identify what they did during a leisure period, jot down how they felt about themselves, what they got from the activity.

Session II

- I. Summary of last week's group activities. Review homework assignment

II. Stereotypes of leisure activities

A. Purpose

1. To increase individual's awareness that stereotypes of leisure activities may prevent participation in an activity.
2. To enable the participant an opportunity to better understand their own motivation for engaging in a leisure activity.

B. Description of exercise

1. Present pictures that represent different leisure activities, i.e. fishing, tennis, football, music, etc.
2. On blackboard, obtain participants' stereotypic attitudes (both positive and negative) toward individuals engaged in these leisure activities.
3. Each participant selects one leisure activity they would like to try and states the reasons for their selection.
4. Each participant selects one activity they would not consider and states reasons why.

C. Group discussion - suggested questions

1. What would people's opinions be of an individual that engaged in that particular activity?
2. What might be some of the obstacles that would prevent them from selection of a particular activity?

III. Planning a weekend - hypothetical situation

A. Purpose

1. To generate alternative solutions that do not require large expenditures of money.
2. To generate creative ideas about leisure time activities.

B. Description of exercise

1. Divide the group into two subgroups. Task of each group is to develop ideas and suggestions concerning the hypothetical situation.
2. Hypothetical situation: They have a date for this weekend. Their task is to plan the weekend's activities (Saturday and Sunday); they have \$5.00 to spend.

3. Each subgroup will have a group leader to lead the discussion and jot down individual ideas.

IV. Relaxation Technique - Deep muscle relaxation

A. Purpose

1. To teach participants an effective technique to reduce stress.

V. Homework assignment

1. Select one activity that they have some interest in or have been planning for some time but have not started. Next week, report to the group the concrete steps they have made to begin the leisure activity.
2. Optional - Practice at least twice a day the relaxation technique taught in the session; preferably, once in the morning and once before bedtime.

Session III

- I. Summary of last week's activities. Review results of last week's homework assignment.

II. Brief evaluation of leisure awareness program

- A. Group feedback concerning their feelings about the workshop
- B. Any comments or changes they would like to see for the latter half of the program

III. Barriers to leisure

A. Description of group exercise

1. On blackboard, write down some unfinished sentences which include words like should, ought to, can't, but that frequently enable people to make excuses for their actions or lack of actions.
2. Directions to participants: Focusing on your leisure patterns, pursuits, etc. jot down the first thing that comes to mind when you read this statement.
 - a) I should stop watching so much TV but...

- b) Fun is...
- c) I'm bored with everything, I wish I could...
- d) If only I had money, then...
- e) I would like to do something different but...
- f) I am happy when...
- g) I need to change...
- h) I want excitement in my life, I should...
- i) I can't relax until I...
- j) If only I had more time, I would...

B. Group discussion about barriers to leisure

IV. Early recollection of childhood activities

A. Purpose

1. To rekindle early childhood experiences that are very positive for the participants.

B. Description of group exercise

1. Imagine yourself as a child (between the ages of 5 and 10), pick a specific incident that was very positive for you - playing ball, going to the movies, going fishing or being at home, etc.
2. What made it very enjoyable? For instance, being a leader, feelings of camaraderie competition or friendship that you most remembered.
3. Can you remember doing anything recently that gave you a similar feeling?
4. Exercise is best done with participants' eyes closed in order for them to more readily flash back to their early childhood.

C. Group discussion

1. Individual members share their experiences with the group.

V. Relaxation Exercises

VI. Homework assignment

1. Select periods during the week you were bored or dissatisfied. What did you do to alleviate

- the feeling? Did it help? What made it better?
2. Optional - Continue practicing relaxation exercise.

Session IV

- I. Summary of last week's group activities.
Discussion of homework assignment.
- II. Pie of Life (Simon, Howe, & Kirschenbaum, 1972)
 - A. Purpose
 1. To help participants inventory their lives, to see how they spend their time.
 - B. Description
 1. Each participant draws a large circle, divide into four quarters to represent 24 hours of the day.
 2. Estimate how you spend the hours of the day.
 3. Draw another circle and segment the sections into your ideal circle, after you leave the drug program.
 - a) How realistic is your ideal circle?
 - b) What changes will you have to make to obtain that ideal?
 - c) How much of the time is set aside for your leisure time?
 - C. Group discussion
 1. Group critique of each circle; i.e., is it realistic, how might you change it...
- III. Relaxation Technique
 - A. Visual imagery exercise
 1. Imagination of their 'special place' where they can feel relaxed, feel calm, free from daily routine, etc.
- IV. Group evaluation of Leisure Awareness Program
 - A. What did they get from the workshop?
 - B. Did it meet their expectations? If not, why not?
 - C. Suggestions for future groups.

LOST ON THE MOON

Purpose: To compare the results of individual decision-making with the results of group decision-making.

Suggested Time: 50 minutes.

Procedure:

- I. Each participant is given a copy of the individual work sheet and told that he has 10 minutes to complete the exercise. The leader reads the instructions.
- II. After 10 minutes, one group work sheet is handed to group.
 - A. Individuals are not to change any answers on their individual sheets as a result of group discussion.
 - B. A member of the group is to record group consensus on this sheet.
 - C. The participants will have 25 minutes in which to complete the group work sheet.
- III. Each participant is given a copy of the direction sheet for scoring. This phase of the experience should take seven to ten minutes.
 - A. They are to score their individual work sheets.
 - B. A recorder will then score the group work sheet.
- IV. The group will compare their individual scores with the group score and discuss the implications of the experience. This phase of the experience should take seven to ten minutes.
- V. Results are posted according to the chart below, and the leader directs a discussion of the outcomes of consensus-seeking and the experience of negotiating agreement.

LOST ON THE MOON (cont'd.)

Consensus Score

Range of Individual Scores

Materials: Pencils
 Individual Worksheets
 Group Worksheets
 Answer sheets containing rationale for
 decisions
 Direction sheets for scoring

NASA EXERCISE INDIVIDUAL WORKSHEET

INSTRUCTIONS: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, however, your ship was forced to land at a spot some 200 miles from the rendezvous point. During landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of their importance to your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important, and so on, through number 15, the least important. You have 10 minutes to complete this phase of the exercise.

- ___ Box of matches
- ___ Food concentrate
- ___ 50 feet of nylon rope
- ___ Parachute silk
- ___ Portable heating unit
- ___ Two .45 calibre pistols
- ___ One case dehydrated Pet milk
- ___ Two 100-lb. tanks of oxygen
- ___ Stellar map (of the moon's constellation)
- ___ Life raft
- ___ Magnetic compass
- ___ 5 gallons of water
- ___ Signal flares
- ___ First aid kit containing injection needles
- ___ Solar-powered FM receiver-transmitter

NASA EXERCISE GROUP WORKSHEET

INSTRUCTIONS: This is an exercise in group decision-making. Your group is to employ the method of Group Consensus in reaching its decision. This means that the prediction for each of the 15 survival items must be agreed upon by each group member before it becomes a part of the group decision. Consensus is difficult to reach. Therefore, not every ranking will meet with everyone's complete approval. Try, as a group, to make each ranking one which all group members can at least partially agree. Here are some guides to use in reaching consensus:

1. Avoid arguing for your own individual judgments. Approach the task on the basis of logic.
2. Avoid changing your mind only in order to reach agreement and avoid conflict. Support only solutions with which you are able to agree somewhat, at least.
3. Avoid "conflict-reducing" techniques such as majority vote, averaging, or trading in reaching your decision.
4. View differences of opinion as helpful rather than as a hindrance in decision-making.

- ___ Box of matches
- ___ Food concentrate
- ___ 50 feet of nylon rope
- ___ Parachute silk
- ___ Portable heating unit
- ___ Two .45 calibre pistols
- ___ One case dehydrated Pet milk
- ___ Two 100-lb. tanks of oxygen
- ___ Stellar map (of the moon's constellation)
- ___ Life raft
- ___ Magnetic compass
- ___ 5 gallons of water
- ___ Signal flares
- ___ First aid kit containing injection needles
- ___ Solar-powered FM receiver-transmitter

NASA EXERCISE ANSWER SHEET

RATIONALE:	CORRECT NUMBER:
No oxygen	<u>15</u> Box of matches
Can live for some time without food	<u>4</u> Food concentrate
For travel over rough terrain	<u>6</u> 50 feet of nylon rope
Carrying	<u>8</u> Parachute silk
Lighted side of moon is hot	<u>13</u> Portable heating unit
Some use for propulsion	<u>11</u> Two .45 calibre pistols
Needs H ₂ O to work	<u>12</u> One case dehydrated Pet milk
No air on moon	<u>1</u> Two 100-lb. tanks of oxygen
Needed for navigation	<u>3</u> Stellar map (of moon's constellation)
Some value for shelter or carrying	<u>9</u> Life raft
Moon's magnetic field is different from earth's	<u>14</u> Magnetic Compass
You can't live long without this	<u>2</u> 5 gallons of water
No oxygen	<u>10</u> Signal flares
First aid kit might be needed but needles are useless	<u>7</u> First aid kit contain- ing injection needles
Communication	<u>5</u> Solar-powered FM receiver-transmitter

NASA EXERCISE DIRECTION SHEET FOR SCORING

The group recorder will assume the responsibility for directing the scoring. Individuals will:

1. Score the net difference between their answers and correct answers. For example, if the answer was 9, and the correct answer was 12, the net difference is 3. Three becomes the score for that particular item.
2. Total these scores for an individual score.
3. Score the net difference between group worksheet answers and the correct answer.
4. Total these scores for a group score.
5. Compare the individual scores with the group score.

Note. From Handbook of structured experience for Human Relations Training by J. W. Pfeiffer and J. Jones, LaJolla, California: University Associates, 1974.

APPENDIX B

CLINICAL RECORD

Report on Informed Consent to be read by subject.

or

Continuation of S. F. 10-1086

(Strike out one line) (Specify type of examination or data)

Information about: Investigation of leisure awareness of substance abusers.

Principal Investigator: Summer Garte, Ph.D. (312) 689-1900

The Institutional Review Board at the North Chicago Veterans Medical Center approved the solicitation of subjects to participate in this research study. The study wishes to investigate the benefits of a leisure awareness program as an adjunct in drug treatment.

I understand that if I volunteer to participate in this study that I will be agreeing to take part in this study for the next six weeks. I understand that I will be required to complete paper and pencil tests for the next six weeks. These will include questions about my leisure time and activities, mood, and how I describe myself and others. I know that I will be assigned to 1 of 3 groups: Group 1 - participation in a leisure awareness program with pre and post measures; Group 2 - no participation in a leisure awareness program but pre and post measures; or Group 3 - participation in a leisure awareness program, no pretest but post measures. Pretesting will be conducted during the first week. Leisure awareness sessions will be held once a week for four weeks, each session will last two hours. Post measures will be taken at the completion of the leisure awareness program.

There are no known adverse effects. I understand that filling the questionnaires and participation in the leisure program will require a certain amount of time. The benefits of the study may be that I may be more aware of the value of leisure. I know that others may benefit from the knowledge gained in this investigation.

The proposed length of treatment, method of administration, and the program have been explained to me. I understand that I am free to withdraw my consent and discontinue participation in this study at any time without prejudice to my continued status as a patient in the Drug Treatment Dependence Center (D.D.T.C.). Although the results of the study may be published in the psychological literature, my identity will not be disclosed. If I have any questions concerning the procedures outlined above or any aspect of the study this will be answered for me.

I have read the above and understand it and hereby consent to the procedures set forth above.

DATE

SUBJECT

WITNESS

(Continue on reverse side) PRINCIPAL INVESTIGATOR

PATIENT'S IDENTIFICATION (For typed or written entries give: Name—last, first, middle; grade; date; hospital or medical facility)

REGISTER NO.

WARD NO.

REPORT ON _____ or CONTINUATION OF _____

APPENDIX C

DEMOGRAPHIC INFORMATION

Directions: For each statement, circle the letter which best describes you.

1. Age: a) 25 and under c) 30 - 34 e) 40 - 44
 b) 26 - 29 d) 35 - 39 f) 45 and over
2. Race: a) White c) Hispanic e) Other _____
 b) Black d) Oriental
3. Marital status:

a) Single	c) Cohabitation	e) Separated
b) Married	d) Divorced	f) Widowed
4. Education:

a) Some grade school	d) Completed high school/GED
b) Completed grade school	e) Some college
c) Some high school	f) Completed college
5. Father's occupation:

a) Professional/business	d) Unskilled manual
b) Clerical or sales	e) Other _____
c) Skilled manual	f) Don't know
6. Mother's occupation:

a) Professional/business	d) Unskilled manual
b) Clerical or sales	e) Other _____
c) Skilled manual	f) Don't know
7. Approximate family income during your childhood:

a) less than \$5000	c) less than \$15,000
b) less than \$10,000	d) \$15,000 and over
8. Approximate daily leisure time before admission to DDTC:

a) 1 - 2 hours	c) 5 - 6 hours	e) 8 and over
b) 3 - 4 hours	d) 7 - 8 hours	

LEISURE ATTITUDE DIMENSION

The statements 1-12 describe attitudes toward leisure. For each item, you are to circle the alphabetical letter which best describes your perception of leisure.

LEISURE IS

- | | | |
|----------------|---------------------------|--------------|
| 1. Good | A...B...C...D...E...F...G | Bad |
| 2. Tense | A...B...C...D...E...F...G | Relaxed |
| 3. Unnecessary | A...B...C...D...E...F...G | Necessary |
| 4. Valuable | A...B...C...D...E...F...G | Worthless |
| 5. Tiring | A...B...C...D...E...F...G | Energizing |
| 6. Full | A...B...C...D...E...F...G | Empty |
| 7. Happy | A...B...C...D...E...F...G | Sad |
| 8. Meaningful | A...B...C...D...E...F...G | Meaningless |
| 9. Dull | A...B...C...D...E...F...G | Interesting |
| 10. Pleasant | A...B...C...D...E...F...G | Unpleasant |
| 11. Boring | A...B...C...D...E...F...G | Exciting |
| 12. Fulfilling | A...B...C...D...E...F...G | Unfulfilling |

ACTIVITY CHECKLIST

Directions: If you participated in the activity during the hour indicated, place a check in the box to indicate the degree to which you enjoy doing the activity, if you did not participate in the activity for that hour, leave it blank.

	6 P.M.			7 P.M.			8 P.M.			9 P.M.		
	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED
MONDAY												
1. Playing pool												
2. Watching TV												
3. Going to the gym												
4. Listening to music												
5. Playing cards												
6. Going to movies												
7. Talking on the phone												
8. Outside sports activity												
9. Attending structured groups												
10. Socializing with friends												
11. Working on a hobby												
12. Other												

ACTIVITY CHECKLIST

Directions: If you participated in the activity during the hour indicated, place a check in the box to indicate the degree to which you enjoy doing the activity, if you did not participate in the activity for that hour, leave it blank.

TUESDAY	6 P.M.			7 P.M.			8 P.M.			9 P.M.		
	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED
1. Playing pool												
2. Watching TV												
3. Going to the gym												
4. Listening to music												
5. Playing cards												
6. Going to movies												
7. Talking on the phone												
8. Outside sports activity												
9. Attending structured groups												
10. Socializing with friends												
11. Working on a hobby												
12. Other												

ACTIVITY CHECKLIST

Directions: If you participated in the activity during the hour indicated, place a check in the box to indicate the degree to which you enjoy doing the activity, if you did not participate in the activity for that hour, leave it blank.

WEDNESDAY	6 P.M.			7 P.M.			8 P.M.			9 P.M.		
	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED
1. Playing pool												
2. Watching TV												
3. Going to the gym												
4. Listening to music												
5. Playing cards												
6. Going to movies												
7. Talking on the phone												
8. Outside sports activity												
9. Attending structured groups												
10. Socializing with friends												
11. Working on a hobby												
12. Other												

ACTIVITY CHECKLIST

Directions: If you participated in the activity during the hour indicated, place a check in the box to indicate the degree to which you enjoy doing the activity, if you did not participate in the activity for that hour, leave it blank.

THURSDAY	6 P.M.			7 P.M.			8 P.M.			9 P.M.		
	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED
1. Playing pool												
2. Watching TV												
3. Going to the gym												
4. Listening to music												
5. Playing cards												
6. Going to movies												
7. Talking on the phone												
8. Outside sports activity												
9. Attending structured groups												
10. Socializing with friends												
11. Working on a hobby												
12. Other												

ACTIVITY CHECKLIST

Directions: If you participated in the activity during the hour indicated, place a check in the box to indicate the degree to which you enjoy doing the activity, if you did not participate in the activity for that hour, leave it blank.

FRIDAY	6 P.M.			7 P.M.			8 P.M.			9 P.M.		
	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED	LIKED	INDIFFERENT	DISLIKED
1. Playing pool												
2. Watching TV												
3. Going to the gym												
4. Listening to music												
5. Playing cards												
6. Going to movies												
7. Talking on the phone												
8. Outside sports activity												
9. Attending structured groups												
10. Socializing with friends												
11. Working on a hobby												
12. Other												

APPROVAL SHEET

The dissertation submitted by Agnes M. Tom has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

4-8-81
Date


Director's Signature