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The Prevalence of Hopelessness in Hospitalized Alcoholics

J. Michael McCarthy
Western Michigan University

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THE PREVALENCE OF HOPELESSNESS IN HOSPITALIZED ALCOHOLICS

by

J. Michael McCarthy

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
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Department of Counseling and Personnel

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THE PREVALENCE OF HOPELESSNESS IN HOSPITALIZED ALCOHOLICS

J. Michael McCarthy, Ed.D.
Western Michigan University, 1981

This study investigated the psychological construct of hopelessness as a factor in hospitalized alcoholics. There is a high suicide rate for alcoholics, and previous research has shown hopelessness to be a key factor in suicide. There have been no previous studies of hopelessness in alcoholics.

The purposes of this study were to establish norms and reliability of the Hopelessness Scale, a instrument designed to measure hopelessness, and to gain more information about hopelessness by testing several hypotheses concerning the relationship between hopelessness and certain variables. These variables included severity of alcoholism, depression, age, length of problem drinking, number of hospitalizations for drinking, relationship with family of origin, pending legal problems, and changes in hopelessness during a treatment program.

Subjects were 94 inpatients of a 30-day substance abuse treatment program of the Veterans Administration Medical Center in Battle Creek, Michigan. In addition to the HS, instrumentation included the Beck Depression Inventory (BDI) and the Michigan Alcoholism Screening Test (MAST). Upon

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admission, the subjects completed the HS, BDI and MAST. The HS and BDI were administered again approximately a week after admission and a final time at the completion of the program.

Those who were classified as alcoholics by the MAST had a mean HS score of 5.00 with a standard deviation of 4.66 and a range of 0-20. Reliability of the HS for this population using Kuder-Richardson procedures was .94, and using Split-half procedures it was .80 with a Spearman-Brown correction of .89.

The correlation between depression and alcoholism was higher than the correlation between hopelessness and alcoholism. The correlation between the BDI and MAST was significant ($p < .01$) while the correlation between the HS and MAST did not reach significance. No relationship between hopelessness and age, length of drinking problem, and number of previous hospitalizations for alcoholism was found. Significantly higher initial HS scores were found for subjects who were not married, who were unemployed, who could not turn to their family of origin for support, and who had legal problems pending. The levels of hopelessness as well as the levels of depression decreased significantly ($p < .001$) during the treatment program. The differences in the
levels of hopelessness noted initially for the subjects who were not married, unemployed, without family support, and with legal problems, changed during the program so that there was no difference in each category at the end of treatment.

The results were interpreted as evidence that alcoholics in treatment did not experience hopelessness as much as those who have attempted suicide. The decision and preparations to enter treatment probably served to alleviate hopelessness which may have been present. Although a significant correlation between hopelessness and alcoholism was not found in this sample of hospitalized alcoholics, because of the high rate of suicide in alcoholics and the nature of alcoholism to consist of recurrent failures and dashing of hopes, it was recommended that the issues of hopelessness be addressed in the treatment of alcoholics to serve as an inoculation against possible future episodes of hopelessness and possible suicide.
ACKNOWLEDGEMENTS

This dissertation is the culmination of an educational, professional and personal development. Reaching this point has been largely due to the influence of many. Most fundamental has been the love and teachings of my parents, John and Helen McCarthy. My indebtedness to them and countless others is immeasurable.

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J. Michael McCarthy
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CHAPTER I

Introduction

Alcoholism and depression are two problems which have been present throughout history and which are prevalent in contemporary American society.

The National Council on Alcoholism (1979) estimates that the scope of alcoholism in the United States today includes 10 million persons classified as alcoholic. However, the social effects are even more pervasive. It is estimated that each alcoholic directly influences the lives of six other persons. Thirty thousand Americans die each year from cirrhosis of the liver, a condition directly related to alcoholism. Alcohol is a factor in 9,000 suicides, 10,000 homicides, 23,000 automobile deaths and 35,000 accidental deaths annually. These numbers account for 30% of suicides, 65% of the murders and 50% of the automobile deaths annually. Alcohol is a factor in 55% of arrests by police each year. An estimated 6 to 10% of the work force
are alcoholic and cost the nation 43 billion dollars annually in absenteeism, health and welfare services, property damage and medical expense.

Depression has been described as a recognizable clinical syndrome for more than 2,000 years (Klerman, 1979). The Old Testament provides an excellent description of depression experienced by Saul. Hippocrates and others in ancient Greek, Roman and Egyptian literature have described a syndrome which any clinician would easily recognize as depression. Kline (1976) has described depression as being more fashionable during certain periods of history than others. Whether depression occurs more often now is not clear, but there is an increased awareness and concern about depression. It is the topic of many articles published and much research being conducted. Klerman has said that the current concern with depression is of such magnitude that this may become known as the Age of Melancholy. It is estimated that 15% of those between the ages of 18 to 74 will experience depression in any given year. Figures of the National Institute of Mental Health (cited by Becker, 1977) show that depression rivals schizophrenia as the most prevalent mental health problem. It is estimated that 80% of the 23,000 suicides each year have significant depressive features. There are 125,000 people hospitalized each year for treatment of
Depression and alcoholism are not mutually exclusive. While it is not clear how many depressives are alcoholic, it has long been known that many alcoholics are depressed. Various studies have provided data showing as many as 98% of diagnosed alcoholics are depressed (Shaw, Donley, Morgan & Robinson, 1975). Both depression and alcoholism have a high suicide rate. Alcohol is a factor in 30% of the suicides each year, and it is estimated that 7 to 21% of alcoholics die by suicide while the national rate of suicide is 0.01%. Although there are theories supporting each position, research has not been able to determine whether the high rate of depression in alcoholics is due to a primary and underlying depression which is manifested by alcoholism, or whether the depression in alcoholics is a realistic reaction to their behavior and losses which have occurred as a result of drinking.

While depression is a factor in many suicides, it has been found that hopelessness, a component of the syndrome of depression, is more a key determinant in suicides than depression itself (Minkoff, Bergman, Beck & Beck, 1973). A study of alcoholics who have attempted suicide concluded
that hopelessness was the key factor in their attempts also (Beck, Weissman & Kovacs, 1976). There have been no studies investigating the relationship of alcoholism and hopelessness, even though the relationship of alcohol and suicide is well known. The figures cited above from the National Council on Alcoholism (1979) demonstrate the high rate of suicide in alcoholics. In Michigan, an increased suicide rate was noticed when state budget cutbacks forced elimination of hospital detoxification programs for those arrested for intoxication ("Alcohol Treatment Cuts," 1980).

Purpose

Considering the fact that hopelessness is a key determinant in suicidal intent, and considering the high rate of suicide in alcoholics, questions arise concerning the role of hopelessness in alcoholism. How prevalent is it? Does it increase with advancing age and with the amount of time one is an alcoholic? Does the discontinuance of drinking and appropriate treatment alleviate hopelessness? Are certain life situations related to hopelessness?

The purpose of this study is to explore the concept of hopelessness in alcoholics, its prevalence, role, and relationship to some associated variables. Norms of hopelessness
in hospitalized alcoholics will be established, and the reliability of the Hopelessness Scale (Beck, Weissman, Lester & Trexler, 1974), an instrument designed to measure hopelessness, will be computed. The role of certain variables and their relationship to hopelessness will be explored by testing the following hypotheses using instruments which measure hopelessness, alcoholism and depression:

Research Hypotheses

H1: There will be a positive relationship between hopelessness and alcoholism.

H2: There will be a positive relationship between depression and alcoholism.

H3: The relationship between hopelessness and alcoholism will be greater than the relationship between depression and alcoholism.

H4: There will be a positive relationship between hopelessness and age.

H5: There will be a positive relationship between hopelessness and the length of problem drinking.

H6: There will be a positive relationship between hopelessness and the number of hospitalizations for alcoholism.
H7: The degree of hopelessness will change during the treatment program being the greatest at the time of admission, lower at the time of discharge, and lowest when entering the rehabilitation phase of the program.

H8: Hopelessness will be greater for those without support from their family of origin.

H9: Hopelessness will be greater for those not married.

H10: Hopelessness will be greater for those not employed.

H11: Hopelessness will be greater for those with legal problems.

Rationale

The above hypotheses were formulated from the position that alcoholism is a learned behavior which results in physiological complications and emotional and psychological experiences which are similar for different individuals.

Alcoholism, as a learned behavior, may be acquired in many situations. It may be due to cultural norms and tolerance for heavy drinking, it may be a response to stress, it may develop as a result of peer pressure or in response to unpleasant emotional experiences. Certain individuals may be biologically predisposed to experience the effects of alcohol more acutely. The constant factor, however, is alcohol. Increased consumption of alcohol leads to predictable phys-
ical effects. Likewise, the behavior induced by alcohol predictably leads to certain social consequences and is causal of situations potentially detrimental to the person who overindulges. Accidents occur, people are neglected or offended, physical altercations may happen, jobs are lost, families are destroyed, material possessions are lost and self esteem is demolished. Such losses are important factors in depression, an experience common to the alcoholic.

Because of the chronic and relapsing nature of alcoholism (American Medical Association, 1967), the alcoholic experiences repeated dashing of hopes. The factor of hopelessness in the depression experienced becomes more and more significant. In this way, just as the physical aspects of excessive alcohol consumption are progressively deteriorating, the deleterious psychological effects are progressive and often result in a kind of "learned hopelessness" as a result of the repeated failures, disappointments and losses.

Confirmation of the above hypotheses will lend evidence to the position that alcoholism is not necessarily the manifestation of primary or underlying psychopathology, but that the nature of the behavior influenced by alcohol leads to an accumulation of losses and aversive consequences of many types. The aversive consequences produce unpleasant
emotional consequences which may result in being relieved by increased alcohol consumption, thus creating a classical vicious circle.

If hopelessness is shown to be a prevalent factor in alcoholics who seek treatment, there are important implications for treatment programs. A major function of successful therapy would include the development and enhancement of hope. The issues surrounding the absence of hope may be addressed more directly and effectively if it is shown that it is prevalent in this population. In addition, techniques can be employed to facilitate the development of hope in individuals. Some of these include mastery and control exercises which have been shown to increase an individual's sense of effectiveness and to generate feelings of hope (Stotland, 1969; Frank, 1974).

Hopelessness is a symptom of cognitive distortions of negative expectations for the future. As a symptom, hopelessness may be addressed directly by disputing it, considering alternative explanations for situations precipitating it and acquiring a wider repertoire of behavior to respond to situations which elicit hopelessness (Ellis, 1962; Beck, 1963, 1970, 1976; Beck, Rush, Shaw & Emery, 1979). If it is known that alcoholics commonly experience hopelessness,
there are alternatives available to improve alcohol treatment programs by dealing with the issues surrounding it more efficiently and effectively, and it would also provide a basis for the development of techniques and interventions directly related to hopelessness.
CHAPTER II

Review of the Literature

Hope and Hopelessness

The concepts of hope and hopelessness have been given little attention in psychological literature even though there is a common awareness of their role in influencing behavior. Part of the reluctance to investigate these concepts has probably been due to their vague, diffused and subjective nature making them difficult to quantify and investigate. Another source of reluctance has probably come from the religious connotations associated with hope.

Frank (1974) compared a diverse collection of therapeutic practices to identify common therapeutic elements. His comparisons included shamans, faith healers, witch doctors, miracle cures at Lourdes, Alcoholics Anonymous, mental hospitals and even psychotherapists. He found that each therapeutic intervention enhanced hope and combated demoralization or the loss of hope. Frank noted that one of the key variables of successful therapeutic incidents was the
fostering of positive expectations by the healers. The techniques and rationale of the various forms of therapy, although differing in content, served similar functions. One of the most crucial of these functions was the enhancing of the patient's hope of relief.

Stotland and Kobler collaborated on a trilogy dealing with hopelessness and suicide. In the first volume, Kobler and Stotland (1964) described an epidemic of suicide among patients in a mental hospital and related it to a prolonged and marked decrease in the morale of hospital staff. In the final volume of the trilogy, Stotland (1969) described the psychology of hope, the development of schemas of hope and the utilization of those in therapy. Stotland defined hope as a system of cognitive schemas of expectations for attainment of goals. It is a subjective state that can strongly influence the future. As a mediating process, hope ties together antecedent and consequent events and thus involves an organism cognizing its relationships to goals. Hope, noted Stotland, is a necessary condition for therapy to be successful.

Other literature of the same period concerning the topic of hope and hopelessness was also related to suicide. Calling it a "disease of hope," Farber (1968) took a posi-
tion similar to Kobler and Stotland with his proposal that suicidal ideation was related to the conceptualization of experience as hopeless by the patient. He observed, "It is when the life outlook is of despairing hopelessness that suicide occurs" (p. 12).

Beck reported clinical studies (1963) and experimental studies (1970) of depression in which hopelessness was one of the main components. An instrument designed to measure the intensity of this component was developed (Beck, Weissman, Lester & Trexler, 1974) and was shown to have a high degree of internal consistency and a relatively high correlation to clinical ratings and other measures of hopelessness. The instrument, called the Hopelessness Scale (HS), was constructed to reflect negative expectations of the future. Items were developed by choosing nine statements from a test of attitudes about the future (Heimberg, 1961), and eleven items were chosen from a pool of pessimistic statements made by patients judged to feel hopeless by clinicians.

Internal consistency of the scale was obtained by administering the scale to 294 hospitalized patients who recently attempted suicide. A reliability coefficient of .93 was obtained. Item-total correlations ranged from .39 to .76.
and all were judged significant at the .01 level. Concurrent validity of the scale was determined by comparing HS scores to scores of other tests designed to measure negative attitudes about the future and to clinical ratings of hopelessness. Correlation with the clinical ratings of hopelessness in a general practice sample was .74, and it was .62 with the sample of attempters of suicide, both significant at the .001 level. Construct validity was established by confirming various hypotheses concerning hopelessness by means of the HS. Factor analysis of the HS revealed three factors related to affective, motivational and cognitive aspects of hopelessness. These were labeled Feelings about the Future, Loss of Motivation and Future Expectations.

The studies of hopelessness using the HS have centered on suicide. Minkoff et al. (1973) found that hopelessness as a component of depression was a stronger indicator of suicide intent than depression itself. Not only was the correlation between suicide intent and the HS significantly higher than the correlation between suicide intent and depression, but in statistical procedures holding depression scores constant, the correlation between hopelessness and suicide intent ($r = .41$) was still significant at the .001 level. However, the correlation between depression and suicide intent while holding hopelessness scores constant be-
came nonsignificant ($r = .09$).

These findings were replicated by Kovacs, Beck and Weissman (1975) in a study of hospitalized suicide attempters; Beck, Kovacs and Weissman (1975) using a large sample of suicide attempters; Wetzel (1976) using a sample of suicide attempters and threateners and the Zung Self-rating Depression Scale (SDS) (Zung, 1965) as a measure of depression; Beck, Weissman and Kovacs (1976) using a sample of suicide attempters who were alcoholic; and Wetzel, Margulies, Davis and Karam (1980) in a study of suicide ideators using the MMPI-D scale as a measure of depression.

The repeated replications of the findings that hopelessness is more closely related than depression to suicide intent, and that the correlation of depression to suicide intent became insignificant when the factor of hopelessness was held constant have led Beck et al. (1975) to suggest that depression has a bearing on suicide intent only by virtue of its associations with hopelessness. They noted that the several replications of these findings "...have removed the puzzle by pinpointing hopelessness as the missing link between depression and suicidal behavior" (p. 1149). Wetzel et al. (1980) remarked that such a relationship between hopelessness and suicide which accounts for a major
proportion of variance and which has been "readily replicated is rare in psychiatry and clinical psychology" (p. 160).

The relation of hopelessness to alcoholism has not been thoroughly studied. It has long been realized that alcoholics are usually clinically depressed, and their suicide rate is much higher than the general population. In addressing this issue, Benensohn and Resnik (1974) described drinking as serving the function of relieving the intrapsychic pain of hopelessness, worthlessness and helplessness, but a lethal mixture is produced when these feelings are combined with alcohol.

Although not addressing the issue of hopelessness explicitly, Smart (1968) described a distorted time perspective in alcoholics by which a coherent ordering of future events seemed to be unusually difficult. One explanation for this was that the difficulty in conceptualizing the future serves as a defense developed from suffering unpleasant consequences of drinking to the extent that the future comes to be perceived to be so bleak that it is avoided.

Because of the high rate of suicide in alcoholics, the alcoholic suicide attempter was the subject in one of the
series of studies on suicide, hopelessness and depression by Beck (Beck, Weissman & Kovacs, 1976). The data from that study once again indicated that hopelessness was the key determinant of suicidal intent, and it was predictive to such a degree that inclusion of the variables of depression level and alcoholism increased predictive power by only \(0.13\%\), an insignificant amount, over that of hopelessness alone.

Changing hopeless attitudes to attitudes of hope is the process of therapy (Frank, 1974). All successful therapies implicitly or explicitly change the patient's image of being overwhelmed by symptoms to that of having mastery and control. There are various means by which this is accomplished.

Wallace (1978) presented various issues which alcoholics must resolve for therapy to be successful. One of these was the issue of pessimism versus pollyanna optimism. He suggested that dealing with the issue directly through discussion and exploration of the role it played for the individual was most effective. Similar approaches have been advocated by Beck (see Beck, 1970; 1976; Beck, Rush, Shaw & Emery, 1979). Beck described a therapeutic process of systematically working on symptoms. Hopelessness, as a symptom, was described as a cognitive distortion and would be cor-
rected by examining and modifying it to realistic interpretations of the world. This very process is what Frank (1974) described as the most important learning in therapy, the experiential process of the patient being confronted with the discrepancies between the assumptive world and actuality.

Stotland (1969) suggested that action can invoke hopeful schemas. When hopeful schemas are invoked by effective action, anxiety is unlikely. He noted that systematic desensitization as a technique is effective because it is a systematic way of training individuals to improve performances and thus become more hopeful. Both Stotland (1969) and Frank suggest that this is precisely the effectiveness of Behavior Therapy, the provision of success experiences.

Mastery is effective in invoking hopeful schemas. Recent literature has suggested that exercise, especially aerobic exercise such as running or swimming, relieves depression and improves self esteem because it involves a mastery of motor skills (Leer, 1980; Fixx, 1977; Glasser, 1976; and Kostrubala, 1976). Leer suggested that running involves the mastery of a skill and the feelings of mastery lead to increased self confidence which generalizes to feelings of competence in other areas. Even unstructured,
open-ended therapies, noted Frank, provide a sense of mastery through achieving a new insight or awareness of previously unconscious thoughts or feelings.

The concept of control has been addressed by Donovan and O'Leary (1979). They reviewed literature and presented various forms of data in a theoretical model conceptualizing the development, maintenance and treatment of problem drinking. The model consisted of constructs of social skills deficits, lack of experienced control and a negative perception of self efficacy. Treatment based on this approach would include cognitive social learning as well as the acquisition of behavioral skills to cope with stressful situations.

Other factors in the development of hope in the patient come from the expectations the therapist has of the patient as well as the therapist's confidence in his own ability (Frank, 1974; Stotland, 1969). These are communicated to the patient in a variety of ways, both direct and verbal as well as indirect and nonverbal.

**Depression and Alcoholism**

Alcoholics who seek treatment are often depressed. Some
attribute this to underlying pathology or endogenous depression which is manifested by the drinking which serves as an attempt to relieve the discomfort of the underlying pathology. Others explain the depression which often accompanies the alcoholic to be a realistic appraisal of the current events and life situation which for the alcoholic often includes losses of health, employment, relationships and self esteem.

Unlike the topic of hopelessness and alcoholism, there have been many studies on the topic of depression and alcoholism. Important issues and findings have been established by these studies. Some of these include examination of positions which use the presence of depression in alcoholism as evidence that there is underlying psychopathology in alcoholism, the cognitive/perceptual characteristics of depressed alcoholics, changes in the course of depression, age as a factor, experience as a factor, and pharmacological studies.

**Underlying Pathology Theories**

Alcoholism has been declared a disease, but the fact that it had to be declared a disease makes it a very unusual disease. Seeley (1962) noted that this declaration was not a
scientific discovery, but rather was a social position statement designed to advocate treatment for the alcoholic instead of the usual criminal charges and/or moral judgments. Whether alcoholism itself was considered a disease, there have long been those who have maintained that it certainly was a manifestation of underlying pathology. This was the position of the American Medical Association (1967) when it declared alcoholism a disease in 1956.

In an effort to prove that alcoholism was a symptom of psychopathology which should be the focus of treatment, Tyndel (1974) conducted a study of 1,000 alcoholics seeking treatment and found that every single person demonstrated some sort of psychopathology or personality disorder. The conclusion of this study was that "the development of alcoholism is inconceivable without underlying pathology" (p. 24). Alcoholism was viewed as being the outcome of a prolonged process of attempts at alleviating discomforts of the underlying pathology. The fact that people are often diagnosed as alcoholic, explained Tyndel, was because the symptoms are so obstrusive as to mask the signs and symptoms of the associated psychiatric conditions.

Tyndel's position would make alcoholism always secondary to a primary pathology. Several members of a group of
researchers have been advocating the differentiation of alcoholism as primary or secondary and the associated disorders such as depression as primary or secondary. In order to be classified as primary, the condition must have existed temporally prior to the other disorder. The person who is alcoholic and later experiences depression would be classified as a primary alcoholic and a secondary or reactive depression. The problem with this scheme is that it is usually difficult to identify a prior condition, and it is assumed that the subsequent condition is causally related to the primary condition.

Pitts and Winokur (1966) advocated this classification scheme. Their study, however, showed a predominance of primary affective disorders in alcoholics. Their evidence came from family studies where they found more alcoholism in relatives of psychiatric patients than in a medical control group. Also, alcoholism occurred more frequently in the relatives of those psychiatric patients who experienced an affective disorder. Interestingly, these results clearly indicated that alcoholism was found in the male but not in the female relatives of the psychiatric patients. This was not explained as simple social learning by the authors, but viewed as the manifestation of the underlying pathology being determined by societal norms; in men it was manifested
as alcoholism, in women it was manifested as depression.

Further studies showed that women who were alcoholic usually had clear-cut affective disorders either prior to or closely after the problem drinking began, but depression in men was not seen until much later in their problem drinking history (Winokur, Rimmer & Reich, 1971). Cadoret and Winokur (1974) compared primary and secondary depressed alcoholics and found that the primary depressed alcoholic tends to drink more episodically with longer intervening periods of abstinence. In nondepressed male alcoholics there was more evidence of alcoholic paranoia, a different manifestation of underlying pathology. In contrast to alcoholics with primary depression, it was found that alcoholics with secondary depression were very similar to alcoholics without depression. This result was supported by another study by Woodruff, Guze, Clayton & Carr (1973) in which alcoholics with an affective disorder more closely resembled alcoholics without an affective disorder than those with an affective disorder only. The course and outcome also differed in addition to their characteristics and history.

Another study by this group (Guze, Woodruff & Clayton, 1971) established that individuals with an affective disorder secondary to alcoholism were usually younger, male and
rarely manic. Their response to treatment was different than primary affective disorders and probably was affected by the pre-existing disorders. Because of the differences, they suggested separation of secondary and primary disorders for research purposes.

Weissman, Pottenger, Kleber, Ruben, Williams & Thompson (1977) investigated the frequency of secondary depression and its associations with different primary diagnoses. They found that secondary depression was found in 32% of opiate addicted patients, 28% of schizophrenic patients and in 59% of alcoholic patients. The patterns of the symptoms were similar for each group, but different in severity. Symptom patterns for the depressed alcoholic were found to be similar to nonalcoholic depressives.

Depression spectrum disease is described in the literature as a genetic disease which manifests itself as alcoholism in men and depression in women (Tanna, Winokur & Elston & Go, 1977). This concept, in contrast to pure depressive disorder, is defined as "depression in a patient who has an alcoholic or antisocial first degree family member" (VanValkenburg, Lowry, Winokur & Cadoret, 1977, p. 341), while pure depression disease occurs in a depressive who has no such family member. VanValkenburg et al. reviewed
hospital records and classified women patients in the two categories of either depression spectrum disease or pure depressive disease. They found differences in areas of personal problems, personality and course of illness for each of the classifications. The depression spectrum disease patients were more likely to recover and have no relapse of depression.

In a study of alcoholism and depression in daughters of alcoholics, Goodwin, Schulsinger, Knop, Mednick & Guze (1977) found that adopted-out daughters of alcoholics who were raised in nonalcoholic homes had no more depression than daughters of nonalcoholics. The authors concluded that depression spectrum disease may be genetic, but the experiential aspect plays a powerful part in determining future behavior, even to the extent of suppressing inherited susceptibility to depression in women with an alcoholic parent.

Although many theories maintain the position that alcohol serves to relieve depression, it is clear that this is not the case with bipolar affective disorders. In examining manic depressives, it has been found that there is a higher than chance association of alcoholism and manic depressive illness, but several reports are unanimous that drinking occurs almost exclusively during the manic phase (Mayfield &
Coleman, 1968; Pitts & Winokur, 1966; Reich, Davis & Himmelhoch, 1974). Reich et al. noted that alcohol is used to counteract the manic phase and the more severe the mania, the more excessive the alcohol use.

**Cognitive Characteristics of Depressed Alcoholics**

An important aspect in the study and treatment of alcoholics who are depressed is understanding the thinking and perception which occurs. Some of the cognitive characteristics which have been studied include idiosyncrasies of thinking processes, distortions in perception of self, distortions in perception of time, and learned helplessness.

Beck, in a clinical study (1963) and in experimental studies (1970) presented his concept of depression as being an affective disorder which was the result of impairment in thinking. He described typical cognitive distortion of depressives including arbitrary inference, selective abstraction, overgeneralization, magnification and minimization, and inexact labeling (1963, pp 328-329).

McCourt and Glantz (1980) have found the same maladaptive processes and themes in alcoholics. They proposed the hypothesis that alcoholics have always been poor problem...
solvers because of these maladaptive thought processes. Drinking leads to increased ineffectiveness with consequent problems resulting in further use of alcohol to alter the experience of problems. An important aspect of their study was the finding that similar thought processes and themes exist in both alcoholics and depressives.

Gibson and Becker (1973a) conducted a factor analytic study of the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) administered to jailed alcoholics and found similarities between the patterns of depression of alcoholics and those primarily depressed. The shared factors were Self Debasement, Vital Depression and Pessimism-Suicide. A subsequent study (Gibson & Becker, 1973b) attempted to assess the relative change in different aspects of alcoholic depression over a period of time. Their results indicated greater changes in the somatic symptoms of alcoholics and they concluded that these may play an essentially different role in the depression experienced by alcoholics than those who are primarily depressed. However, their studies led them to conclude that most of the symptoms of depression are transdiagnostic with alcoholism.

Steer, Shaw, Beck and Fine (1977) studied the factor structure of depression in black alcoholic men and compared
their results with those of Gibson and Becker (1973a). Their results for black men were comparable to the results for predominantly white groups of alcoholic patients, and they were also comparable to primarily depressed patients. Not only were the patterns of depression the same as predominantly white alcoholic populations, they were the same as nonalcoholics who were depressed. The factor of Cognitive-Affective impairment was the strongest.

O'Leary and Donovan (1974) observed distortion in alcoholics' perception of depression in themselves and others. Using the ratings of the staff, other patients, self-ratings and an objective measure of depression, they found that alcoholics had a distorted perception of their own depressed state, and the magnitude of this distortion was positively related to the magnitude of the depression.

Time distortion in alcoholics' thinking was investigated by Smart (1968). By comparing future time perspectives of alcoholics and a control group of social drinkers, it was found that alcoholics had particular difficulty in coherently ordering the future. Characteristics of immediate gratification and hopelessness were implied by the results of the study.
A recent perspective on depression has been offered by Seligman (1974) and is known as "learned helplessness." The basic principle of Seligman's model is that learned helplessness develops as a result of a lack of contingency between behavior and reinforcement, or response-outcome independence. The model was developed from animal experiments in which it was noted that the behavior demonstrated by animals which had undergone unavoidable and inescapable shocks was quite similar to the behavior of depressives. The similarities included reduced activity, passivity, libido deficit, social withdrawal, and spontaneous remission.

O'Leary and associates have studied the concept of Learned Helplessness in relation to alcoholics. In a study (Donovan, Radford, Chaney & O'Leary, 1977) using measurement of external-internal locus of control, they found that the external locus of control, which reflects response-outcome independence, was significantly correlated with depression. Their definition of external locus of control as response-outcome independence was the same used in defining Learned Helplessness in their subsequent studies.

In a replication study with alcoholics, it was found that there were no significant interactions obtained on tasks which had been used to correlate depression and help-
lessness in college populations of relatively low level depression (O'Leary, Donovan, Krueger & Cysewski, 1978). The reason for this was felt to be a function of possibly more severe depression in the alcoholics or a possible function of the interaction between depression and alcoholism.

Donovan, O'Leary and Walker (1979) reported a study in which they validated an instrument purported to measure helplessness. They found a correlation between the degree of depression and the level of helplessness. Those individuals who scored high on helplessness were significantly more depressed. In addition, those who scored high on the helplessness scale were reported to reflect a behavioral and motivational deficit consistent with the construct of helplessness.

**Course of Depression in Alcoholics**

When an alcoholic seeks treatment, the course of depression so often experienced changes. Physical factors are intricately involved initially at the time of detoxification. There have been various studies which have examined changes in the course of depression of alcoholics.

The acute withdrawal from alcohol involves the physio-
logical adjustment of the body and this period of time during treatment is referred to as detoxification. Weissman et al. (1977) noted that the association between depression and alcoholism is strongest during detoxification. Kielholz (1970) reported that because a depressive and morose mood is typical during withdrawal, accurate diagnosis of depression can only be made "after detoxification is complete and the withdrawal depression" has been resolved..." (p. 189). Pitts and Winokur (1966) also briefly mentioned a withdrawal depression. As they described it, this depression did not exist prior to detoxification, its nature seemed to be different than other depressions, and the relationship to other depression was unclear. Loosen, Prange and Wilson (1979) observed behavioral changes in alcoholics treated with prothiaden. The only beneficial effects observed were very brief in duration and only occurred in response to doses administered during acute withdrawal. These responses were similar to the antidepressant effect observed in previous studies.

A study by Keeler, Taylor and Miller (1979) noted that "the sequelae of chronic alcoholism and/or recent prolonged spell of excessive drinking and/or recent alcohol withdrawal..." (p. 588) can result in signs and symptoms which are very much like those of depression. These sequelae, they
noted, can last for weeks.

The study of Weingold, Lachin, Bell and Coxe (1968) is usually cited as documentation of the prevalence of depression in alcoholics. They found mild to deep depression in 70% of alcoholic patients, but the results showed that it spontaneously decreased steadily over time and was not affected by the type of drug regime being employed. The changes noted were proportional to the levels of depression, that is, high levels of depression decreased the most over time.

Gibson and Becker (1973b) followed the Weingold et al. study to assess the changes in different aspects of alcoholic depression. They found that the somatic factor and the mood factor showed significant decreases in the first fourteen days of treatment. The authors speculated that the change in mood may be related to the improvement in the somatic symptoms which occur when alcohol consumption stops, and somatic symptoms may play a more significant role in alcoholic depression than in primary depression.

Shaw et al. (1975) noted the changes in depression following the initiation of treatment for alcoholism. The level of depression decreased both for groups treated with
medication (a combination of chlordiazepoxide and imipramine) and for the placebo group. One explanation offered was that perhaps the discontinuation of drinking had a positive effect in alleviating the depression. Interestingly, they also found that the instrumentation which focused more on somatic symptoms, the Zung Self-rating Depression Scale (Zung, 1965), showed more improvement in depression than the Minnesota Multiphasic Personality Inventory (MMPI) or the Beck Depression Inventory (Beck et al., 1961). These findings were consistent with the results reported above by Weingold et al. and Gibson and Becker.

Pottenger, McKernon, Patrie, Weissman, Ruben and Newberry (1978) found depressive symptoms in alcoholics to be quite persistent. A survey of outpatients accepted for treatment of alcoholism found 59% to be clinically depressed. Even though they had attended the treatment program, a follow-up conducted one year later found that there was no significant change in the depressive symptoms.

**Age and Experience as Factors in Alcoholic Depression**

It takes time for alcoholism to develop to the point of being problematic. The physical, psychological, and social complications do not occur instantly, and it is the pro-
gressive deterioration in the different spheres which finally motivates a person to seek treatment for alcoholism. According to the Jellinek (1960) theory of alcoholism, the person with a certain combination of a particular constitutional factor, a personality factor and a social factor is faced with going through the various stages of alcoholism for the next 10 to 25 years.

Noting that most studies examined the patient who had sought treatment for alcoholism, Hamm, Major and Brown (1979) examined a group of men referred solely for excessive drinking, not alcoholism. They found that although the subjects could be classified as alcoholics on the basis of the Michigan Alcoholism Screening Test (Selzer, 1971), the ratings for depression and anxiety were lower than shown in other studies where the subjects had sought treatment. It was noted, however, that age distribution in this study biased against finding correlations between depression and the length of drinking. A subsequent study by Weissman and Myers (1980) also examined alcoholics not seeking treatment, but their sample was too small to determine whether the association between depression and alcoholism is not present in the young. In contrast to the Hamm et al. study, Zielinski (1979) found first admission alcoholic patients who were clinically depressed to be younger and more de-
pressed than a group of relapsed alcoholics readmitted for further treatment.

Although the purpose of a study conducted by Kolakowska and Swigar (1977) was to examine thyroid function in depression and alcohol abuse, inspection of their data reveals that the mean ages increase respectively for groups of alcohol abuse with no depression (31.4 years), reactive depression (37.2 years) and depression secondary to alcoholism (38.7 years).

Age in terms of maturity was examined by Blum and Levine (1975). In classifying alcoholics as essential (more severe and chronic) and reactive (more mature and responsible), they found, contrary to their expectations, that essential alcoholics tended to score higher on depression. This was explained by identifying the essential alcoholic as more ready to express helplessness and dependence than the more mature alcoholic.

With increasing age comes increasing experience. The experience for the alcoholic is typically bitter. The behavior of the alcoholic is characterized by deteriorating health, loss of friends and jobs, marital and family problems, arrests and legal problems and loss of self esteem.
The experience of loss is central to many concepts of depression (Beck, 1970; Arineti and Bemporad, 1979; Freud, 1917 (in Becker, 1977)).

Smart's (1968) study on distorted future time perspectives in alcoholics was explained as the possible result of an accumulation of bitter life experiences. The difficulties in ordering the future serves as a defense against the bleak prospect of failure with which the future has been associated.

Beck et al. (1976) noted that alcoholics who had attempted suicide were found to be older and to have a longer history of drinking than alcoholics who had not attempted suicide.

Forrest (1978) offered the explanation for the depression experienced by alcoholics as a turned-in anger and resentment for the many bitter situations and wrongs, both real and imagined, experienced by the alcoholic. Time is involved in the history and experience of these situations and depression would not develop until later in the alcoholic.

As noted above, Zielinski (1979) found the younger
alcoholic seeking first treatment to be more depressed than a group of relapsed alcoholics seeking readmission, even though they were much older, had longer drinking histories, and were previous treatment failures. He used these results as evidence that depressed alcoholics are qualitatively different than nondepressed, relapsed and more experienced alcoholics. Even though Blum and Levine (1975) expected such results, theirs were the opposite as they found the more severe and chronic alcoholic reporting higher depression.

Pharmacological Studies and Depressed Alcoholics

The theory that alcoholics are primarily depressed has been examined from the perspective of their response to antidepressant medication. There have been several studies of the different aspects of pharmacology and the depressed alcoholic.

An interesting aspect of the Weingold et al. (1968) study was that depression decreased at the same rate over time whether the subject was receiving antidepressant medication or not. The types of drugs included in the study were antianxiety drugs and antidepressant drugs. Shaw et al. (1975) reported similar results. They found that depression was reduced in groups receiving chlordiazepoxide, imipramine
or placebo. An explanation offered for these results was that perhaps the discontinuation of drinking itself had an alleviating effect on depression, or possibly the inclusion in such a study engendered positive expectations. Overall, Brown, Williams and Neill (1973) reported a study of the responses of detoxified alcoholics to phenothiazines, benzodiazepine and tricyclic drugs. Results indicated that the psychological discomfort of the detoxified alcoholic is quite sensitive to drug treatment and seemed to resemble an "endogenous" type of depression rather than a reactive depression. These investigators did not include a placebo control group in this study.

Another aspect of drug administration has been in terms of successful abstinence from alcohol by those receiving antidepressant medication. The rationale of this approach has been that if the alcoholic is basically depressed, the administration of an antidepressant would alleviate the need to drink. Kielholz (1970) advocated the prescription of antidepressant drugs on a long term basis to diminish the danger of relapse. Kissin and Charnoff (1976) followed more than 1,500 patients who were prescribed one of ten different medications including placebo for six months. They found that no given drug was superior to its placebo in producing abstinence.
Lithium has been used quite successfully in the treatment of affective disorders, particularly the bipolar disorders. Reynolds, Merry and Coppen (1977) reported a study in which lithium was used as a prophylactic treatment of alcoholism. They found that in their double blind placebo controlled study over a one year period, patients receiving lithium abstained more from drinking than controls. The study was plagued by a very high drop-out rate which did not eliminate the possibility that those alcoholics who remained in the study were highly motivated to abstain, regardless of the type of drug received. Schou (1977) reviewed lithium therapy studies and although generally reporting successful results in terms of abstinence on the part of those depressed alcoholics receiving lithium, he referred to the typically high attrition rate in the studies which he said should be considered in evaluating the results. He also criticized the studies using lithium for depressed alcoholics for not eliminating the possibility that patients assigned to lithium had a better prognosis than those given placebo.

Identifying Alcoholism

The question "What is an alcoholic?" is not easy to
answer. The question "Who is an alcoholic?" is probably more
difficult to answer. Everyone seems to have their own def-
initions and each definition has different diagnostic pro-
cedures. There are several different concepts and methods of
identification of alcoholics.

The American Psychiatric Association published the
Diagnostic and Statistical Manual of Mental Disorders (DSM
II) in 1968 and described an alcoholic as follows:

• • • (one) whose alcohol intake is great enough to da-
mage their physical health, or their personal or social
functioning, or when it has become a prerequisite to
normal functioning (p. 45).

Three categories of alcoholism were presented and the dif-
ferentiation of those categories was generally based on the
frequency of excessive alcohol consumption. The three cate-
gories identified were episodic excessive drinking, habitual
excessive drinking, and alcohol addiction. Episodic exces-
sive drinking was described as occurring "if alcoholism is
present and the individual becomes intoxicated as frequently
as four times a year" (p. 45). Habitual excessive drinking
was a diagnosis to be given to persons who were alcoholic
and became intoxicated more than twelve times a year or came
under the influence of alcohol more than once a week al-
though not intoxicated. The final category, alcohol addic-
tion, was described as a dependence on alcohol, presumably
physiological, which was evidenced by withdrawal symptoms.
DSM III Draft (American Psychiatric Association, 1978) classified alcohol problems as either alcohol abuse or alcohol dependence. Alcohol abuse was diagnosed in the presence of continuous or episodic use of alcohol for at least a month, social complications of alcohol use, and either psychological dependence or pathological patterns of use. Alcohol dependence was diagnosed when tolerance and/or withdrawal were present in addition to the above mentioned symptoms. Each of these diagnoses were further coded as continuous, episodic, in remission, or unspecified. DSM III noted that depressive symptoms are a frequent complication of alcohol dependence and in part account for the high rate of suicide which occurs in those dependent on alcohol.

One approach to alcoholism has been that there is an alcoholic personality. Indeed, the personality factor is one of the conditions Jellinek (1960) cites as predisposing a person to alcoholism. Others have denied that alcoholism is due to an alcoholic personality (American Medical Association, 1967, p. 13). Much work has been done with the Minnesota Multiphasic Personality Inventory (MMPI) to identify possible alcoholic personality profiles. The most success, however, has come from the development of subscales of the MMPI designed to identify alcoholics. The Hampton Scale

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(1951), the Holmes-Button Scale (1956), and the Sedlacek Scale (1958) are some examples of alcohol subscales of the MMPI.

MacAndrew and Geertsma (1964) reviewed the alcohol subscales of the MMPI and found that while they were able to differentiate alcoholics from normals, they were incapable of differentiating alcoholics from psychiatric patients as well. They concluded that the scales existing at that time were indices of maladjustment rather than alcoholism. MacAndrew (1965) devised another subscale to differentiate alcoholics from neurotics who also happened to drink too much. The MacAndrew Alcoholism Scale (MAS) was the result of his efforts, and it has come to be widely used and supported as a device to screen alcoholics.

Noting that the myriad of definitions of alcoholism were so broad that their diagnostic usefulness was limited to those who were grossly alcoholic, Selzer (1971) devised a screening device which came to be known as the Michigan Alcoholism Screening Test (MAST). The purpose of this instrument was to provide consistent quantifiable information for the detection of alcoholism. Originally, the 25-item questionnaire was administered in a semi-structured interview format with differential weighting of the items en-
dorsed in the keyed direction. However, recent studies (Selzer, Vinokur & vanRooijen, 1975; Skinner, 1979) have found that a self-administered format and a simpler unit weighting method of scoring were essentially identical, particularly for ordering individuals along a continuum according to their degree of alcohol involvement.

The MAST has become a popular instrument which is considered highly reliable (Skinner, 1979). It was constructed with the possible lack of candor of alcoholic respondents in mind. Some of the questions are sufficiently neutral that persons reluctant to admit problem drinking may reveal their alcohol problems anyhow. In an experiment in which hospitalized alcoholics were instructed to lie about their drinking problems, 92% disclosed sufficient information for them to be classified as alcoholic (Selzer, 1971).

Validation of the MAST was determined by searching factual information found in legal, social, medical, driving and criminal records of the respondents and comparing those findings with the results of the MAST. One finding was that youthful respondents did not score as high as older persons on the MAST since they had not yet developed the social, medical, and legal complications necessary to score in the alcoholic range. However, the test proved to have quite high
discriminatory ability in identifying those whose records verified the existence of alcohol problems.

Zung and Charalampous (1975) examined the internal validity of the MAST by means of an item analysis. Their findings supported the internal validity of the instrument as few items failed to correlate significantly with the total score and few failed to discriminate between problem and adjustive drinkers. They noted that the content of the different items of the instrument may give valuable information about the individual.

Some research has included efforts to shorten the 25 item MAST questionnaire. Pokorny, Miller and Kaplan (1972) devised a 10-item instrument which produced scores highly correlated with the full length MAST. Selzer et al. (1975) used a 13-item version of the MAST in a self-administered format and found high correlation between the short and full length versions.

Zung (1979) criticized efforts to shorten the MAST because this amounted to homogenizing the content when there is evidence that the content of the MAST and the nature of alcoholism is multidimensional. The shortened versions, he argued, not only lower test validity, but they throw out
important information on the factors operant in the subjects.

A factor analysis of the MAST by Zung (1978) produced four dimensions of symptomatology of motorists arrested for driving while intoxicated. These factors were Help-Seeking, Discord, Alienation, and Denial. He suggested that these factors be considered rather than only the overall score which identifies a person as an alcoholic or not. The factors have implications for the problem areas to be focused on in treatment and could also be used to assess changes in symptomatology during and after treatment. Skinner (1979) in a factor analysis of the MAST identified five factors underlying the MAST, and these reflected specific problem areas. The factors identified were (1) Recognition of Alcohol Problems by Self and Others, (2) Legal, Work and Social Problems, (3) Help Seeking, (4) Marital-Family Difficulties, and (5) Liver Pathology. Skinner recommended that the MAST be given routinely in assessment programs to record a history of problems associated with alcohol use. In addition, by examining the factors endorsed, treatment could be facilitated by focusing on pertinent problem areas.
**Identifying Depression**

Despite the acclaimed uniformity of descriptions of depression throughout the centuries, its ubiquitous nature still confounds precise identification. The term is used in many senses colloquially and clinically. It refers to both a mood and a syndrome. Kline (1976) noted that the distinction between the syndrome of depression and the symptom of depression is necessary since the patient with a depression is not necessarily depressed. The clinical syndrome of depression consists of several symptoms, but prevalence of certain symptoms differs in different cultures (Marsella, in press). Teja, Narang and Aggrawal (1971), for example, describe a person who is aggressive and boisterous in India as being depressed while the American-Western European concept of a depressed person is described as one of being quiet, withdrawn and sad. Currently, there are several concepts of depression, its symptoms, and methods of identifying it.

**Symptoms**

Mendels (1970) claimed the central symptoms of depression to be sadness, pessimism, and self-dislike with a loss of energy, motivation and concentration. The degree and combination of these symptoms are infinitely variable. He
categorized the signs and symptoms of depression as disturbances of mood, thought, behavior and appearance, somatic, anxiety features and suicidal behavior. Beck (1970), using different terminology, presented the same categories of symptoms of depression: emotional, cognitive, motivational, and vegetative-physical. In addition, he noted the clinical observations of retardation, agitation and sad melancholic appearance.

Arieti and Bemporad (1979) distinguished between two types of depression, severe and mild. Symptoms of mild depressions, which are characterized as dystonic and accepted by the patient, include feelings of depression, not wanting the despondent feelings, occurrence of suicidal ideas, various somatic difficulties and other symptoms depending on the circumstance and type of depression. Severe depression, described as syntonic and accepted by the patient as a way of living, are characterized by pervasive melancholia, unusual content and retardation of thought processes, psychomotor retardation and somatic difficulties.

**Objective Measurement Techniques**

Various objective assessment techniques for depression have been developed and validated in recent years. Mayer

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(1978) has reviewed many of these instruments. There are basically two types of assessment instruments: self-report measures and observer rating scales. The basic difference between the two types is that the subject does the rating in the self-report measures and some other person does the rating in the observer rating scales.

Among the observer rating scales are the Depression Rating Scale (Wechsler, Grosser & Busfield, 1963), the Depression Status Inventory (Zung, 1972), and a behavioral measure of depression developed by Williams, Barlow and Agras (1972). The most commonly used observer rating scale is the Hamilton Rating Scale (HRS) (Hamilton, 1960). The HRS was designed to quantify systematically the results of interviews with patients diagnosed as depressive in order to assess the severity and patterns of the symptoms. The score is the sum of ratings by the interviewer and an observer on seventeen variables included in the test.

Hamilton did not provide validity information about the HRS (Mendels, 1970). Inter-rater reliability coefficients reported ranged from .80 to .90 with more experienced raters obtaining higher coefficients.

An advantage of the HRS, being rated by observers,
that it includes observations the subject may not be aware of, but the disadvantage is the expense involved in training and providing two persons to administer the test. The time involved to administer the HRS to one subject is at least thirty minutes. Another factor which is present is inter-rater reliability factors which vary from test to test. Mayer (1978) noted that the content of the HRS items seemed to be weighted on behavioral and somatic factors while neglecting cognitive and affective factors. Because of this, it may be more valid for more severely depressed patients than mildly depressed patients.

Self-report measures offer the advantages of being economical, easily administered, and facilitative of repeated measurements over time. Pichot (cited by Mayer, 1978) noted that depression in particular can be evaluated by the patient or by an observer equally well. However, the limitations of the self-report measures are based on the accuracy of the patient's assessment. Some of the variables which influence this are literacy, cooperativeness, and degree of depression of the subject.

The Beck Depression Inventory (BDI) (Beck et al., 1961) was developed to measure the presence and intensity of depression. It consists of sets of statements graded in se-
verity for each of twenty-one symptoms. The symptoms included are those which Beck felt to be the most crucial in depression and naturally are consistent with his theory of depression. Many of the items emphasize the cognitive manifestations of depression, but the physical and affective symptoms are not neglected entirely. However, the decreased emphasis on the affective and physical components of depression has been the basis of most of the criticism of the BDI.

Few have argued with the reliability and validity of the BDI, however. High reliability has been reported in terms of parallel changes of BDI scores and clinical ratings over time. Split-half reliability coefficients of .86 and a Spearman-Brown correction of .93 were obtained (Beck et al., 1961). Validity was demonstrated by comparing clinical ratings of depression with BDI scores. Also, the instrument compared favorably with other instruments purported to measure depression (Beck, 1970). Factor analytic studies of the BDI indicate that it measures a concept of depression that closely resembles the generally accepted view (Mayer, 1978).

The Self-rating Depression Scale (SDS) was developed by Zung (1965) to provide a short, self-administered instrument that qualitatively described depression. The score is based
on the estimation of the patient of the frequency of occurrence of the symptoms listed. Raw scores must be transposed to SDS Index scores. Original validation of the SDS was based on comparisons of SDS scores and a control group of staff and medical patients with a group of patients diagnosed as depressed. Mayer (1978) noted that the internal consistency, discriminant validity, and other important aspects of the SDS had not been adequately researched. There have been some reports that the SDS did not discriminate levels of severity of depression very well and is less sensitive to change in depression in lower socio-economic status patients (Mendels, 1970). The SDS has been used in several cross cultural studies. Zung (1969) noted that between cultures there is small correlation in the items endorsed by those not depressed but high correlation in the items endorsed by those who were depressed.
CHAPTER III

Methodology

Subjects

The subjects for this study were 94 male inpatients of the Substance Abuse Treatment Unit (SATU) of the Veterans Administration Medical Center in Battle Creek, Michigan. This facility is primarily a psychiatric hospital for the Veterans Administration's system of medical centers in Michigan. The patients who are served by this facility come from throughout the State of Michigan. The facility has a 1,000 bed capacity, and the SATU has a bed capacity of 72.

The SATU is a four week treatment program. Any detoxification procedures which may be necessary are accomplished on the Detoxification Unit prior to transfer to the SATU. Admissions to the SATU are made directly from the Admissions Office or as transfers from the Detoxification Unit or other hospital wards. The criteria for admission to the SATU are an acknowledgement of a substance abuse problem, a willingness to participate in the treatment program, positive mo-
tivation to obtain help, and no evidence of active psychosis, significant organic impairment, suicidal ideation, being harmful to others, or severe medical or surgical problems (SATU, Note 1).

Upon admission to the SATU, the patient joins a one week pre-rehabilitation phase of the program. During this time, initial medical, psychological, and social work evaluations are completed and the patient is oriented to the program and participates in educational programs on alcoholism and substance abuse. At the completion of the pre-rehabilitation phase of the program, each individual is seen by the treatment team in the Assessment and Planning (A&P) meeting. The treatment team includes representatives from psychology, social work, medicine, nursing and recreation services. At this meeting the treatment plans are made for each individual going into the rehabilitation phase of the program. Some individuals leave the program at the time of the A&P, and some who are considered in need of hospitalization but inappropriate for SATU are transferred to other wards of the hospital.

The rehabilitation phase of the program is three weeks in length and consists of a full daily schedule of activities. These activities include daily group therapy meetings,
physical activities, occupational therapy activities and various patient education programs. Patient education programs include workshops on communication, loneliness and depression, physical effects of drugs and alcohol, and job seeking and interviewing skills. Post-hospitalization planning and placement is emphasized during the program. Arrangements are made with half-way houses for those in need of placement and all individuals develop aftercare plans with the therapist. These plans consist of returning to the SATU for outpatient visits or arranging support in ones own community. In addition, the program includes a resident government and Alcoholics Anonymous meetings. Other treatment modalities are sometimes included in the schedule for certain individuals.

The group therapy component of the program is considered to be of central importance. The groups meet for an hour and a half daily. The number of patients in a group ranges from 6 to 25 with the average being 15. The groups are facilitated by two staff members, usually a social worker and a psychologist or counselor at the Masters degree level of education. The objectives of the group therapy are to improve skills in relating to others and to experience the value of others in problem solving, support, learning and personal growth.
The members of a group going through the rehabilitation phase of the SATU program graduate three weeks following the Assessment and Planning meeting when they began the rehabilitation phase of the program. The graduation takes place at the resident government meeting during which each individual completing the program is presented to the entire resident body, congratulated, and wished well.

Instrumentation

**Hopelessness Scale (HS)**

The HS (Appendix A) is a twenty-item true-false questionnaire which was designed to operationalize the concept of hopelessness. Developed by Beck, Weissman, Lester and Trexler (1974), the HS consists of nine statements selected from a test of attitudes about the future and eleven items chosen from pessimistic statements made by patients judged to feel hopeless by clinicians. The current format of the test consists of nine statements keyed "false" and eleven statements keyed "true." Statements are scored 0 or 1, and the sum of the scores of the statements gives a hopelessness score. The possible range of scores is from 0 to 20.
Reliability of the HS was reported by Beck et al. (1974) from a study of 294 hospitalized patients who had attempted suicide. Analysis of internal consistency by means of coefficient alpha produced a reliability coefficient of .93. Item-total correlation coefficients were all significant and ranged from .39 to .76. Concurrent validity was established by comparisons of the HS with other tests designed to measure attitudes about the future and with clinical ratings of hopelessness. There were significant correlations with both a test of attitudes toward the future ($r = 0.60; p < .001$) and the pessimism item of the Beck Depression Inventory ($r = .63; p < .001$). Correlations of the HS with the clinical ratings of hopelessness in a general practice sample was .74, and it was .62 in a sample of attempters of suicide. Both were significant at the .001 level. Construct validity was established by confirming various hypotheses by means of the HS. Factor analysis of the HS revealed three factors related to affective, cognitive and motivational aspects of hopelessness. Beck et al. (1974) named these factors Feelings about the Future, Loss of Motivation, and Future Expectations.

Studies using the HS have centered on suicide. Minkoff et al. (1973) found that hopelessness as a component of depression was a stronger indicator of suicide intent than
depression itself. The correlation between hopelessness and suicide intent was significantly higher than the correlation between depression and suicide intent. In statistical procedures holding depression scores constant, the correlation of hopelessness with suicide intent \( (r = .41) \) remained significant at the .001 level, but holding hopelessness constant produced a nonsignificant correlation \( (r = -.09) \) between depression and suicide intent.

Several replications of the Minkoff et al. study have been done. Kovacs, Beck and Weissman (1975) found that the HS was a significantly better indicator of suicide risk than depression (measured by the BDI) or self ratings of desire to go on living. Partial correlation between BDI and suicide intent holding HS constant was nonsignificant \( (r = .20) \), however correlation between HS and suicide intent holding BDI constant was significant at the .001 level \( (r = .49) \). Beck, Kovacs and Weissman (1975) also investigated the relation of hopelessness to levels of depression and suicide intent in suicide attempters. Correlation of HS with suicide intent was significant \( (p < .001) \) even when holding the BDI constant. However, correlation of the BDI with suicide intent \( (r = .30) \) decreased from significance at the .001 level to a nonsignificant level \( (r = .06) \) when the HS was held constant.
Wetzel (1976) replicated the findings of Beck and associates using a sample of suicide threateners as well as attempters. He correlated HS scores with a different measure of depression, the Zung Self-rating Depression Scale (SDS) (Zung, 1965). He found that the HS correlated more highly than the SDS with suicide intent in both attempters and threateners of suicide. In another study using the MMPI D scale as the measure of depression (Wetzel et al., 1980), it was found once again that although both significant, suicide intent was more highly correlated with HS ($r = .76$) than the MMPI D scale ($r = .36$). Although both of these correlations were reported as significant at the .05 level, partial correlation procedures between depression and suicide intent holding hopelessness constant fell to nonsignificance ($r = .10$) while correlation between hopelessness and suicide intent holding depression constant remained significant ($r = .72$, $p < .05$).

Beck, Weissman and Kovacs (1976) studied alcoholics who had attempted suicide. They found hopelessness to be the key variable in suicide intent in this population as well. The addition of depression (BDI) as an independent variable did not add to the knowledge of suicide intent beyond the variance accounted for by the HS. In fact, inclusion of both
variables of depression and alcoholism increased the predictive power of the HS by only 0.13%, an insignificant amount.

Normative data are not available for the HS. However, Beck and associates (Garrison, Note 2) have developed cut-off scores which they have used in the depressive populations they have studied. The hoplessness norms for depressed patients are 0-3 none, 4-8 mild, 9-14 moderate, and over 15 severe.

**Beck Depression Inventory (BDI)**

The BDI (Appendix B) is a self report instrument designed to measure the severity of depression. Developed by Beck et al. (1961), it was designed to approximate clinical judgements in an objective manner so that research on depression would be facilitated. The BDI consists of twenty-one categories of symptoms and attitudes developed by Beck from his observations of depressed patients (Beck, 1970). Cognitive, affective, motivational and vegetative symptoms are included in the categories. Consistent with Beck's theory of depression (1970), the BDI places heavier emphasis on cognitive manifestations of depression and contains fewer items related to anxiety, agitation and somatic complaints.
(Mayer, 1978). The BDI was designed to not only include all the essential symptoms of depression but to provide a grading of the intensity of the symptoms.

The BDI consists of groups of four statements for each of the twenty-one categories. The statements for each category range from neutral to a maximum level of severity and are scored from 0 to 3. Originally, administration of the BDI was "interview-assisted" as trained interviewers read the statements to the patients who selected the one which fit them best. The usual current format involves the subject completing the questionnaire without the assistance of an interviewer.

The BDI was developed by comparing the scores with ratings of psychiatrists (Beck et al., 1961). It was based on a psychiatric sample of 409 inpatients and outpatients of two Philadelphia hospitals. The BDI was administered to half the sample directly before an interview by a psychiatrist, and the other half took the BDI directly after the interview. The psychiatrist interviewed the patients and rated them on a four part scale for depth of depression and also assigned a diagnosis. Inter-rater reliability of the psychiatrists participating in the study showed that there was agreement within one degree on the four-point scale in 97%
of the cases.

Reliability of the BDI was determined by two methods (Beck, 1970). In one, the score of each of the twenty-one categories was compared to the total score, and it was found that all categories showed a significant relationship to the total score. The significance level was beyond the .001 level for all categories except the weight-loss category which was significant at the .01 level. The other method of determining reliability was by the split-half method in which the reliability coefficient of the odd and even numbered categories was .93 with a Spearman-Brown correction.

In addition, Beck reported a variation of the test-retest method of estimating reliability of the BDI. This was done by administering the BDI at two different times and comparing the results with clinical ratings. It was found that changes in the clinically rated depth of depression was predicted in 85% of the cases, indicating a consistent relationship of the instrument to the patients clinical state.

Concurrent and construct validity studies were reported (Beck, 1970). Concurrent validity was evaluated by comparing the BDI with clinical ratings and other tests of depression. Studies showed a close relation of BDI scores to clinical
ratings with biserial correlation in two studies of .65 and .67. As noted above, changes in the clinical ratings of depression were predicted in 85% of the cases. Johnson and Heather (1974) noted that changes in BDI scores at times occurred prior to changes in clinical ratings suggesting that the BDI is more sensitive than clinical ratings.

BDI scores have been correlated with other tests of depression (Beck, 1970). Correlation coefficients of .75 with the MMPI D scale and .66 with the Depression Adjective Checklist (DACL) (Lubin, 1965) were reported. Mayer (1978) noted that the BDI has been found to be more highly correlated to the MMPI D scale, Zung Self-rating Depression Scale (Zung, 1965) and the Hamilton Rating Scale (Hamilton, 1960) than to global clinical ratings.

Construct validity of the BDI was established by studies confirming predictions made from the theory underlying the test. Beck (1970) reported that studies confirmed predictions that depressed persons (1) have dreams of "masochisitic" content, (2) have a negative self concept, (3) identify with the "loser" on projective tests, (4) have a childhood history of deprivation and (5) respond to experimentally induced failure with a disproportionate drop in self-esteem and an increase in hopelessness.
Burns and Beck (1978) reported normative data and cut-off scores for the BDI. Scores from 0 to 9 are considered to indicate minimal or no depression, 10-14 borderline depression, 15-20 mild depression, 21-30 moderate depression, 31-40 severe depression, and 41-63 very severe depression.

Factor analytic studies of the BDI have identified factors of Vital Depression, Self-Debasement, Pessimism-Suicide and Indecision-Inhibition (Beck, 1970). Comparing other factor analytic studies of the BDI, Mayer (1978) notes that the factors of Guilty Depression, Retardation and Somatic Disturbance appear consistently.

**Michigan Alcoholism Screening Test (MAST)**

The MAST (Appendix C) was developed to provide a brief instrument for assessing the presence and extent of alcoholism. The MAST consists of 24 true-false items related to the frequency, pattern and consequences of drinking. Although originally designed to be given in a semi-structured interview format with differential weighting of the items endorsed in the keyed direction, recent studies (Selzer, Vinokur & vanRooijen, 1975; Skinner, 1979) have found that a self-administered format and a simpler unit
weighting method of scoring were essentially identical, particularly for ordering individuals along a continuum according to their degree of alcohol involvement. This study used the self-administered format and used the unit weighting method of scoring as the primary source of data from the test. The unit weighting method consists of giving each item scored in the keyed direction a score of one, multiplying the total score by two and then subtracting two (Skinner, 1979). The original scoring system devised by Selzer (1971) consisted of assigning points ranging from 1 to 5 for each of the items. Any total score of five or more is considered indicative of alcoholism in the differential weighting system of scoring.

The MAST has become a widely used instrument for the detection of alcoholism, and it is considered to be a highly reliable instrument (Skinner, 1979). Selzer (1971) constructed the MAST largely from items which had also been used by other investigators in surveys of alcoholism. One of the objectives in the construction of the MAST was to develop an instrument which would be immune to the many conscious and unconscious motives of alcoholics to hide their drinking problems. Indeed, in an experiment in which hospitalized alcoholics were instructed to lie about their drinking problems, 92% disclosed sufficient information for
them to still be classified as alcoholic (Selzer, 1971).

In developing the MAST, Selzer (1971) administered the MAST to five groups consisting of a total of 219 persons. A scoring system in which certain questions were given different weights was devised so that a minimum number of false positives were produced. A score of three points or less was considered nonalcoholic, four points was suggestive of alcoholism and five points or more was indicative of alcoholism.

Validity of the MAST was determined by obtaining independent evidence of problem drinking. This evidence came from searching for legal, social, medical, driving and criminal records of respondents at every agency in the county where such records may have been found. Although the test proved to have quite high discriminatory ability in identifying those whose records verified the existence of alcohol problems, Selzer (1971) noted that the MAST was somewhat less sensitive in classifying younger persons as alcoholic since it was based on drinking behaviors and their consequences. The younger alcoholic often has not experienced problems of excessive alcohol use sufficiently to score on many MAST items.
Reliability of the MAST has been documented by the work of Zung and Charalampous (1975). In an item analysis of the MAST given to 200 persons arrested for drinking while intoxicated, they found that most items discriminated problem and nonproblem drinkers. They noted that the fact that there were items which did not correlate highly with the total score indicated that alcoholism may be multidimensional. Interestingly, they noted that the items which required subjective judgements about the subject's own normality or severity had the highest internal consistency coefficients.

Shortly after the MAST was published in 1971, efforts to shorten the 24-item questionnaire appeared. In 1972, a 10-item version of the MAST was presented by Pokorny, Miller and Kaplan. They claimed that their version produced scores highly correlated with the full length MAST. A 13-item version of the MAST in a self-administered format was introduced by Selzer et al. (1975), and they also claimed high correlations between the short and full length versions. Zung (1979) conducted a study of the full length MAST and the two shorter versions. His findings generally supported the claims that the shortened versions were reasonably valid in identifying alcoholics. However, he presented a strong argument against the use of the shortened versions since their effect was to homogenize the content when there was
strong evidence that alcoholism, and even the MAST, were multidimensional. He argued that the shortened versions eliminated important information on specific factors operant in subjects.

The multidimensionality of the MAST was further supported by factor analytic studies. Zung (1978) identified four factors in persons who had been arrested for driving while intoxicated. These factors were Help-Seeking, Discord, Alienation, and Denial. Skinner (1979) identified five factors underlying the MAST. He described these factors as Recognition of Alcohol Problems by Self and Others; Legal, Work and Social Problems; Help Seeking; Marital-Family Difficulties; and Liver Pathology. Both Zung and Skinner felt the presence of these factors reflected specific problem areas. Zung suggested that the factors be given careful attention rather than only the overall score which identified a person as alcoholic or not. Skinner recommended that the MAST be given routinely in assessment programs to record a history of problems associated with alcohol use. Both authors felt that the examination of the factors endorsed on the MAST would facilitate treatment by helping to focus on the pertinent problem areas.

The 24-item version of the MAST was used for this

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study. Additional items were added after the 24 items of the MAST to gain demographic information from the subjects. The unit and differential weighted scoring methods were both computed.

**Procedures**

There were two types of data collected for this study: the data from the instruments described above and demographic data. The demographic variables which were noted from each of the individuals in addition to the questionnaires were age, length of problem drinking, number of treatment programs participated in previously, date of the last drink, length of detoxification, pending legal problems, whether a parent was alcoholic, marital status, employment status, and the availability of support from parents and siblings (family support). These demographic data were obtained by the addition of questions 25 to 34 at the end of the MAST (see Appendix C).

Data from the instruments administered were collected three different times during the time an individual was participating in the program. The first administration consisted of the HS, BDI, and MAST. On the second and third administrations, the HS and BDI were completed.
The first time an individual was seen was within forty-eight hours of admission to the SATU. Those individuals who were transferred to the SATU from the detoxification unit were also seen within forty-eight hours of their admission to the SATU. At the first contact, the researcher approached the patient and requested participation in the study. The researcher identified himself, described the nature and purpose of the research, and went over the Informed Consent procedures (Appendix D) explaining the voluntary and confidential nature of the research and its purpose. If the patient agreed to participate in the study, the researcher had the Informed Consent signed and gave a copy to the patient. The researcher left the questionnaires with the patient and gave directions on returning them.

The second administration of the instruments was at the end of the pre-rehabilitation phase of the program just prior to the Assessment and Planning meeting. At this time the researcher approached each of the patients who completed the initial administration of the questionnaires and reminded them of the Informed Consent information and requested that they complete some of the questions again. Those who agreed to do so were given the HS and BDI to complete. The final administration of the instruments occurred
on the day before graduation from the program. At that time, the researcher approached the patients who had participated in the first two administrations of the questionnaires and reminded them of the Informed Consent information and requested that they complete some questionnaires again. They were given the HS and BDI to complete and return to the researcher.

**Statistical Analyses**

The statistical procedures used in this study included measures of central tendency, Pearson product moment correlation coefficients, and t tests of differences in dependent means and differences in independent means. Reliability coefficients were computed using the Kuder-Richardson procedure, item-total correlations and Split-half correlations with Spearman-Brown corrections. A significance level of .05 was used as the standard for acceptance of the hypotheses. For the correlation procedures, Fisher Z transformations were used to determine the significance of the coefficients at the .05 level.

These statistical procedures were used to analyze the data appropriate to the purposes of this study. The data were analyzed to establish the Hopelessness Scale used with
a population of hospitalized alcoholics and to identify some of the variables related to hopelessness in this population.

An important objective of this study was to establish normative data for the HS used with hospitalized alcoholics. To do this, the mean, standard deviation and range of HS scores were computed for those who exceeded the cutoff score of the MAST using the differential weight scoring system (Selzer, 1971).

Another objective was to examine the internal consistency of the HS used with a population of hospitalized alcoholics. The procedures used to accomplish this were item-total correlations, Kuder-Richardson reliability procedures, and Split-half correlations with Spearman-Brown corrections.

The Hypotheses were analyzed with the appropriate statistical procedures. These are listed below.

H1: The Pearson product moment correlation coefficient was computed for the score of the first administration of the HS and the MAST. Fisher $Z$ transformations were computed to determine the significance level of the correlation coefficients.
H2: The Pearson product moment correlation coefficient was computed for the score of the first administration of the BDI and the MAST. Fisher Z transformations of the correlation coefficient were tested for significance at the .05 level.

H3: The difference between the correlation of the BDI and MAST and the correlation of the HS and MAST was computed. Fisher Z transformations of the difference in coefficients was tested at the .05 level of significance.

H4: The Pearson product moment correlation coefficient of the first administration of the HS and age was computed. A Fisher Z transformation of the correlation coefficient was tested at the .05 level of significance.

H5: The Pearson product moment correlation coefficient of the first administration of the HS and the length of problem drinking was computed. A Fisher Z transformation of the correlation coefficient was tested at the .05 level of significance.

H6: The Pearson product moment correlation coefficient of the HS score and the number of hospitalizations for drinking
was computed. A Fisher Z transformation of the correlation coefficient was tested at the .05 level of significance.

H7: The differences in the scores of the first, second and third administration of the HS were analyzed by a t test of the differences in dependent mean scores. The scores of the t tests were tested at the .05 level of significance.

H8: The differences in the HS scores of those with family support and those without family support was analyzed by a t test of the difference in the mean scores. The score of the t test was tested at the .05 level of significance.

H9: The differences in the HS scores for those married and those not married was analyzed by a t test of the differences in the mean scores of the HS. The score of the t test was tested at the .05 level of significance.

H10: The differences in the HS scores for those employed and those unemployed was measured by a t test of the difference in mean scores. The score of the t test was tested at the .05 level of significance.

H11: The differences in the the HS scores for those with legal problems and those without legal problems was analyzed
by a $t$ test of the differences in mean HS scores. The significance of the score of the $t$ test was tested at the .05 level of significance.
CHAPTER IV

Results

This study examined the psychological construct of hopelessness as a factor in hospitalized alcoholics. Norms and reliability of the HS were established and eleven hypotheses concerning hopelessness were tested. The statistical results of the study and descriptive data of the nature of the sample are presented in this chapter.

The data were analyzed by measures of central tendency, correlational procedures and studies of mean differences. In accordance with established statistical practices for testing hypotheses, a significance level of .05 was chosen. Statistical techniques used to test for significance were Fisher $Z$ transformations of correlation coefficients and one-tailed $t$ tests of mean differences. Computations were performed by the PDP-10 computer of Western Michigan University. A summary and overview of the results are presented in Table 1.
Table 1
Summary of Results

Norms of HS used with Hospitalized Alcoholics:
Mean: 5.00 Standard Deviation: 4.66 Range: 0-20

Reliability of HS used with Hospitalized Alcoholics:
Kuder-Richardson: .94
Split-Half: .80
Spearman-Brown Correction: .89
Item-total Correlations: .36 to .78
(All significant at p < .01)

Hypotheses:
H1: HS positively correlated with MAST NOT CONFIRMED
H2: BDI positively correlated with MAST CONFIRMED
H3: HS-MAST correlation greater than HS-BDI correlation. NOT CONFIRMED
H4: HS positively correlated with age NOT CONFIRMED
H5: HS positively correlated with Length of Problem Drinking. NOT CONFIRMED
H6: HS positively correlated with Number of Times Hospitalized for Alcoholism NOT CONFIRMED
H7: HS-1 greater than HS-2; HS-3 greater than HS-2. NOT CONFIRMED
H8: HS greater for those with no Family Support. CONFIRMED
H9: HS greater for those Not Married CONFIRMED
H10: HS greater for those Not Employed CONFIRMED
H11: HS greater for those with Legal Problems. CONFIRMED
Description of the Sample

There were a total of 94 patients who participated in this study. Tables 2 and 3 present descriptive data of the participants of the study. The means and ranges of age, number of years of problem drinking and number of times hospitalized for drinking are presented in Table 2.

Table 2

Means and Ranges of the Age, Number of Years of Problem Drinking and Number of Times Hospitalized for Drinking

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>40.64</td>
<td>22-65</td>
</tr>
<tr>
<td>Years Problem Drinking</td>
<td>14.47</td>
<td>0-40</td>
</tr>
<tr>
<td>Times Hospitalized for Alcoholism</td>
<td>2.61</td>
<td>0-20+</td>
</tr>
</tbody>
</table>

The number and percent of the patients who were married, employed, had family support, with legal problems, who were admitted to the detoxification unit, and who completed the program are presented in Table 3.
Table 3

Number and Percent of Patients Married, Employed, Having Family Support, With Legal Problems, Completing the Program

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>23</td>
<td>25.27</td>
</tr>
<tr>
<td>Not Married</td>
<td>68</td>
<td>74.73</td>
</tr>
<tr>
<td>Divorced</td>
<td>23</td>
<td>25.27</td>
</tr>
<tr>
<td>Single</td>
<td>23</td>
<td>25.27</td>
</tr>
<tr>
<td>Separated</td>
<td>20</td>
<td>21.98</td>
</tr>
<tr>
<td>Widowed</td>
<td>2</td>
<td>2.20</td>
</tr>
<tr>
<td>Employed</td>
<td>13</td>
<td>13.98</td>
</tr>
<tr>
<td>Not Employed</td>
<td>80</td>
<td>86.02</td>
</tr>
<tr>
<td>With Family Support</td>
<td>41</td>
<td>45.56</td>
</tr>
<tr>
<td>Without Family Support</td>
<td>49</td>
<td>54.44</td>
</tr>
<tr>
<td>With Legal Problems Pending</td>
<td>28</td>
<td>30.11</td>
</tr>
<tr>
<td>Admitted to Detoxification Unit</td>
<td>49</td>
<td>53.26</td>
</tr>
<tr>
<td>Completed Program</td>
<td>57</td>
<td>60.63</td>
</tr>
<tr>
<td>Did Not Complete Program</td>
<td>37</td>
<td>39.37</td>
</tr>
<tr>
<td>Left Prior to A&amp;P</td>
<td>3</td>
<td>3.19</td>
</tr>
<tr>
<td>Transferred Prior to A&amp;P</td>
<td>9</td>
<td>9.57</td>
</tr>
<tr>
<td>Left at A&amp;P</td>
<td>11</td>
<td>11.69</td>
</tr>
<tr>
<td>Transferred at A&amp;P</td>
<td>4</td>
<td>4.25</td>
</tr>
<tr>
<td>Left During the Program</td>
<td>10</td>
<td>10.63</td>
</tr>
</tbody>
</table>
The ages of the participants ranged from 22 to 65 with a mean age of 40.64 years. At the time of their participation in the SATU program 25.27% were married, 14% were employed and 30% had legal problems pending. There were 53.26% percent of those participating in the study who had to undergo formal detoxification procedures prior to entering the SATU while 46.74% were admitted directly to the SATU. Of the participants, 69.21% had been previously hospitalized for drinking. The mean number of hospitalizations was 2.61. There were 39.23% who reported that one of their parents was alcoholic. Of these, 77.16% reported that their father was alcoholic, 11.42% reported that their mother was alcoholic and 11.42% reported that both parents were alcoholic.

The participants who stayed for the entire program completed three different administrations of the HS and BDI, and one administration of the MAST, at the time of admission to SATU. These results are presented in Table 4.

There were 91 participants who completed the initial administration of the HS, BDI, and MAST. This occurred within 48 hours of admission to the SATU. The mean score for the initial HS was 4.88, and the range was from 0 to 20. The mean score for the initial BDI was 18.72 with a range of 1 to 45. The MAST was scored in two ways. The unit weight scoring method (Skinner, 1979) produced a mean score of
31.32 and the scores fell along the entire possible range of 0 to 46. The differential weight scoring method (Selzer, 1971) produced a mean score of 36.92 and covered the entire possible range from 0 to 53. As recommended by Skinner (1979), the unit weight scoring method was used for comparison of scores and the differential weight method was used to cutoff those not alcoholic.

Table 4
Means, Standard Deviation and Range of each Administration of the HS, BDI and MAST

<table>
<thead>
<tr>
<th>Test</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS-1</td>
<td>91</td>
<td>4.88</td>
<td>4.60</td>
<td>0-20</td>
</tr>
<tr>
<td>HS-2</td>
<td>76</td>
<td>3.32</td>
<td>4.00</td>
<td>0-18</td>
</tr>
<tr>
<td>HS-3</td>
<td>55</td>
<td>1.55</td>
<td>2.57</td>
<td>0-11</td>
</tr>
<tr>
<td>BDI-1</td>
<td>91</td>
<td>18.72</td>
<td>10.97</td>
<td>1-45</td>
</tr>
<tr>
<td>BDI-2</td>
<td>76</td>
<td>10.92</td>
<td>9.69</td>
<td>0-42</td>
</tr>
<tr>
<td>BDI-3</td>
<td>57</td>
<td>3.81</td>
<td>5.41</td>
<td>0-20</td>
</tr>
<tr>
<td>MAST (unit weight)</td>
<td>91</td>
<td>31.32</td>
<td>11.90</td>
<td>0-46</td>
</tr>
</tbody>
</table>

There were 76 participants who completed the second administration of the HS and BDI. This administration occurred between 1 and 10 days following the first adminis-
The mean score for the second administration of the HS was 3.32 with a range of 0 to 18. The mean score for the second administration of the BDI was 10.92 with a range from 0 to 42.

There were 57 participants who completed the third administration of the HS and BDI at the completion of the program. This administration occurred approximately 30 days following admission to SATU. The mean score of the third HS was 1.55 with a range from 0 to 11. The mean score of the third BDI was 3.81 with a range of 0 to 20.

Norms of the Hopelessness Scale

In order to establish the norms of the HS for alcoholics, the scores of the MAST were used to eliminate any patients who may not have qualified as alcoholic. Using the cutoff scores of Selzer's (1971) differential weight scoring system, those scoring less than five points on the MAST were eliminated. Only three of the patients were eliminated by this procedure. The mean score of the first administration of the HS to those classified by the MAST was 5.00 with a range of 0 to 20 and a standard deviation of 4.66.
Reliability of the Hopelessness Scale

The reliability of the HS used with a population of hospitalized alcoholics was computed using three different methods: the Kuder-Richardson formula, Split-half reliability procedures and Item-total correlation coefficients. Table 5 shows the reliability coefficients for each administration of the HS.

Table 5

<table>
<thead>
<tr>
<th>Test</th>
<th>Procedure</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS-1</td>
<td>Kuder-Richardson</td>
<td>.94</td>
</tr>
<tr>
<td></td>
<td>Split-half</td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>Spearman-Brown Correction</td>
<td>.89</td>
</tr>
<tr>
<td>HS-2</td>
<td>Kuder-Richardson</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Split-half</td>
<td>.74</td>
</tr>
<tr>
<td></td>
<td>Spearman-Brown Correction</td>
<td>.85</td>
</tr>
<tr>
<td>HS-3</td>
<td>Kuder-Richardson</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td>Split-half</td>
<td>.74</td>
</tr>
<tr>
<td></td>
<td>Spearman-Brown Correction</td>
<td>.85</td>
</tr>
</tbody>
</table>

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For HS-1, the Kuder-Richardson method produced a reliability coefficient of .94. The Split-half reliability procedure correlated the odd and even numbered items and produced a reliability coefficient of .80. Spearman-Brown correction of the Split-half reliability coefficient produced a reliability coefficient of .89.

The reliability coefficients for the other administrations of the HS are seen in Table 5. The second administration of the HS had a Kuder-Richardson reliability coefficient of 1.00. The Split-half reliability procedures produced a reliability coefficient of .74 which was corrected to .85 using Spearman-Brown procedures. The third administration of the HS produced a Kuder-Richardson reliability coefficient of 1.03. The Split-half procedures for the third HS showed a reliability coefficient of .74 which was corrected to .85 using Spearman-Brown procedures.

Item-total correlations were all significant at the .01 level. The Item-total correlation coefficients ranged from .36 to .78. Item-total correlations for the first administration of HS are presented in Table 6.
Table 6
Item-total Correlations of HS-1

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Correlation With Total</th>
<th>Item Number</th>
<th>Correlation With Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.53</td>
<td>11</td>
<td>.72</td>
</tr>
<tr>
<td>2</td>
<td>.52</td>
<td>12</td>
<td>.54</td>
</tr>
<tr>
<td>3</td>
<td>.54</td>
<td>13</td>
<td>.64</td>
</tr>
<tr>
<td>4</td>
<td>.36</td>
<td>14</td>
<td>.60</td>
</tr>
<tr>
<td>5</td>
<td>.38</td>
<td>15</td>
<td>.76</td>
</tr>
<tr>
<td>6</td>
<td>.64</td>
<td>16</td>
<td>.68</td>
</tr>
<tr>
<td>7</td>
<td>.69</td>
<td>17</td>
<td>.67</td>
</tr>
<tr>
<td>8</td>
<td>.44</td>
<td>18</td>
<td>.58</td>
</tr>
<tr>
<td>9</td>
<td>.65</td>
<td>19</td>
<td>.69</td>
</tr>
<tr>
<td>10</td>
<td>.49</td>
<td>20</td>
<td>.78</td>
</tr>
</tbody>
</table>

Further evidence of the homogenous nature of the HS was obtained by a factor analysis of the HS. For the first administration the factor analysis procedures produced two factors, one with an eigenvalue of 11.95 and the other with an eigenvalue of 1.06. Factor analysis of the second administration of the HS produced only one factor and it had an eigenvalue of 17.14. Factor analysis of the third administration of the HS also produced only one factor and it had an eigenvalue of 18.84.
Hypotheses

H1: There will be a positive relationship between hopelessness and alcoholism.

The relationship between hopelessness and alcoholism was examined by correlation of the first administration of the HS and the MAST. Table 7 shows the results of this correlation. The Pearson product moment correlation coefficient of the HS and MAST was .14 which was not significant at the .05 level. Thus, the null hypothesis that there was no relationship between the HS and MAST could not be rejected. The other administrations of the HS are also presented in Table 7. The correlation between the HS and MAST was .18 for the second administration and .004 for the third administration. Neither of these correlation coefficients were significant at the .05 level.

Table 7
Correlation of Each Administration of HS with the MAST

<table>
<thead>
<tr>
<th>Administration</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS-1 (N = 91)</td>
<td>.14</td>
</tr>
<tr>
<td>HS-2 (N = 76)</td>
<td>.18</td>
</tr>
<tr>
<td>HS-3 (N = 55)</td>
<td>.004</td>
</tr>
</tbody>
</table>
H2: There will be a positive relationship between depression and alcoholism.

The relationship between the BDI and the MAST was examined by use of the Pearson product moment correlation coefficient of the first administration of the BDI and the MAST. There was a .28 correlation between the first BDI and MAST. This was significant at the .05 level and thus the null hypothesis that there was no relationship between the BDI and MAST could be rejected. The results of the correlations of each administration of the BDI and MAST are presented in Table 8.

Table 8
Correlation of Each Administration of BDI with the MAST

<table>
<thead>
<tr>
<th>Administration</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-1 (N = 91)</td>
<td>.28*</td>
</tr>
<tr>
<td>BDI-2 (N = 76)</td>
<td>.28**</td>
</tr>
<tr>
<td>BDI-3 (N = 57)</td>
<td>.19</td>
</tr>
</tbody>
</table>

* p < .01
** p < .02

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H3: The relationship between hopelessness and alcoholism will be greater than the relationship between depression and alcoholism.

The hypothesis that the correlation between the first administration of the HS and MAST was greater than the correlation between the first administration of the BDI and MAST was studied by inspection of the two correlation coefficients (See Table 7 and Table 8). Since the correlation between the BDI and MAST ($r = .14$) was greater than the correlation between the HS and MAST ($r = .28$), the null hypothesis that the BDI-MAST correlation was greater could not be rejected.

Further information about the relationship of the HS and BDI was obtained by partial correlation procedures. These results are presented in Table 9. The zero order correlation between the HS and MAST was .14, but when the BDI was held constant by partial correlation procedures, the correlation dropped to -.03. The BDI, on the other hand, had a zero order correlation of .28 with the MAST. However, when the effect of the HS on the relationship of the BDI and MAST was held constant, the correlation only dropped to .25, significant at the .05 level. There was very little difference in the correlation between the HS and BDI with the zero order coefficient being .56 and the partial correlation holding the MAST constant being .55.
Table 9
Correlations and Partial Correlations of the First Administrations of the HS, BDI and MAST

<table>
<thead>
<tr>
<th>Tests</th>
<th>( r )</th>
<th>Controlling for</th>
<th>Partial ( r )</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS-MAST</td>
<td>.14</td>
<td>Depression (BDI)</td>
<td>-.03</td>
</tr>
<tr>
<td>BDI-MAST</td>
<td>.28*</td>
<td>Hopelessness (HS)</td>
<td>.25**</td>
</tr>
<tr>
<td>HS-BDI</td>
<td>.56*</td>
<td>Alcoholism (MAST)</td>
<td>.55*</td>
</tr>
</tbody>
</table>

* \( p < .01 \)
** \( p < .02 \)

**H4:** There will be a positive relationship between hopelessness and age.

The relationship between HS and age was tested by the Pearson product moment correlation coefficient of the first HS and the age of the patient. The correlation coefficient was -.12, an insignificant amount, thus the null hypothesis that there was no relation between the HS and age could not be rejected.

Table 10 shows the correlation coefficients for each of the administrations of the HS. Although not reaching significance at the .05 level, there was an increase in the positive relationship between the HS and age for each administration of the HS. As Table 10 also shows, the BDI
scores showed a similar pattern of changes.

Table 10
Correlations of HS with Age and BDI with Age

<table>
<thead>
<tr>
<th>Administration</th>
<th>Correlation HS-Age</th>
<th>Correlation BDI-Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>-.12</td>
<td>-.12</td>
</tr>
<tr>
<td>Second</td>
<td>.03</td>
<td>.01</td>
</tr>
<tr>
<td>Third</td>
<td>.22</td>
<td>.13</td>
</tr>
</tbody>
</table>

H5: There will be a positive relationship between hopelessness and length of problem drinking.

The relationship between the HS and the length of problem drinking was tested by the Pearson product moment correlation coefficient of the HS score and the number of years drinking was considered a problem for the patient. The correlation coefficient of the HS and the length of problem drinking was -.06. This was not significant at the .05 level and thus the null hypothesis could not be rejected.

Table 11 shows the scores of the HS and BDI for each of the three administrations. It can be seen, that for each instrument, the relationship between the HS score and the length of problem drinking becomes greater with each admin-
istration. Although the correlation coefficients do not reach significance at the .05 level, they do approach closely to this level.

Table 11
Correlation of HS and BDI with Length of Problem Drinking

<table>
<thead>
<tr>
<th>Administration</th>
<th>HS-Length</th>
<th>BDI-Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>-.08</td>
<td>.07</td>
</tr>
<tr>
<td>Second</td>
<td>.12</td>
<td>.16</td>
</tr>
<tr>
<td>Third</td>
<td>.21</td>
<td>.26</td>
</tr>
</tbody>
</table>

H6: There will be a positive relationship between hopelessness and the number of hospitalizations for drinking.

The relationship between HS and the number of times the patient had been hospitalized for alcoholism was tested by the Pearson product moment correlation coefficient. The correlation coefficient of the HS and the times hospitalized for alcoholism was -.01. This did not reach positive significance at the .05 level, so the null hypothesis that there was no relationship between the HS and the times hospitalized for alcohol could not be rejected.

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Table 12 presents the correlation coefficients for each administration of both the HS and BDI. Both instruments vary in similar patterns in their relationship to the number of times hospitalized for alcoholism, but none of the relationships approaches significance at the .05 level.

Table 12
Correlations of HS and BDI with the Number of Hospitalizations for Drinking

<table>
<thead>
<tr>
<th>Administration</th>
<th>Correlation HS-# Hosp</th>
<th>Correlation BDI-# Hosp</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>-.01</td>
<td>-.01</td>
</tr>
<tr>
<td>Second</td>
<td>.02</td>
<td>.02</td>
</tr>
<tr>
<td>Third</td>
<td>-.04</td>
<td>-.03</td>
</tr>
</tbody>
</table>

H7: The degree of hopelessness will change during the treatment program being the greatest at the time of admission, lower at the time of discharge and lowest when entering the rehabilitation phase of the program.

The differences in the HS scores for each administration was tested by using a t test for dependent means. The results are presented in Table 13. Although the administrations of the tests do not differ as predicted in the hypothesis (HS1 > HS3 > HS2), and the null hypothesis was not rejected, they do differ in an orderly and significant man-
As seen in Table 13, each administration of the HS produced a significantly lower mean score than the previous administration. The difference in mean scores for the first and second HS was significant at the .014 level. The differences between the second and third administration and the first and third administration were significant beyond the .001 level. It is also noted that the same pattern of changes occurred in the BDI scores.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Difference in Mean Scores</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>First vs. Second</td>
<td>1.55</td>
<td>-2.47</td>
<td>.01</td>
</tr>
<tr>
<td>First vs. Third</td>
<td>3.33</td>
<td>-6.13</td>
<td>.00</td>
</tr>
<tr>
<td>Second vs. Third</td>
<td>1.78</td>
<td>-3.62</td>
<td>.00</td>
</tr>
</tbody>
</table>

Further analysis of the changes in the HS scores was made by One-Way Analysis of Variance of repeated measures. These results are presented in Table 14. The results of this procedure produce an F-value of 26.54 which is significant well beyond the .001 level.
Table 14

One-Way ANOVA with Repeated Measures for Each Administration of the HS

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>D.F.</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2240.95</td>
<td>93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>2350.67</td>
<td>188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>521.89</td>
<td>2</td>
<td>260.90</td>
<td>26.54*</td>
</tr>
<tr>
<td>Residual</td>
<td>1828.77</td>
<td>186</td>
<td>9.83</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4591.62</td>
<td>281</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .001

**H8**: Hopelessness will be greater for those without support of their family of origin.

The differences in the HS scores for those with the support of their family of origin (parents, brothers, sisters) and those without family support was tested by means of a t-test of the differences of the mean scores for the first administration of the HS. The results of this analysis are presented in Table 15. The difference between the HS scores of those with family support (3.12) and those without family support (6.53) produced a t score of -3.69 which was significant at the .001 level of significance. Thus, the null hypothesis that there was no difference between the scores of the HS for those who have family support and those who do not have support was rejected.
Table 15

$t$-Test of the Difference Between the Scores of the First Administration of the HS for Those With and Without Family Support

<table>
<thead>
<tr>
<th>Family Support</th>
<th>N</th>
<th>Mean HS</th>
<th>S.D.</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>With</td>
<td>41</td>
<td>3.12</td>
<td>2.83</td>
<td>-3.69*</td>
</tr>
<tr>
<td>Without</td>
<td>49</td>
<td>6.53</td>
<td>5.31</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .001$

The scores of each administration of the HS for those with and without family support are presented in Table 16.

Table 16

Mean Scores for Each Administration of HS for Those With and Without Family Support

<table>
<thead>
<tr>
<th>Family Support</th>
<th>HS-1</th>
<th>HS-2</th>
<th>HS-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>With</td>
<td>3.12</td>
<td>2.19</td>
<td>1.39</td>
</tr>
<tr>
<td>Without</td>
<td>6.53</td>
<td>4.31</td>
<td>1.59</td>
</tr>
</tbody>
</table>

$H_0$: Hopelessness will be greater for those not married.

The differences in the scores of the first administration of the HS for those married and those not married was tested by means of a $t$ test of the difference between the
means of the HS of those married and those not married. The results are presented in Table 17. The mean HS score of those married was 3.43 and the mean HS score of those not married was 5.53. The difference in these scores produced a t score of -7.88 which was significant beyond the .001 level. Because this was well beyond the .05 level of significance, the null hypothesis that there was no difference in HS scores of those who were married and who were not married was rejected.

Table 17

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>N</th>
<th>Mean HS</th>
<th>S.D.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>23</td>
<td>3.43</td>
<td>2.76</td>
<td></td>
</tr>
<tr>
<td>Not Married</td>
<td>68</td>
<td>5.53</td>
<td>5.00</td>
<td>-7.88*</td>
</tr>
</tbody>
</table>

* p < .001

The results of each administration of the HS according to marital status are presented in Table 18. It is noted that the HS scores of those not married became less than those who were married at the time of the last administration of the test. Those who were single began with the highest HS score but concluded with the lowest of all mari-
categorical categories.

Table 18

Mean Scores for Each Administration of the HS for Different Categories of Marital Status

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>HS-1</th>
<th>HS-2</th>
<th>HS-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>3.43</td>
<td>2.30</td>
<td>2.00</td>
</tr>
<tr>
<td>Not Married</td>
<td>5.52</td>
<td>3.69</td>
<td>1.40</td>
</tr>
<tr>
<td>Divorced</td>
<td>5.35</td>
<td>4.00</td>
<td>1.39</td>
</tr>
<tr>
<td>Single</td>
<td>6.52</td>
<td>3.82</td>
<td>1.04</td>
</tr>
<tr>
<td>Separated</td>
<td>4.80</td>
<td>3.05</td>
<td>1.35</td>
</tr>
</tbody>
</table>

H10: Hopelessness will be greater for those not employed.

The differences in the HS scores of those who were employed and those unemployed were tested by a t test of the differences in the mean score of the initial HS of those employed and those unemployed. The results are presented in Table 19. The mean HS score of those employed was 4.07 while the mean HS score of those unemployed was 5.07. This difference produced a t score of -2.40 which was significant at the .05 level. Thus, the null hypothesis that there was no difference between the HS scores of those employed and those unemployed was rejected.
Table 19

$t$ Test of Differences in Scores of the First Administration of HS for Those Employed and Those Unemployed

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>N</th>
<th>Mean HS</th>
<th>S.D.</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>13</td>
<td>4.08</td>
<td>4.01</td>
<td>-2.40*</td>
</tr>
<tr>
<td>Not Employed</td>
<td>80</td>
<td>5.07</td>
<td>4.69</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

Table 20 presents the HS scores for each administration of those employed and unemployed. It can be seen that the final administration shows no significant differences in HS scores.

Table 20

Mean Scores for Each Administration of the HS for Those Employed and Those Unemployed

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>HS-1</th>
<th>HS-2</th>
<th>HS-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>4.07</td>
<td>2.53</td>
<td>1.61</td>
</tr>
<tr>
<td>Not Employed</td>
<td>5.07</td>
<td>3.45</td>
<td>1.51</td>
</tr>
</tbody>
</table>

H11: Hopelessness will be greater for those with legal problems.

The differences in HS scores for those with legal problems pending and those without legal problems pending was tested by a $t$ test of the differences in the mean scores.
of initial HS of those with legal problems and those without legal problems. The results are presented in Table 21. The mean HS score for those with legal problems pending was 6.57 while the mean HS score for those with no legal problems pending was 4.23. The $t$ score of the difference in these scores was 2.30 which is significant beyond the .025 level. Thus, the null hypothesis that there was no difference between the HS scores of those employed and those unemployed was rejected.

Table 21

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>N</th>
<th>Mean HS</th>
<th>S.D.</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal Problems Pending</td>
<td>28</td>
<td>6.57</td>
<td>5.59</td>
<td>2.30*</td>
</tr>
<tr>
<td>No Legal Problems</td>
<td>65</td>
<td>4.23</td>
<td>3.94</td>
<td></td>
</tr>
</tbody>
</table>

*$p < .025$

Table 22 shows the results of each administration of the HS to those with legal problems and those without legal problems. It can be seen that by the end of the program and the third administration of the HS, the levels of each of the HS scores became comparable.
Table 22

Mean Scores for Each Administration of the HS for Those With and Without Legal Problems Pending

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>HS-1</th>
<th>HS-2</th>
<th>HS-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal Problems Pending</td>
<td>6.57</td>
<td>2.89</td>
<td>1.39</td>
</tr>
<tr>
<td>No Legal Problems</td>
<td>4.23</td>
<td>3.51</td>
<td>1.58</td>
</tr>
</tbody>
</table>

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Summary

This study investigated the psychological construct of hopelessness as a factor in hospitalized alcoholics. There is a high suicide rate for alcoholics, and previous research has shown hopelessness to be a key determinant in suicide.

The purposes of this study were to establish norms and reliability of the Hopelessness Scale (HS) (Beck et al., 1974), an instrument designed to measure hopelessness, and to gain more information about hopelessness by testing several hypotheses concerning the relationship between hopelessness and certain variables. These included severity of alcoholism, depression, age, length of problem drinking, number of hospitalizations for drinking, relationship with family of origin, pending legal problems, and changes in hopelessness during a treatment program.

These purposes were accomplished through the use of the
HS, the Beck Depression Inventory (BDI) (Beck et al., 1961), an instrument designed to measure depression, and the Michigan Alcoholism Screening Test (MAST) (Selzer, 1971), a test designed to measure alcoholism.

Hopelessness as measured by the HS did not occur in high levels for the subjects of this study. Depression was more related to alcoholism than hopelessness. However, during a treatment program, there was a significant decrease in the hopelessness which did occur as well as depression. The variables directly related to the severity of alcoholism such as length of problem drinking, times hospitalized for drinking, and age, were not closely related to initial HS scores. However, life situations which commonly occur as consequences of alcoholism showed a relationship to hopelessness. Those who were unemployed, not married, had no family support and had legal problems pending were more likely to have had higher initial HS scores.

Discussion

Each of the purposes of the study and the specific hypotheses tested have certain implications and meaning. The specific purposes included establishing norms for the HS, determining reliability of the HS in this population, and
studying the relationship between hopelessness, depression and alcoholism; hopelessness and variables of alcoholism; changes in the HS scores during treatment; and hopelessness and life situations commonly experienced by the alcoholic.

Norms of the Hopelessness Scale

The norms of the HS scores for the participants who were classified by the MAST as alcoholic were a mean of 5.00, a standard deviation of 4.66 and a range of 0-20. Comparison of the HS scores of this study with the unpublished norms of the HS for depressives (Garrison, Note 2), however, shows the mean HS score falls in the "mild" range of hopelessness for depressives. For the initial administration of the HS, 80% of the scores fell in the "mild" or "none" category. For the final administration, 95% of the scores fell in the "mild" or "none" category with only three individuals in the "moderate" range. The highest score for the third administration was 11, a "moderate" score. Whether or not these scores would be above or below what the HS scores would be for the normal population is not known, but the fact that there was a change in HS scores during treatment is notable.
Reliability of the HS

Reliability studies done on the HS included Kuder-Richardson procedures, Split-half reliability procedures with Spearman-Brown corrections and Item-total correlations. As seen in Table 5, all the procedures yielded high reliability coefficients. Beck et al. (1974) reported a Spearman-Brown corrected reliability coefficient of .93 which compares quite favorably with the Spearman-Brown corrected reliability coefficient of .89 obtained in this study. The range of the Item-total correlations reported by Beck et al. (1974) was from .39 to .76. These figures were virtually identical with the range of .36 to .78 obtained in this study.

Factor analysis of the HS also revealed that its measurement was precise and homogenous. The reliability studies show that the HS used with this population of hospitalized alcoholics proved to be a highly reliable instrument.

Relationship of Hopelessness, Depression and Alcoholism

The relationship between hopelessness, depression and alcoholism was investigated. Depression was examined because the HS was developed from a component of depression, and

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previous studies of the HS have compared it with depression.

It was anticipated that there would be a positive relationship between the HS and alcoholism with more severe alcoholics having higher HS scores. The results of this study did not confirm that anticipation. The correlation coefficient between the HS and MAST ($r = .14$) was low and not statistically significant.

The investigation of the relationship between depression and alcoholism was actually a replication of many previous studies which have shown that many alcoholics are depressed. Of the participants in this study, 44% scored in the moderate to very severe ranges of depression. In addition, this study correlated the severity of alcoholism with depression. This correlation as measured by the BDI and MAST was statistically significant at the .01 level. The correlation between the BDI and MAST was ($r = .28$) significant at the .01 level.

The difference between the strength of the relationship of the HS and MAST and the strength of the relationship between the BDI and MAST was examined. It was hypothesized that there would be a stronger relationship between the HS and MAST, but this was not the case. The correlation between
the BDI and MAST ($r = .28$) was much greater than the correlation between the HS and MAST ($r = .14$).

Partial correlation of these relationships showed that hopelessness contributed little to the relationship between depression and alcoholism. When HS was held constant, the correlation between BDI and MAST changed from .28 to .25, still significant ($p < .02$). However, when the BDI was held constant, the correlation between HS and the MAST changed from .14 to -.03. These statistical procedures indicate that there was little, if any, relationship between hopelessness and alcoholism that was not accounted for by depression. This was confirmed by inspecting the relationship between the HS and the BDI when the MAST was held constant. The change in the correlation coefficient between the HS and BDI was from .56 to .55, indicating the small effect of alcoholism on this relationship.

The study of the relationships between hopelessness, depression and alcoholism showed that hopelessness was not a highly significant factor for the participants of this study. Depression was a more important factor, generally. The setting that the study was conducted in must be considered, however. It is conceivable that those alcoholics who would score high on the HS and be great risks for suicide do
not come in for treatment. The hospital itself is a hopeful setting, and the decision and preparations to enter the hospital could alleviate feelings of hopelessness.

Variables Directly Related to Alcoholism

The length of time that drinking has been a problem and the number of times hospitalized for drinking are variables which were considered directly related to alcoholism. In addition, age is also a factor which is related to alcoholism by its inextricable connection to the length of problem drinking. That is, increases in the length of problem drinking cannot be entirely separated from the factor of age.

Since the progressiveness of the complications of chronic alcohol use take time to develop, age was considered directly related to alcoholism. This was confirmed by the high correlations of the MAST and age which were obtained in this study. However, very little relationship, if any, between the HS and age ($r = -.12$) appeared for the first administration, but a trend in the data showing that the relationship between HS and age increased to a level approaching significance at the .05 level at the end of treatment was noted. This means that at the end of the pro-
gram, the older person had higher HS scores than the younger person. The meaning of this is unclear, but it undoubtedly reflects a tendency of the older alcoholic to be more pessimistic about the future.

Perhaps the same problem is reflected in the examination of the relationship between the HS score and the amount of time drinking has been a problem. Initial administration of the HS showed no significant relationship \( r = -0.08 \) between the HS score and the length of problem drinking. However, the results of the third administration showed a correlation between the HS and length of problem drinking which approached significance at the .05 level.

The age of the alcoholic and the length of problem drinking are certainly interrelated. The similar patterns that the changes in the HS scores follow seem to be a reflection of that similarity. The increased positive correlation of HS and length of problem drinking may reflect a lack of optimism caused by the recurrent nature of alcoholism and the resultant doubts whether the future would bring improvement into their lives. An alternative interpretation could be that longer term alcoholics have a tendency to be pessimistic.
There was not, however, a relationship between the HS score and number of hospitalizations for drinking. This implies that repeated hospitalizations for drinking are not related to discouragement about the future. Those who are experiencing their first treatment for alcoholism scored about the same on the HS as those who had been hospitalized several times for alcoholism. The lack of relationship was consistent for each administration of the HS. The number of hospitalizations for alcoholism were not shown to be related to hopelessness.

Comparing the correlations of the HS scores and the variables of of the length of problem drinking, age, and the numbers of hospitalizations for drinking indicates that the reasons for hospitalization may not be related to chronicity of alcoholism. There can be many reasons for going to the hospital to receive treatment, and these likely vary from individual to individual. For some, hospitalization may be a much more significant event than for others. In addition, this variable was not studied in detail as to the type of hospitalizations there have been. There are a wide variety of alcohol treatment programs. Some consist of medical detoxification, some are oriented exclusively toward psychotherapy, some are inpatient programs and some are outpatient programs. Other factors which may bear on the degree of
hopelessness and the number of hospitalizations for drinking are the circumstances for the admissions and how they are viewed. The person with no place to live and no job may have a different perception of the hospitalization than the person who is self employed and closes the business for a month to join a alcohol treatment program.

**Changes in the HS Scores**

It was originally hypothesized that the final HS scores would increase to be greater than the second administration but not as great as the first. It was speculated that past experiences of failure would result in anxiety about departure. Although an increase in HS scores at the time of discharge was not seen overall, it has been noted that there was a trend for HS scores to become more highly correlated with age and length of problem drinking at the final administration.

Significant and orderly changes were seen in the investigation of the changes in HS scores during treatment. There were decreases in the HS scores for each administration. As seen in Table 13, the changes were significant for the differences in all combinations of the testing. The greater differences in the HS scores occurred with the
greater time between the tests, that is between the first and third administration and between the second and third administration. The smallest difference, although still significant \((p < .01)\), occurred between the first and second administrations of the HS. The second administration took place an average of five days following the first administration. Further analysis of the difference between the test administrations by means of One-way Analysis of Variance with repeated measures shows that the differences attributed to treatment were highly significant \((p < .001)\). These analyses, however, do not show whether the treatment itself was responsible for the decreases in the HS scores. The results could just have well been due to the fact that drinking was stopped and the intervening time was the curative factor.

**Life Situation Variables**

Life situation variables which may or may not be related to alcoholism which were included in the study included the presence of support from the members of the family of origin, marital status, employment status and the existence of legal problems. These are situations which are often affected negatively by alcoholism. These were general categories studied for exploratory purposes and did not take
into account the differences in the situation and quality of the variable. For example, a person may have been married, but the relationship may have been a poor and destructive one.

The difference between the mean HS scores of those who could and could not turn to members of the family of origin (parents or siblings) for support if needed showed that this variable played an important part in the scores of the first administration of the HS. However, the HS scores showed a change so that the final administration of the HS did not show a significant difference between the scores of those with family support and those without family support.

The differences in the HS scores for the different categories of marital status were studied. Those who were married had the lowest mean HS score for the first administration of the HS. Of those who were not married, the individuals who were single had the highest HS score initially. Interestingly, the changes of the HS scores showed that those who were not married decreased to a level that was as low or lower than those who were married at the final administration of the HS. This may have been a reflection of feelings associated with returning to the same family situation and problems which may have been instrumental in the
problem drinking. Those who were single had no such family situations to return to and probably more freedom to make changes and adjustments in their lives which they felt would be beneficial for them. Another factor which may have been involved in this analysis was age. Those who were married were older and their HS scores may reflect the higher scores of the third administration of those who were older as seen in the study of the relationship of the HS and age.

The employment status of the participant also reflected significant differences in HS scores. Initial HS scores of those who were unemployed were significantly higher (p < .025) than those who were employed. However, the HS scores for the final administration showed that the hopelessness had decreased to virtually the same level as those who were employed. As in returning to a marriage, returning to a former job may in itself have contained discouraging qualities which kept the HS at a level with those who were unemployed.

Those with legal problems had significantly higher HS scores at the time of admission to the SATU. The HS scores of those with legal problems decreased dramatically by the second administration of the HS which occurred between 1 and 10 days following admission. This decrease was to the point

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of actually being less than those who did not have legal problems. This change was still evident at the final administration when there was virtually no difference in the HS scores.

Conclusions and Recommendations

This study showed that hopelessness was not as significant a factor in hospitalized alcoholics as it is in suicide. Hopelessness did occur and did change during a treatment program for the participants of this study, but the results failed to show that hopelessness occurred in a way that could not be accounted for by depression. There was a significant correlation between depression and alcoholism in this study, and 44% of the participants entered treatment with depression ranging from moderate to severe. In this study, when depression was controlled for through partial correlation procedures, the relationship between hopelessness and alcoholism dropped to virtually nothing. This is the exact opposite of what was found in the studies of hopelessness and suicide. In those studies, when depression was controlled for, the high relationship between hopelessness and suicide intent was barely affected.

The results of this study show that a decrease in
hopelessness occurred while the participant was in the SATU program. The specific program components which may have been causal of this change could not be identified from this study. Indeed, whether the program was causal of the changes cannot be stated with certainty. The ultimate experiment would be to use a control group and compare treatment versus no treatment. The difficulty in managing such a study, even if ethically conceivable, is staggering.

The timing of the study is felt to have been an important factor. The study surveyed those alcoholics who were already in a hospital, a hopeful environment. Hopelessness may well have occurred prior to hospitalization. Conceivably, it could have been the motivating factor to seek treatment. Another factor in timing may have been the possible influence that emotions associated with finishing the program might have had on the final administration of the instruments. Follow-up studies of the occurrence of hopelessness in those completing the program would provide valuable information on the role hopelessness plays in resumed drinking or continued sobriety.

A factor not accounted for in this study was how voluntary the patient's admission was. For the person experiencing extreme physical and psychological discomfort, in-
cluding hopelessness, admission to the hospital may have been completely voluntary. However, it may not have been so voluntary for the person coerced into treatment under the threat of dire consequences (e.g., going to jail; getting fired; being divorced), and perhaps feelings of hopelessness were not as intense.

Beck et al. (1976) noted that suicide attempts, highly correlated with hopelessness, usually occur during times of intoxication for the alcoholic. During times of sobriety, feelings of hopelessness may be less intense. No intoxicated participants were noticed in this study, and this would result in lower HS scores if feelings of hopelessness were more intense during periods of inebriation.

The studies on suicide suggest another factor which could be considered to enhance the results of this study. That factor is consideration of the history of suicidal attempts and ideation. Those who have such a history may be persons who experience hopelessness more intensely than those who do not have such a history. The levels of hopelessness obtained from such individuals may well be different from those who have no history of suicidal attempts or ideation.
The possibility must be considered that those who experienced hopelessness were not considered for treatment in the SATU. The screening criteria for the program state that those who were actively suicidal were not appropriate for the SATU. In addition, those who have gross organic brain syndrome are not included in the SATU. Smart (1968) noted that alcoholics have a distorted perception of the future. If this condition is due to organicity, they may not have been included in treatment in the SATU.

The results of this study show that the variables of marital status, employment status, the existence of family support and legal problems have implications for the initial HS score. However, the hopelessness decreases to levels comparable to those without those problems by the end of the program. Further investigation would be fruitful for these categories and for all decreases in HS scores. Item-analysis of the differences in the way certain items are marked may reflect crucial variables which result in a decrease of hopelessness. Knowledge of the types of changes which occur would be useful in program evaluation and development.

Although hopelessness was not evident in overwhelming degrees in this study, the nature of chronic alcoholism to be filled with recurrent failures, losses, and dashing of
hopes make hopelessness an issue of concern in therapy. The high suicide rate in alcoholics indicates that hopelessness occurs in greater degrees than seen in the treatment program in this study. In therapy, thorough discussion and working through the issues of hopelessness can serve as an inoculation against possible future severe episodes of hopelessness, or even suicide.

In theoretical and philosophical works, hope and hopelessness are considered crucial factors in therapy. Yet, except for the role of hopelessness in suicide, there have been few systematic studies of them. The changes in these factors seen during an alcohol treatment program are intriguing. Questions arise concerning the place of hope and hopelessness in mental health and other mental disorders. As a cognitive distortion, hopelessness can be corrected so that it is replaced by hope, the essence of successful therapy.
REFERENCE NOTES

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APPENDIX A

HS Questionnaire

For each of the following statements, circle "T" if the statement is "true" or "F" if it is "false" according to how you feel now.

1. I look forward to the future with hope and enthusiasm.
2. I might as well give up because I can't make things better for myself.
3. When things are going badly, I am helped by knowing they can't stay that way forever.
4. I can't imagine what my life would be like in 10 years.
5. I have enough time to accomplish the things I most want to do.
6. In the future, I expect to succeed in what concerns me most.
7. My future seems dark to me.
8. I expect to get more of the good things in life than the average person.
9. I just don't get the breaks and there's no reason to believe I will in the future.
10. My past experiences have prepared me well for my future.
11. All I can see ahead of me is unpleasantness rather than pleasantness.
12. I don't expect to get what I really want.
13. When I look ahead to the future, I expect I will be happier than I am now.
14. Things just won't work out the way I want them to.
15. I have great faith in the future.
16. I never get what I want so it's foolish to want anything.
17. It is very unlikely that I will get any real satisfaction in the future.
18. The future seems vague and uncertain to me.
19. I can look forward to more good times than bad times.
20. There is no use in really trying to get something I want because I probably won't get it.
APPENDIX B

BECK INVENTORY

NAME: ____________________________

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1 0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can't snap out of it.
   3 I am so sad or unhappy that I can't stand it.

2 0 I am not particularly discouraged about the future.
   1 I feel discouraged about the future.
   2 I feel I have nothing to look forward to.
   3 I feel that the future is hopeless and that things cannot improve.

3 0 I do not feel like a failure.
   1 I feel I have failed more than the average person.
   2 As I look back on my life, all I can see is a lot of failures.
   3 I feel I am a complete failure as a person.

4 0 I get as much satisfaction out of things as I used to.
   1 I don't enjoy things the way I used to.
   2 I don't get real satisfaction out of anything anymore.
   3 I am dissatisfied or bored with everything.

5 0 I don't feel particularly guilty.
   1 I feel guilty a good part of the time.
   2 I feel guilty most of the time.
   3 I feel guilty all of the time.

6 0 I don't feel I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.
7 0 I don't feel disappointed in myself.
   1 I am disappointed in myself.
   2 I am disgusted with myself.
   3 I hate myself.

8 0 I don't feel I am any worse than anybody else.
   1 I am critical of myself for my weaknesses or mistakes.
   2 I blame myself all the time for my faults.
   3 I blame myself for everything bad that happens.

9 0 I don't have any thoughts of killing myself.
   1 I have thoughts of killing myself, but I would not carry them out.
   2 I would like to kill myself.
   3 I would kill myself if I had the chance.

10 0 I don't cry anymore than usual.
    1 I cry more now than I used to.
    2 I cry all the time now.
    3 I used to be able to cry, but now I can't cry even though I want to.

11 0 I am no more irritated now than I ever am.
    1 I get annoyed or irritated more easily than I used to.
    2 I feel irritated all the time now.
    3 I don't get irritated at all by the things that used to irritate me.

12 0 I have not lost interest in other people.
    1 I am less interested in other people than I used to be.
    2 I have lost most of my interest in other people.
    3 I have lost all of my interest in other people.

13 0 I make decisions about as well as I ever could.
    1 I put off making decisions more than I used to.
    2 I have greater difficulty in making decisions than before.
    3 I can't make decisions at all anymore.

14 0 I don't feel I look any worse than I used to.
    1 I am worried that I am looking old or unattractive.
    2 I feel that there are permanent changes in my appearance that make me look unattractive.
    3 I believe that I look ugly.

15 0 I can work about as well as before.
    1 It takes an extra effort to get started at doing something.
    2 I have to push myself very hard to do anything.
    3 I can't do any work at all.
16  0 I can sleep as well as usual.
     1 I don't sleep as well as I used to.
     2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
     3 I wake up several hours earlier than I used to and cannot get back to sleep.

17  0 I don't get more tired than usual.
     1 I get tired more easily than I used to.
     2 I get tired from doing almost anything.
     3 I am too tired to do anything.

18  0 My appetite is no worse than usual.
     1 My appetite is not as good as it used to be.
     2 My appetite is much worse now.
     3 I have no appetite at all anymore.

19  0 I haven't lost much weight, if any, lately.
     1 I have lost more than 5 pounds.  (I am purposely trying
     2 I have lost more than 10 pounds.  to lose weight by eating
     3 I have lost more than 15 pounds.  less.  Yes ___  No ___)

20  0 I am no more worried about my health than usual.
     1 I am worried about physical problems such as aches and
     2 I am very worried about physical problems and it's hard
     3 I am so worried about my physical problems, that I cannot
     to think of much else.
     think about anything else.

21  0 I have not noticed any recent change in my interest in sex.
     1 I am less interested in sex than I used to be.
     2 I am much less interested in sex now.
     3 I have lost interest in sex completely.
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<tr>
<th></th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>1</td>
<td>Do you feel you are a normal drinker? (By normal we mean you drink less than or as much as most other people.)</td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?</td>
<td></td>
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<tr>
<td>3</td>
<td>Does your wife, husband, a parent or other near relative ever worry or complain about your drinking?</td>
<td></td>
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<tr>
<td>4</td>
<td>Can you stop drinking without a struggle after one or two drinks?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Do you ever feel guilty about your drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Do friends or relatives think you are a normal drinker?</td>
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</tr>
<tr>
<td>7</td>
<td>Are you able to stop drinking when you want to?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Have you ever attended a meeting of Alcoholics Anonymous?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Have you ever gotten into physical fights when drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Has drinking ever created problems between you and your wife, husband, a parent or other near relative?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Has your wife, husband, a parent or other near relative ever gone to anyone for help about your drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Have you ever lost friends or girlfriends because of your drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Have you ever gotten into trouble at work because of your drinking?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
yes  no  14. Have you ever lost a job because of your drinking?

yes  no  15. Have you ever neglected your obligations, your family or your work for two or more days in a row because you were drinking?

yes  no  16. Do you drink before noon fairly often?

yes  no  17. Have you ever been told you have liver trouble? Cirrhosis?

yes  no  18. After heavy drinking have you ever had delirium tremens (DTs) or severe shaking or heard voices or seen things that really weren't there?

yes  no  19. Have you ever gone to anyone for help about your drinking?

yes  no  20. Have you ever been in a hospital because of drinking?

yes  no  21. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem that resulted in hospitalization?

yes  no  22. Have you ever been seen at a psychiatric or mental health clinic or by any doctor, social worker or clergyman for help with any emotional problem where drinking was part of the problem?

yes  no  23. Have you ever been arrested for drunk driving, driving while intoxicated, or driving under the influence of alcoholic beverages?

yes  no  24. Have you ever been arrested, even for a few hours, because of other drunken behavior?

yes  no  25. Do you have a job to return to?

yes  no  26. Do you have any legal problems pending?

yes  no  27. Could you turn to your parents, brothers or sisters for help, if needed?

--------  28. What is your marital status (single, married, divorced, separated, widowed)?
29. How many years has drinking been a problem for you?

30. When was your last drink?

31. If you were on the detoxification unit, how many days were you there?

32. How many times have you been hospitalized for drinking?

33. Was either your Father or Mother alcoholic? Which one?

34. What is your age?
APPENDIX D

INFORMED CONSENT

Dear Participant:

I am conducting a research project as a part of my doctoral studies at Western Michigan University and would appreciate your participation. This study which has been approved by the hospital Research and Development Committee is designed to obtain information to help us understand and treat those in Substance Abuse programs.

The study consists of some questionnaires. Some of the questions concern your past experiences, and some concern your current attitudes and feelings such as depression, hope, hopelessness and satisfaction. Information from you and other veterans will increase our understanding of the problems you experience. You will be asked to complete the questionnaires two or three times while you are in the program. Completion of the questionnaires will take about 15 to 20 minutes each time.

Your participation is VOLUNTARY, and it is not part of your therapy. You may withdraw from the study at any time without
an effect on your treatment. The results of your questionnaires will be CONFIDENTIAL and will be available only to me. Your identity will not, in any way, be associated with the replies you make.

Please feel free to ask any questions you may have at any time. Return the questionnaires to me in Room 104A.

I deeply appreciate your providing accurate information about your feelings and attitudes. Thank you for your participation!

Sincerely,

Michael McCarthy

I agree to allow the information from this study to be used only for the research purposes described above, understanding that complete confidentiality will be maintained. Please sign and indicate the date.

Name ___________________________ Date _____________
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