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\\ UNDERSTANDING THE ROLE OF
DEPRESSION IN THE ALCOHOLIC //

A Thesis Presented to
the Faculty of
California State College, San Bernardino

In Partial Fulfillment for the
Requirements of the Degree
Master of Science
in
Psychology

by
Peggy Allison Snow
May, 1984

UNDERSTANDING THE ROLE OF
DEPRESSION IN THE ALCOHOLIC

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Approved by:

Chairperson

Date

June 14, 1984

ABSTRACT

Depression scales were administered to male and female alcoholics in inpatient treatment facilities to determine the presence and effects of depression during the course of treatment for alcoholism. Younger individuals who scored high on feelings of personal worth were more likely to complete the treatment program. Affective-behavioral, cognitive, somatic, and personal worth components of depression abated significantly over the course of treatment. Both males and females were less depressed at the completion of treatment than at the beginning; however, males reported more somatic conditions at the end of treatment than did females while females reported fewer instances of positive affect at the end of treatment than did males.

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INTRODUCTION

Depressive features are commonly considered to be an important affective component of alcoholism. For example, if an alcoholic presenting himself/herself for treatment does not show signs of depression, substance abuse workers tend to wonder if something is wrong and if the alcoholic has the insight necessary for successful treatment (Curlee, 1972). As a possible manifestation of this relationship between alcoholism and depression, alcoholics are at a higher risk of suicide than the general population (Batchelor, 1954; Benensohn & Resnik, 1974; Robins, Murphy, Wilkinson, Gassner, & Kayes, 1959) and, among alcoholics, those who report being depressed are more likely to attempt suicide than those who do not report being depressed (Cadoret & Winokur, 1974). In order to understand the relationship between alcoholism and depression numerous questions can be asked. First, what is the prevalence of depressed affect in alcoholics? Second, what psychological benefits do alcoholics expect from alcohol ingestion, and does their drinking meet these expectations? Third, does a genetic link exist between depression and alcoholism? Fourth, is depressed affect altered by treatment for alcoholism? Fifth, what are

the individual differences which influence this relationship? Finally, what are the methodological constraints which limit the conclusions that may be drawn in this area? Implications for treatment and research will then be considered.

Prevalence of Depression

What is the prevalence of depressed affect in alcoholics? In a comment to an early presentation on this topic, Karpman stated, "It is therefore a matter of clinical observation that preceding the use of alcohol there is always a depression" (Wall, 1937, p. 952). In spite of this pronouncement, early reports did not emphasize depression as a major concomitant of alcoholism (Ellerman, 1948; Norvig & Nielsen, 1956; Van Amberg, 1943; Wall, 1936; Wall, 1937). These reports appeared to not recognize, or simply not find, depression in their alcoholic populations. In contrast, more recent studies estimate the presence of depression in alcoholism anywhere from 98% (Shaw, Donley, Morgan, & Robinson, 1975) to 3% (Winokur, Rimmer, & Reich, 1971). This wide discrepancy has led to much confusion and little utility for the clinician.

Those studies which have reported the highest rates of depression typically have defined the

existence of depression as the individual's scoring in the mildly to severely depressed range on one or more self-report inventories, clinical rating scales, or in a clinical interview. Shaw et al. (1975) found depression as measured by the D scale (depression) on the Minnesota Multiphasic Personality Inventory (Dahlstrom, Welsh, & Dahlstrom, 1972), the Zung Self-Rating Depression Scale (Zung, 1965), or the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), present in 98% of their halfway house patients on at least one of the depression scales. Utilizing the Hamilton Depression Scale (Hamilton, 1960), the Zung scale, and the MMPI D scale, 28%, 66%, and 43%, respectively, of alcoholics in a Veterans' Administration hospital scored in the depressed range (Keeler, Taylor, & Miller, 1979). Sixty-nine percent of alcoholics in another VA hospital scored in the depressed range on the MMPI D scale (Curlee, 1972). Using the Zung scale, Weingold, Lachin, Bell, and Cox (1968) found that 72% of the alcoholics in a state hospital facility scored in the depressed range. Depression rates of 6% on the Hamilton and 35% on the Zung were found in military personnel who had been referred to an inpatient alcohol rehabilitation unit

(Hamm, Major, & Brown, 1979).

Those studies utilizing clinical interviews report similar rates. Among alcoholics who sought psychiatric treatment, 89% reported depressed mood compared to 28% of those who had not sought treatment (Woodruff, Guze, & Clayton, 1973). Utilizing the Raskin Depression Scale (Raskin, Schulterbrandt, Reatig, & McKeon, 1969) which, like the Hamilton scale mentioned previously, is completed by the clinician based on the interviewee's behavior, clinicians judged 59% of alcoholics in a community mental health center treatment program as being clinically depressed (Pottenger, McKernon, Patrie, Weissman, Ruben, & Newberry, 1978). Among alcoholic outpatients, 41% had experienced periods of moderate to severe depression (Rosenberg & Amodeo, 1974) while among incarcerated felons 31% of alcoholics reported depression as compared to only 9% of non-alcoholics (Goodwin, Crane, & Guze, 1971).

Other studies have dealt with whether alcoholics have had a diagnosis of depression either concurrent to or separate from the alcoholism. Those reporting concurrent diagnoses report rates of 59% in psychiatric outpatients (Weissman & Myers, 1980; Weissman, Pottenger, Kleber, Ruben, Williams, & Thompson, 1977),

55% in a psychiatric clinic (Woodruff, Guze, Clayton, & Carr, 1973), 39% in inpatients at a mental health center and a psychiatric ward (Cadoret & Winokur, 1974), and 21% in a Dublin, Ireland, hospital program (O'Sullivan, Daly, Carroll, Clare, & Cooney, 1979).

Lower rates came from studies in which only primary affective disorder with secondary alcoholism was considered. The affective disorder was considered as primary only if it was manifested previous to the onset of alcoholism or was present during a well-documented period of alcohol abstinence. Here a depressive disorder was found to comprise 27% of a female sample (Schuckit, Pitts, Reich, King, & Winokur, 1969), 25% of the females and 3% of the males (Winokur, Reich, Rimmer, & Pitts, 1970), and 9% of the males at a VA hospital (Keeler et al., 1979).

Obviously the more measures utilized (e.g., Shaw et al., 1975) the more likely an alcoholic will be considered depressed on at least one measure. Similarly, when stringent criteria are employed (e.g., Winokur et al., 1970) rates of depression drop dramatically. If the question can be stated: "Is depression a concomitant affective state with alcoholism?", then at least a significant minority of

alcoholics are depressed. In all likelihood these alcoholics continue to drink because of, and in spite of, feeling depressed. Therefore, it is important to understand the alcoholic's expectations with regard to the use of (or effects of) alcohol and what the actual effects of alcohol are on the alcoholic.

Effect of Alcohol on Mood

What psychological benefits do alcoholics expect from alcohol ingestion, and does drinking meet these expectations? Alcoholics consistently believe that alcohol will improve their depressed mood. Interviewed alcoholics reported psychological distress (25%), family problems (13%), and employment problems (5%) as the primary reasons for resuming drinking (Ludwig, 1972). When sober, alcoholics stated that they drank to decrease anxiety and depression (Nathan, Titler, Lowenstein, Solomon, & Rossi, 1970). Not only do alcoholics expect to feel better after drinking, but they also expect to become more sociable (Tamerin, Weiner, & Mendelson, 1970) and to accrue other positive psychological benefits (Beckman, 1980). These characteristics may be particularly true of certain types of alcoholics who are more likely to use alcohol as a coping mechanism (Loberg, 1981).

Some of these expectations may prove true for moderate drinkers (Mayfield, 1968) or in severely depressed patients without any history of excessive drinking (Mayfield & Allen, 1967). However, in general these expectations are consistently refuted, especially by the experience of the chronic alcoholic. After stating that they expected to decrease anxiety and depression after a few hours of drinking, anxiety and depression increased both in behavior and in subjects' self-report on a Mood Adjective Checklist (Nathan et al., 1970). Similarly, in contrast to alcoholics' previously stated expectations, psychic pain and aggression increased with intoxication while, in line with their expectations, irresponsible behavior also increased (Tamerin et al., 1970). Other studies have found these same negative effects after alcohol intoxication (Martarano, 1974; McNamee, Mello, & Mendelson, 1968; Steffan, Nathan, & Taylor, 1974; Warren & Raynes, 1972) with two investigators stating that "the feeling of depression and the expression of this affect appeared to be one of the hallmarks of the alcoholic's experience during intoxication" (Tamerin & Mendelson, 1969, p. 893). This distress syndrome appears to increase with increased intake of alcohol

(Allman, Taylor, & Nathan, 1972; Williams, 1966) and has been found to predominate more than factors such as hostility and impulsivity in the highest levels of alcohol abuse (Whitelock, Overall, & Patrick, 1971). It appears then, that while moderate doses of alcohol may be pleasure inducing, larger doses lead to increased distress, although this may be moderated to some extent by situational factors (Russell & Mehrabian, 1975).

This contradiction between the alcoholic's expectations and his/her actual experience may be explained by understanding the early stages of this disorder. At one time, while ingesting moderate doses of alcohol, the alcoholic experienced the positive psychological benefits common to other moderate drinkers. The negative psychological and physiological effects appeared later when the alcoholic lost control of the drinking. The alcoholic's hope that control can again be gained over the drinking and, in turn, ameliorate the distressed state maintains the drinking behavior. However, in contrast to the alcoholic's expectation, control is not regained, the vicious cycle continues, and the depression is intensified. This suggests that a cognitive or learning model accounts

for this cycle. However, it is also important to understand the potential genetic factors which may predispose an individual to engage in this behavior.

Familial Studies

Does a genetic link exist between depression and alcoholism? Familial studies of alcoholic and depressive individuals, primarily by Winokur and his colleagues, have provided evidence that alcoholism and depression tend to run in the same families, suggesting a possible genetic factor. Winokur et al. (1970) studied 507 first degree relatives of 259 alcoholic probands, finding that female relatives were more likely to be depressed than male relatives and that male relatives were more likely to be alcoholic than female relatives. In a study of depressives, rather than only depressed alcoholics (Winokur, Cadoret, Dorzab, & Baker, 1971), it was proposed that depression be divided into at least two different types: pure depressive illness and "depressive spectrum" illness in which males are predisposed to alcoholism and females are predisposed to unipolar depression. Age at onset of depression was an important factor in their results as female probands and male probands with early onset of depression (before age 40) were more likely to have

female relatives who were depressed and male relatives who were alcoholic. In another study comparing primary alcoholics with individuals with alcoholism secondary to depression it was found that, if diagnosed as psychiatrically disordered, fathers and brothers of both groups tended to be alcoholic while mothers and sisters tended to have the same diagnosis as the female proband (Schuckit et al., 1969). Finally, in a study of male adoptees raised apart from their alcoholic biological parents, these adoptees were found to be no different from controls in frequency of psychiatric symptomatology but did have a much higher incidence of alcoholism, suggesting a genetic predisposition toward alcoholism for these males (Goodwin, Schulsinger, Hermansen, Guze, & Winokur, 1973). This does not appear to be the case for females as a replication of the same study using female children of alcoholics yielded ambiguous results (Goodwin, Schulsinger, Knop, Mednick, & Guze, 1977). These studies suggest that individuals, especially males, may be genetically predisposed to alcoholism. Male probands and male relatives of probands have much higher incidences of alcoholism than females, even when there is no difference in the frequency of psychiatric

symptomatology. The reverse holds true for females in regard to depression.

However, it also appears clear that for those cases in which depression plays a dominant role, whether the individual becomes primarily alcoholic or primarily depressed may be more a function of other influences than a genetic factor. For example, the expression of depressed affect as depression is more congruent with the female sex role than with the male sex role and therefore, its expression may more likely be tolerated and even rewarded in females than in males. In contrast, males may be more likely to be punished for a direct expression of depression and, as a result, may resort to other coping mechanisms such as the use of alcohol.

Treatment

Is depressed affect altered by treatment for alcoholism? Several studies have addressed themselves to changes in depressive affect after treatment. Weingold et al. (1968) administered the Zung scale to 73 male alcoholics upon admission to treatment (70% of whom scored in the "depressed" range) and at the end of the 21 day treatment program. Based on the attending psychiatrist's judgement, the alcoholics were divided

into a no-drug group (n=13), a group receiving antianxiety drugs (n=50), and a group receiving antianxiety plus antidepressant drugs (n=10). At the end of the treatment program, depression decreased significantly from admission, the amount of decrease being proportional to the initial level of depression. There were no differences among groups. The similar effectiveness of all three treatments, the selection factor introduced by the psychiatrist's judgement, or simply the effect of alcohol withdrawal and abstinence, regardless of treatment, could have accounted for these results.

Most other studies have reported similar findings. As little as one week after treatment for alcoholism had commenced, patients who were generally depressed upon admission reported decreased depressive feelings and increased vigor (Smith & Layden, 1972). As measured by the MMPI D scale, scores decreased approximately one standard deviation (10 T) after a program of unspecified duration (Rohan, 1972) and after a 10 week program (Rohan, Tatro, & Rotman, 1969). Significant decreases on both the Zung and the Beck scales were found in inpatient alcoholics in a 10 week treatment program with most changes occurring by the

fourth week of the program (Gibson & Becker, 1973). After a 30 day treatment program, depression appeared to abate somewhat as measured by the Zung, Beck, and MMPI D scales, although no consistent differences were found between a group administered an antianxiety drug compared to a group administered a placebo (Shaw et al., 1975).

Two studies deviate from these findings. In the first (Pottenger et al., 1978), after a treatment program of unspecified duration, depressive symptoms were found to persist in 60% of the patients one year after the initial intake. The authors specifically point out that few patients were given antidepressant drug therapy in this program. This may or may not be true of the previously described studies which typically did not address this point.

In the second study (Overall, Brown, Williams, & Neill, 1973), three weeks after beginning a drug treatment program, alcoholics who had taken either an antipsychotic or an antidepressant were significantly less depressed, as measured by the MMPI D scale, than those who had taken an antianxiety drug. This is the only study which the author has located that has been able to demonstrate effects due to a

specific type of treatment in addition to detoxification of the alcoholic. The reasons for this discrepancy are not clear although it should be noted that this study was one of the better designed and, certainly, one of the most sophisticated statistically which may have strengthened its internal validity.

These studies suggest that alcoholics do show a decrease in depression immediately upon detoxification. Whether this is due to relief from physical symptoms caused by alcohol ingestion, a decrease in cognitive or emotional symptomatology, or some combination of the two is not clear. In contrast to this immediate effect, it is not clear whether most alcoholics show a decrease in depression months after detoxification. The fact that many alcoholics return to drinking (Marlatt, 1978), possibly to alleviate distress, suggests that detoxification alone does not inevitably relieve the depression. Treatment focused specifically on depression may be needed to relieve part of the motivation for the alcoholic to return to drinking. Shipley (1982) has used opponent-process theory in explaining this elevated mood after withdrawal and indicated that this may be an excellent opportunity to initiate changes for the alcoholic.

Individual Differences

What are the individual differences which influence this relationship? Despite the many assumptions about the relationship between alcoholism and depression, such as substance abuse workers assuming a positive relationship as noted previously, few of these assumptions have been verified consistently. Two factors which are important in explaining these findings are sex differences and differences among types of alcoholics.

Sex Differences

One of the most glaring weaknesses in this area is the lack of studies of potential differences among males and females. As might be expected, the vast majority of studies to date have examined male alcoholics exclusively (Rimmer, Reich, & Winokur, 1972; Schuckit et al., 1969). Until recently, those studies which examined male and female differences were typically family studies looking for genetic factors. For example, these showed that male relatives of alcoholics are much more likely to receive a diagnosis of sociopathy or alcoholism than female relatives while the reverse holds true for affective disorder (Winokur et al., 1970). In examining the probands of these

studies, sex differences were also found. Females were more likely to be diagnosed with a primary affective disorder than were males but there were no differences in the rate of secondary affective disorder (Cadoret & Winokur, 1974). Even though there were no differences in the rate of secondary affective disorder, males had a much longer time between onset of secondary depression following alcoholism than did females. In general, females tend to have a later onset of alcoholism than do males and females with depression tend to have a later onset than do other female alcoholic groups (Winokur, Rimmer, & Reich, 1971). Finally, it is not clear whether depressed female alcoholics have any more severe depression than do depressed male alcoholics. The mean profiles of men and women were almost identical on the MMPI (Eshbaugh, Tosi, & Hoyt, 1980), and no significant differences were found on a number of scales measuring depression (Pottenger et al., 1978; Rosen, 1960). However, Zielinski (1979) reported that females were significantly more depressed than were males on the Zung, Beck, and MMPI D scales.

To account for these differences it could be hypothesized that females are genetically predisposed

to affective disorder while males are genetically predisposed to alcoholism. At this point, this explanation can certainly not be refuted by the data. However, other explanations which focus on the societal expectations of males and females seem more likely. It could be that environmental conditions may manifest the same problem through many means with an affective disorder being more socially acceptable for women while alcoholism is more socially acceptable for males (Winokur, Cadoret, Dorzab, & Baker, 1971). Support for this idea comes from the fact that males and females do not differ in the rate of depression secondary to alcoholism, as noted previously (Cadoret & Winokur, 1974).

It should also be noted that the male sex role is not as congruent with the experience of depression as is the female sex role (Warren, 1983). For example, males are less likely to experience sex role conflict than are females. Some research has suggested a conflict between a female's overt response of identifying with more "traditional" female values and a covert response of wanting to be more masculine (Wilsnack, 1973). When conflicts are experienced due to the assumption of many different roles (e.g., work,

parent, gender, etc.) alcohol may be used to minimize the discomfort of the conflict experience (Gomberg, 1981). In addition, males are more likely to avoid depression, perceiving that depression is a sign of powerlessness, to utilize active responses such as drinking when feeling depressed, and are less likely to disclose their feelings to others, such as mental health workers (Warren, 1983). Just as males attempt to avoid this powerlessness, Beckman (1978) emphasizes that these feelings of inadequacy and powerlessness may cause female alcoholics to drink. Not only may males avoid depression more than do females, but mental health workers may be more prone to emphasize alcoholism in the male while deemphasizing the depression and do the reverse for females. Police are certainly less likely to confront and arrest a female than a male for alcohol problems (Schuckit & Morrissey, 1979).

Types of Alcoholics

Another promising distinction may be in attempting to determine different types of alcoholics based on psychometric profiles. Utilizing MMPI profiles, Button (1956) suggested that there were not two different alcoholic profiles (i.e., a psychopathic and a

neurotic) as was commonly assumed but instead two different ways of handling the same behavioral pattern, a candid and a defensive alcoholic. However, more recent work appears to confirm the idea of two different groups of alcoholics, one characterized by an antisocial personality disorder and the other group characterized by a distress syndrome, with subsets of these two groups a definite possibility. In a study of female alcoholics two major groups were delineated, the primary alcoholic and the individual with alcoholism secondary to affective disorder (Schuckit et al., 1969). It was later suggested that these primary alcoholic females tend to resemble primary alcoholic males while, in comparison, the females with affective disorder tended to have a relatively high socioeconomic status, to be more isolated, and have contact with the mental health community (Schuckit & Morrissey, 1979). In male alcoholics, four types were identified including one which was differentiated by the use of alcohol to cope with nervousness and depression (Loberg, 1981). Finally, although subgroups were identified, including one characterized by distress, two basic types were seen as most important: one with a character disorder and the other with neurotic

problems (Eshbaugh et al., 1980).

It is not clear whether these types are useful distinctions, especially in terms of treatment. To date, most efforts have focused on the identification of types and these efforts need further replication and subsequent validation. It may be that many of the discrepancies and much of the confusion in understanding the relationship between alcoholism and depression could be dissipated by forming more homogenous groups of alcoholics in each study (e.g., Jones, 1971; Skinner, 1974). A group of alcoholics seen in a psychiatric facility of a medical center may be very different from those referred by a court to a mental health facility for mandatory treatment. Identifying homogenous groups of alcoholics would allow not only for more consistent diagnosis but also for more appropriate treatment specific to each subgroup.

Types of Depression

When considering the link between depression and alcoholism, most often only unipolar depression is considered. It should be noted that some alcoholics do exhibit bipolar disorder (Freed, 1970, 1978). As with unipolar depression, it also appears that alcoholism is genetically transmitted independently of bipolar

disorder (Dunner, Hensel, & Fieve, 1979). However, the drinking pattern of alcoholics with bipolar disorder is very different from alcoholics with unipolar depression. Instead of drinking when depressed, individuals with bipolar disorder tend to increase their drinking during the manic phase when they are elated. Drinking during the depressive phase is more the exception than the rule (Mayfield & Coleman, 1968; Reich, Davies, & Himmelhoch, 1974). Thus, alcoholics with bipolar disorder and alcoholics with unipolar disorder appear to be fundamentally different.

Other Characteristics

Besides the sex and type of alcoholic, other individual characteristics may also be important. A distinction has been made between primary affective disorder and affective disorder secondary to alcoholism. Unfortunately, this distinction has yielded mixed results. Secondary depressives were found to have the same symptom pattern as primary depressives only less severe (Weissman et al., 1977). However, patients with alcoholism and secondary depression were found to resemble alcoholic patients without depression more than they resembled primary depressives (Woodruff, Guze, Clayton, & Carr, 1973).

Age has also been utilized with similar, mixed results. Alcoholics were found to report depressive symptoms including tiredness, dysphoric mood, and disturbances of concentration, significantly more than did controls (Hagnell & Tunving, 1972). The highest prevalence of these symptoms was found in the 33-38 age range with group differences decreasing with age. However, in another sample with a mean age of 32 and a range of 20-45 years old, depressive symptomatology was reported to be less than in other studies (Hamm et al., 1979). The authors suggested that these individuals may not have suffered alcoholism long enough to have had major life losses or that they were simply at lower risk because of their younger age indicating that depressive symptomatology would increase with age.

Methodological Issues

What are the methodological constraints which limit the conclusions which can be drawn in this area? Three of the most salient factors are type of measurement, timing of measurement, and self-selection for treatment.

Type of Depression Instrument

From the previous discussion, it is clear that

numerous tools have been utilized to identify depression, including self-rating depression scales (e.g., the Zung), clinical rating scales (e.g., the Raskin Depression Scale), and clinical interviews. Among these the self-rating depression scales typically yield the greatest indication of depression among alcoholics. This is particularly true of the Zung which may be due to the fact that the Zung is more heavily loaded with somatic symptoms which are typical of depression than are some of the other scales such as the Beck (Shaw et al., 1975). Each scale tends to have its own unique characteristics, which sometimes are due to the theoretical orientation out of which the scale was derived, characteristics of validation samples, or other considerations. These differences may have dramatic effects when used in a study. For example, among the Beck, MMPI D scale, and the Zung, only the Beck significantly differentiated dropouts from those who remained in treatment (Shaw et al., 1975). The authors suggested that this was because the Beck may be a more sensitive indicator of the degree of awareness of subjective feelings of depression. This emphasizes the importance of theoretical orientation as the Beck's cognitive orientation proved particularly useful in

this setting.

In contrast, clinical interviews have typically yielded much lower rates of depression. However, this has been confounded by the fact that many of these studies used the interview to yield a diagnosis of depression rather than noting the degree of depression the individual had, as a scale would do. The emphasis on diagnosis, rather than distressed affect per se, probably contributed to these low rates.

Unfortunately, in comparing the results of their studies to those which have been done previously, many authors assume that all diagnostic instruments have equal reliability, validity, and, more importantly, the same purpose. As Keeler et al. (1979) have indicated, it is important that researchers and clinicians make it clear which question is being asked: "Is there sufficient evidence for a diagnosis of depression?" or "Does the alcoholic have depressed affect and other symptomatology typical of depression?"

Timing of Measurement

Not only are different measurement tools utilized but they are administered at different times. Most notably, some studies have administered their measures of depression immediately upon admission while others

have waited until after the alcoholic has been detoxified. Mayfield and Coleman (1968) emphasized that, upon initial admission, it is difficult to separate the effects of depression, especially physiological manifestations, from the physiological and psychological effects of alcohol. In fact, some authors have questioned whether the alcoholic does have a clinical depression or simply interprets distress from the physiological effects of the alcohol or withdrawal from the alcohol as depression (Gibson & Becker, 1973; Pottenger et al., 1978). Kielholz (1970) cautioned that depression cannot be measured until detoxification is completed as alcoholics are typically depressed during the detoxification period and measurement of depression at that time would give spuriously high results.

In comparing studies, it is important to be aware that higher rates will be obtained when depression is measured upon admission than when it is measured later. However, this does not dismiss the importance of measuring depression at both times instead of emphasizing one over the other. Again, it depends on the question being asked. Those in the highest level of distress before detoxification may be most motivated

to change to alleviate their distress, and at the same time most susceptible to relapse because of their distress. Whether or not there is a change in motivation and whether it differs after detoxification from that of patients experiencing less distress could be addressed. Alcoholics continue to be treated as a homogenous group when, in fact, their levels of distress at different times may serve as a useful discriminator.

Treatment vs. No Treatment

As with most clinical syndromes typically the investigator has a potentially biased sample. Here, the population of alcoholics that is studied is often a group of alcoholics who have sought treatment. Hamm et al. (1979) found somewhat lower rates of depression than in most studies in a group of military personnel who were referred solely for excessive drinking with no significant medical or psychiatric problems. The authors emphasized that these lower rates indicated that previous studies may have obtained spuriously high correlations because they used samples of alcoholics in need of medical or psychiatric hospitalization. However, they may have found lower rates simply because they excluded alcoholics who had significant depressive

disorders.

In a systematic sample of a community mental health center catchment area, 15% of those who were diagnosed as currently alcoholic also met the diagnostic criteria for depression (Weissman & Myers, 1980). However, due to a small sample size of current alcoholics (n=13), these results must be considered somewhat tentative. Woodruff et al. (1973) found few differences between psychiatrically treated and untreated alcoholics on demographic and other variables except for the fact that "depressive symptoms, the presence of secondary affective disorder, and a history of severe disturbance of mental content appeared less frequently among untreated alcoholics" (p. 1166). As depressed alcoholics are more likely to seek treatment than non-depressed alcoholics (Cadoret & Winokur, 1974), it appears that treatment samples are biased toward a greater preponderance of depression with alcoholism than exists in the general alcoholic population. Within the treatment setting itself inpatient alcoholics tend to have more distress than outpatient alcoholics (Nerviano, McCarty, & McCarty, 1980).

Present Study

A positive relationship between alcoholism and depression seems relatively undisputed for certain alcoholic subgroups. Realizing that depression and alcoholism are often concurrent has important implications for treatment. First, as was stated previously, after detoxification the alcoholic's mood elevates but the depression often remains. Although the alcoholic may discontinue drinking, the need for therapy exists to alter the person's cognitive and affective states and to facilitate social readjustment. The alcoholic typically has to begin a new lifestyle which requires more than termination of drinking. Depression may be alleviated somewhat by termination of drinking but assuming that it will abate extensively is too simplistic. If it can be shown that degree of depressive symptomatology can discriminate between those who complete a treatment program and those who do not and that some components of depression change in treatment while others do not, then alcohol treatment programs could gear themselves to the inclusion of therapy for depression as well as treatment for alcoholism, thereby possibly lowering the relapse rates.

The present study attempts to examine some of these issues in individuals in inpatient alcoholism treatment facilities. The specific hypotheses under study are as follows:

1. While depression scores are known to decrease for those individuals who remain in treatment (e.g., Weingold et al., 1968), only one study (Shaw et al., 1975) has demonstrated that depression scores on some scales significantly discriminate between those who complete a treatment program and those who do not. In the present study it is expected that degree of depressive symptomology will discriminate between those who complete a treatment program and those who do not, and that components of depression will be more useful in prediction than will be total scores.

2. While numerous investigators have suggested that depression scores decrease over treatment (e.g., Smith & Layden, 1972), no one has examined whether components of depression change differentially. It is expected that behavioral, somatic, and cognitive components of depression will change in treatment while the affective component will not.

3. While there is some support for the notion that

female alcoholics have higher levels of depression than do male alcoholics (e.g., Zielinski, 1979), the research is inconclusive. It is expected that females will demonstrate higher levels of depression immediately after detoxification and at the completion of treatment.

METHOD

Subjects

The subjects in this study included 108 male and 39 female inpatients admitted to one private and one county alcohol treatment facility in the San Bernardino area between October 1, 1983, and February 13, 1984.

Instruments

All subjects completed a four-part, 74-item questionnaire (see Appendix). Part I consisted of an eight-item survey used to obtain basic demographic data including sex, age, marital status, occupation, level of education, and income of the subjects.

The Center for Epidemiological Studies--Depression Scale (CES-D). The CES-D (Radloff, 1977) is a 20-item scale derived from other self-report depression inventories. It is designed to sample the major components of depressive symptomatology but has a heavy weighting on affective content. Scale items consist of first person statements in which examinees indicate how often during the past week they have felt or behaved in the manner described. Scores range from 0 to 3 and are identified as follows: 0-rarely or none of the time (less than 1 day); 1-some or little of the time (1-2

days); 2-occasionally or moderate amount of time (3-4 days); 3-most or all of the time (5-7 days). The scale attempts to tap the following aspects of depression: feelings of guilt and worthlessness, loss of appetite, depressed mood, feelings of helplessness and hopelessness, psychomotor retardation, and sleep disturbance (Radloff, 1977). From a rational viewpoint, it appears that four items measure cognitive symptoms, eight items measure affect, two items measure somatic and social symptoms, and four items measure behavioral symptoms. Test-retest reliabilities vary as could be expected in an instrument designed to measure change in depressive mood but average around .57, and the CES-D has proven valid in differentiating between clinical and non-clinical samples (Radloff, 1977). The CES-D usually takes about 5 minutes to complete.

The Beck Depression Inventory (BDI). The BDI (Beck et al., 1961) is a 21-item self-report depression scale in which subjects are asked to describe on a scale of 0 to 3 their current state of depression. Scores indicate intensity of depression and are identified as follows: 0-none; 1-mild; 2-moderate; 3-severe. Items and weights were derived logically. Although the scale is designed to tap all the major

components of depression there is an emphasis on the cognitive area. Eleven scale items tap cognition, two measure overt behavior, and one taps interpersonal symptoms. Cut-off scores of 13 for screening and 21 for clinical research have been recommended (Beck & Beamesderfer, 1974). Test-retest reliability for 31 undergraduates after three months has been reported to be .74 (Miller & Seligman, 1973). Correlations with clinical rating scales and with a behavioral observation scale have been good (Williams, Barlow, & Agras, 1972). Because of the structure of the BDI it allows for systematic item or "subscale" analyses. The BDI can be taken in about 10 minutes.

The Michigan Alcoholism Screening Test (MAST).
The MAST (Selzer, 1971) is a 25-item self-report instrument used to determine the extent and severity of impairment due to alcohol abuse and to obtain an objective confirmation of the diagnosis of alcoholism. Examinees are asked to indicate yes or no to questions concerning their use of, and consequences as a result of their use of, alcohol. Some of the questions are sufficiently neutral that a person reluctant to admit to problem drinking may inadvertently reveal his/her alcohol affliction (Selzer, 1971). There are no

questions concerning amounts of alcohol consumed because such questions typically result in vague responses. Questions were weighted based on a clinical knowledge of alcoholism with the highly discriminatory questions assigned a two point value and others assigned a one point value. A score of 5 or more indicates alcoholism. Criteria for validation was independent evidence of problem drinking and included assessment of hospitalized alcoholics' records from legal, social, and medical agencies and driving records. The MAST takes about 15 minutes to complete.

Procedure

Initial contact with the subjects was made after detox and within one week of admission to the treatment program. The course of treatment consisted of group counseling, A.A. meetings, individual peer counseling, and exercise. No medication was prescribed or dispensed by the treatment facility. Subjects were told that participation in the study was on a voluntary basis and that they were free to withdraw from the study at any time. Subjects were then given an informed consent form explaining these matters and the purpose of the study and completed parts I, II, and III of the questionnaire in a group setting. Subjects were

told they would be contacted again at the end of their treatment program and asked to again complete parts II and III of the questionnaire. This was done four weeks after the initial testing.

RESULTS

Common Factors Within the CES-D and BDI

Principal factors extraction with varimax rotation was performed on the 20 items of the CES-D and the 21 items of the BDI. This was done in order to determine on an empirical basis which depression factors in alcoholics could be identified by the scales. Principal components extraction was used to estimate the number of factors and the presence of outliers (Tabachnick & Fidell, 1983) with an $\alpha = .01$ cutoff level. Five males and one female were identified as outliers and deleted from principal factors extraction.

The principal factors extraction yielded five factors. Utilizing a cutoff of .40 for inclusion of a variable in interpretation of a factor, 19 of the 20 CES-D and 16 of the 21 BDI items were included (see Table 1). Only three items were found to be complex in loading on more than one factor [others dislike me (CES-D) on factors 1 and 2, couldn't shake the blues (CES-D) on factors 1 and 3, and feelings of sadness (BDI) on factors 2 and 3]. Factor 1, containing 12 items from the CES-D, appears to measure affective and behavioral components of depression such as: I felt sad; I felt fearful; I felt I could not get going; I

Table 1
Factor Loadings on CES-D and BDI Items

	F ₁	F ₂	F ₃	F ₄	F ₅
Felt depressed(C)	.691	.000	.000	.000	.000
Felt sad(C)	.658	.000	.000	.000	.000
Felt lonely(C)	.634	.000	.000	.000	.000
Disliked by others(C)	.565	.402	.000	.000	.000
Felt fearful(C)	.555	.000	.000	.000	.000
Couldn't get going(C)	.487	.000	.000	.000	.000
Couldn't shake blues(C)	.485	.000	.420	.000	.000
Mind wanders(C)	.477	.000	.000	.000	.000
Others unfriendly(C)	.474	.000	.000	.000	.000
Effort to live(C)	.471	.000	.000	.000	.000
Talked less(C)	.435	.000	.000	.000	.000
Crying spells(C)	.411	.000	.000	.000	.000
Pessimism toward future(C)	.000	.619	.000	.000	.000
Feeling dissatisfied(B)	.000	.599	.000	.000	.000
Suicidal ideation(B)	.000	.582	.000	.000	.000
Interested in others(B)	.000	.555	.000	.000	.000
Feelings of punishment(B)	.000	.547	.000	.000	.000
Feelings of sadness(B)	.000	.495	.431	.000	.000
Decision making ability(B)	.000	.484	.000	.000	.000

Table 1 (continued)

	F ₁	F ₂	F ₃	F ₄	F ₅
Personal Attractiveness(B)	.000	.436	.000	.000	.000
Hopeful about future(C)	.000	.427	.000	.000	.000
Self criticism(B)	.000	.410	.000	.000	.000
Appetite Disturbance(C)	.000	.000	.611	.000	.000
Sleep Disturbance(C)	.000	.000	.537	.000	.000
Appetite Disturbance(B)	.000	.000	.450	.000	.000
Weight Changes(B)	.000	.000	.444	.000	.000
Sleep Restless(B)	.000	.000	.401	.000	.000
Feelings of failure(B)	.000	.000	.000	.552	.000
Feelings of guilt(B)	.000	.000	.000	.470	.000
Self disappointment(B)	.000	.000	.000	.468	.000
Self irritation(B)	.000	.000	.000	.468	.000
Life as failure(C)	.000	.000	.000	.427	.000
Enjoyed life(C)	.000	.000	.000	.000	.459
As good as others(C)	.000	.000	.000	.000	.459
Happiness(C)	.000	.000	.000	.000	.435

Note. Factor loadings of less than .40 have been replaced by .000. Items that did not have a loading of greater than .40 on any factor have not been included in this table. F₁= factor 1, affective-behavioral; F₂=

Table 1 (continued)

factor 2, cognitive; F_3 = factor 3, somatic; F_4 = factor 4, personal worth; F_5 = factor 5, ability to experience positive affect. (C) = Item from CES-D. (B) = Item from BDI.

had crying spells. Factor 2, containing nine items from the BDI and two items from the CES-D, appears to measure thought content or cognitive components of depression such as: pessimism toward the future; self criticism; feelings of dissatisfaction; people dislike me. Factor 3, containing four items from the BDI and three items from the CES-D, appears to measure somatic components of depression such as: appetite changes; changes in sleep patterns; weight changes. Factor 4, containing four items from the BDI and one item from the CES-D, appears to measure personal worth components of depression such as: feelings of failure as a person; feelings of guilt; self-disappointment; seeing life as a failure experience. Factor 5, containing three items from the CES-D, appears to measure ability to experience positive affect such as: ability to be happy; ability to enjoy life. Once these factors were determined, factor scores were computed by summing the scores across variables. To examine the reliability of these scales coefficient alpha was utilized. Alpha coefficients were .85, .85, .77, .71, and .63 for factors 1-5, respectively. This indicated that, especially for factors 1-4, scales were of sufficient reliability to warrant further analysis.

Effects of Sex and Age on Scores

To examine the possible effects of sex and age on scores on the CES-D, the BDI, and their factor scores, hierarchical multiple regressions were performed on pretest scores. The three predictor variables, sex, age, and the interaction of sex and age, were entered into the regression equation in the following order: age, sex, and the interaction. Of these dependent variables, scores on the BDI and on three factors were predicted by age but not by sex nor by the sex by age interaction. Specifically, the results were as follows: with the total BDI score as the dependent variable, $R=.16$, $F(1,139)=3.72$, $p=.06$; factor 1, $R=.16$, $F(1,139)=3.49$, $p=.06$; factor 2, $R=.21$, $F(1,139)=6.39$, $p=.01$; factor 4, $R=.19$, $F(1,139)=5.34$, $p=.02$. In each case as the age of the subject increased depression level decreased.

Effects of Sex on Scores Across Treatment

To examine the effects of sex on depression scores across treatment, two types of analyses were conducted on scores on the CES-D, the BDI, and their factor scores. First, repeated measures analyses of variance on pretest and posttest scores were conducted utilizing sex as the independent variable. The analyses yielded

a number of significant main effects for trials (see Table 2). In only one case was the sex variable important: for factor 3 there was a sex by trial interaction which approached significance, $F(1,42)=84.42$, $p<.001$. This indicated that while females have higher pretest depression scores ($M=10.44$) compared to males ($M=8.80$), females evidenced lower scores on posttest ($M=2.00$) compared to males ($M=3.86$).

Second, analyses of covariance were conducted utilizing sex as the independent variable and covarying out pretest from posttest scores. The analyses of two of the factor scores approached significance. First, utilizing factor 3 as the dependent variable an effect for sex was revealed, $F(1,41)=3.74$, $p=.06$. This indicated that males (adjusted $M=3.96$) had more somatic concerns at the end of treatment than did females (adjusted $M=1.58$). An effect for sex approached significance utilizing factor 5 as the dependent variable, $F(1,41)=2.90$, $p<.10$. This indicated that females (adjusted $M=7.14$) reported fewer instances of positive affect than did males (adjusted $M=5.85$).

Effects of Variables in Predicting Dropout Rate

Hierarchical stepwise discriminant function analyses were performed to determine whether the

Table 2
Depression Scores from Repeated Measures
Analyses of Variance

Dependent Variable	F(1,42)	Pretest	Posttest
CES-D total	32.13**	33.46	22.95
BDI total	42.66**	20.91	8.80
Factor 1	55.03**	20.36	11.36
Factor 2	15.02**	11.52	6.27
Factor 3	58.82**	9.14	3.48
Factor 4	28.82**	7.84	4.25
Factor 5	6.84*	4.98	6.11

Note. Factor 1= affective-behavioral; Factor 2= cognitive; Factor 3= somatic; Factor 4= personal worth; Factor 5= ability to experience positive affect.

* $p < .05$. ** $p < .001$.

predictor variables age, sex, scores on the MAST, CES-D, and BDI, and factor scores, could be used to differentiate between those subjects who completed the program and those who dropped out prior to completion. Predictor variables were introduced into the equation in the following order: a) age; b) MAST; c) depression scores, either the CES-D, BDI, or the five factor scores; d) sex. Variables within the depression scores were entered in a stepwise fashion.

Utilizing the total depression scores, no statistically significant discrimination between the two groups was found. However, when the factor scores were utilized, a statistically significant discrimination was achieved, $F(4,136)=3.18$, $p<.02$. Number of cases per group in the present study were used to estimate beforehand probabilities of group membership. Classification according to the discriminant function resulted in 59% of the cases being correctly classified (54% of those who dropped out and 71% of those who completed the treatment program). Thus, the greatest error in this procedure was in the misclassification of those individuals whom the program classified as completing but whom actually dropped out.

On the basis of four variables (age, factor 4, factor 2, and sex), the discriminant function was calculated, $\chi^2(4)=12.25$, $p<.02$. A loading matrix of correlations between the discriminant function and the predictor variables (see Table 3) indicates that age, $F(1,136)=5.13$, $p<.05$, and factor 4, $F(1,136)=5.50$, $p<.05$, account for the separation between the two groups. Specifically, individuals who completed the treatment program were younger ($M=32.15$) and demonstrated higher factor 4 scores ($M=7.80$) than did those individuals who dropped out of the program (M 's=37.52 and 6.55 for age and factor 4, respectively).

Table 3
Results of Discriminant Function Analysis
Utilizing Factor Scores

Predictor Variable	Correlation of Predictor Variable With Discriminant Function	Univariate $F(1,136)$
Age	.70	6.44
MAST	.04	.03
Factor 1 (affective-behavioral)	-.16	.00
Factor 2 (thought content)	-.13	.21
Factor 3 (somatic)	-.04	.03
Factor 4 (personal worth)	-.61	4.85
Factor 5 (experience positive affect)	-.14	.00
Sex	.24	.73
Canonical $\underline{R}$	.29	

Table 3 (continued)

Eigenvalue	.09
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DISCUSSION

Findings gleaned from the results of this study will now be discussed in terms of how they relate to the hypotheses, where discrepancies exist, possible explanations for the outcome, and implications for treatment.

First, it was predicted that degree of depressive symptomatology would discriminate between those alcoholics who completed the treatment program and those who did not. The results of the study partially supported this hypothesis. In terms of total scores on the depression scales, no significant discrimination could be made between those alcoholics who reported fewer indications of depression and those who reported the highest number of indications of depressive symptomatology in predicting program completion or dropout. This finding contradicts that of Shaw et al. (1975) in which the BDI was found to significantly differentiate dropouts from those who remained in treatment. However, when the age variable was included, age differences were found to be significant in predicting dropout/completion rates. It was found that younger individuals were more likely to complete the treatment program. In addition, it was found that

individuals who scored high on factor 4 (personal worth components) were more likely to complete the treatment program. No sex differences were found in predicting dropout/completion rates. It may be that younger individuals are more likely to complete treatment than are older individuals because of their feeling that they are still young enough to turn their lives around, and view completion of treatment as one of the vehicles through which change could occur. This theory is supported by a study by Hamm et al. (1979) which suggests that younger alcoholics may have not yet experienced major life losses due to their alcoholism so that changing behavior may be easier for them and their situation might be more easily rectified.

Similarly, those individuals who scored high on the factor 4 (personal worth) depression component were individuals who reported fewer feelings of themselves or their lives as failures, and fewer feelings of guilt or disappointment in themselves. It may be that these individuals would be more likely to complete the treatment program than those who reported themselves and their lives to be failures, since repeated failure experiences generally lead to feelings of hopelessness and helplessness, neither of which are incentives to

complete a treatment program that, in all likelihood, the alcoholic perceives as just another potential failure experience to add to an already lengthy list.

It was expected that behavioral, somatic, and cognitive components of depression would change during the course of treatment while the affective component would not. In fact, all the components changed in that these symptoms abated over treatment. It is interesting to note that in this population the affective and behavioral dimensions of depression were so highly correlated that they were not found to be two separate components, and that both changed. Perhaps in other populations the affective component is independent of the behavioral component. But because alcohol is a central nervous system depressant the physiological and affective dimensions may not be separate and this may manifest in the structure of the alcoholic's depression immediately after detoxification.

Next, it was hypothesized that females would demonstrate higher levels of depression than would males immediately after detoxification and at the completion of treatment. Regardless of sex, scores on the posttest were lower than scores on the pretest,

indicating that individuals were less depressed at the completion of treatment than at the beginning. This finding was not unexpected; that depressive symptoms decrease during the course of treatment for alcoholism is well documented (Weingold et al., 1968; Smith & Layden, 1972; Rohan, Tatro, & Rotman, 1969). However, it was expected that female alcoholics would demonstrate more severe depression than would male alcoholics. This was not found to be the case. These results appear to coincide with those of Pottenger et al. (1978), and Rosen (1960), in which no significant differences were found on a number of scales measuring depression, but contradict those of Zielinski (1979) in which females were significantly more depressed than were males on several depression scales.

In fact, the sex variable approached significance in the repeated measures analyses only for factor 3 (somatic component) in which it was found that females report more somatic symptoms of depression than do males immediately after detoxification but fewer somatic symptoms than do males at the completion of treatment. In looking at sex differences when initial scores were covaried from posttreatment scores, in two instances were differences that approached significance

found. Males were again found to report more somatic concerns than were females at the end of treatment. It may be that the increase in somatic concerns on the part of the males is due to the fact that, once in treatment, males are away from the outside environment in which they have been heavily socialized to maintain a more macho image and to ignore or deny debilitating somatic conditions which may contribute to depression. Once confronted in treatment with the likelihood that somatic symptoms are part of the male alcoholic's reality and due to the heavy emphasis in treatment programs on being honest with oneself and others, it may be that the macho image is torn down for that time and that males become not only more aware of their somatic condition, but also more likely to report these symptoms. In contrast to societal expectations for males, it is much more socially acceptable for females to report somatic concerns. There is no macho image to live up to; in fact, it seems that females are expected to manifest more somatic conditions than are males. Therefore, that females score higher than males on somatic symptoms at the onset of treatment is not surprising. The difference in number of somatic concerns at the completion of treatment may be due to

the willingness of the male to now report what had previously been ignored or denied in conjunction with the more socially permissive and honest atmosphere of the treatment setting.

Contrary to the findings of no gender differences, it was found that females reported fewer instances of positive affect posttreatment than did males. This indicated that although the general level of depression among females abated, they still felt less able compared to males to be happy and to enjoy life. It may be that female alcoholics perceive that they receive less support and more criticism during treatment than do males, which results in their having fewer positive experiences. Charkins (1984) found that at the beginning of treatment females expect more emotional support from their friends than do males. It may be that that emotional support never materializes thereby lessening feelings of happiness and enjoyment. A study by Beckman (1978) indicates that female alcoholics feel inadequate and powerless. It may be that these feelings lead to a general inability to enjoy life and to be happy.

Given that the results of this study and others indicate few sex differences it could be that perceived

differences in the way male and female alcoholics should be approached in treatment may be overemphasized and that perhaps a more generic treatment approach could be just as beneficial as one that is geared to emphasizing gender differences in treatment methods. Other variables, such as personality types, availability of coping mechanisms, and extent of locus of control, may be much more important than gender differences.

There were several limitations to this study which made clear the need for further research. Foremost was the difficulty in obtaining the study sample. The expected high (60%) dropout rate during the course of the treatment program made it necessary to test many individuals initially in order that an acceptable number would still be in treatment at completion time. As in other studies, women alcoholics were particularly difficult to obtain as proportionately fewer female alcoholics enter treatment than do males. In addition, many more females than males refused to participate in the study. Approximately 12% of all females refused to participate in the study while approximately 1% of males refused to participate. It may be that refusal to participate indicated very high levels of

depression, and therefore, this study did not include those females who were most depressed, making this an important selection factor.

A method for followup in order to assess an individual's depression level several months after treatment would be most helpful. Due to the often transient nature of this population, reluctance on the individual's part to answer followup questionnaires, and the high relapse rates among treated alcoholics, this followup would be very difficult to gather. However, it is important in order to assess treatment effectiveness.

Finally, the results of this study were obtained using self-report instruments. It may be that, for this particular population, self-report instruments are not very valid due to the large part that denial plays in the disease of alcoholism. Alternative assessment methods such as clinical interviews or behavioral measures might yield more objective data but are costly and time consuming, and therefore it appears that self-report measures may be the most expedient method of gathering data.

APPENDIX

Informed Consent Statement

The Department of Psychology at California State College at San Bernardino supports the practice of protection for human subjects participating in research. The following information is provided so that you can decide whether you wish to participate in the present study.

This study is concerned with your alcohol use, and your feelings about yourself, and how they may change over the next few months. You will be given a questionnaire now, at the end of your treatment program, and ten weeks after the end of your treatment program.

Your participation is solicited but is strictly voluntary. Be assured that your name will not be associated in any way with the research findings. I appreciate your cooperation very much.

Sincerely,

Peggy A. Snow

Signature of person agreeing to participate

DEMOGRAPHIC INFORMATION

PART I

Code # _____

Please circle or fill in the appropriate response as it applies to you.

1. Sex M F
2. Age _____
3. Marital Status
 - a. single, never married
 - b. separated
 - c. divorced
 - d. married
 - e. widowed
4. Education
 - a. less than 12 years
 - b. H.S. diploma
 - c. 1-3 years of college
 - d. college degree
 - e. graduate education
5. Your occupation _____
6. Your annual income _____
7. Your spouse's annual income _____
8. Total family annual income _____

CENTER FOR EPIDEMIOLOGICAL STUDIES-

DEPRESSION SCALE

PART II

Code # _____

This section contains a list of the ways you might have felt or behaved. Please indicate how often you have felt this way during the last week.

RARELY OR NONE OF THE TIME (less than 1 day)
 SOME OR LITTLE OF THE TIME (1-2 days)
 OCCASIONALLY OR MODERATE AMOUNT OF TIME (3-4 days)
 MOST OR ALL OF THE TIME (5-7 days)

<u>DURING THE PAST WEEK:</u>		<u>A</u>			
		<u>RARELY</u>	<u>LITTLE</u>	<u>MODERATE</u>	<u>MOST</u>
1.	I was bothered by things that don't usually bother me ..	0	1	2	3
2.	I did not feel like eating; my appetite was poor...	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends	0	1	2	3
4.	I felt that I was just as good as other people	0	1	2	3
5.	I had trouble keeping my mind on what I was doing	0	1	2	3
6.	I felt depressed ...	0	1	2	3
7.	I felt that everything I did was an effort	0	1	2	3

<u>DURING THE PAST WEEK:</u>		<u>RARELY</u>	<u>A LITTLE</u>	<u>MODERATE</u>	<u>MOST</u>
8.	I felt hopeful about the future ...	0	1	2	3
9.	I thought my life had been a failure	0	1	2	3
10.	I felt fearful	0	1	2	3
11.	I was happy	0	1	2	3
12.	My sleep was restless	0	1	2	3
13.	I talked less than usual	0	1	2	3
14.	I felt lonely	0	1	2	3
15.	People were unfriendly	0	1	2	3
16.	I enjoyed life	0	1	2	3
17.	I had crying spells	0	1	2	3
18.	I felt sad	0	1	2	3
19.	I felt that people dislike me	0	1	2	3
20.	I could not get "going"	0	1	2	3

BECK DEPRESSION INVENTORY

PART III

Code # _____

Please circle or fill in the appropriate response as it applies to you.

1.
 - a. I do not feel sad
 - b. I feel blue or sad
 - c. I am blue or sad all the time and I can't snap out of it
 - d. I am so sad or unhappy that it is very painful
 - e. I am so sad or unhappy that I can't stand it
2.
 - a. I am not particularly pessimistic or discouraged about the future
 - b. I feel discouraged about the future
 - c. I feel I have nothing to look forward to
 - d. I feel that I won't ever get over my troubles
 - e. I feel that the future is hopeless and that things cannot improve
3.
 - a. I do not feel like a failure
 - b. I feel I have failed more than the average person
 - c. I feel I have accomplished very little that is worthwhile or that means anything
 - d. As I look back on my life all I can see is a lot of failures
 - e. I feel I am a complete failure as a person (parent, husband, wife)
4.
 - a. I am not particularly dissatisfied
 - b. I feel bored most of the time
 - c. I don't enjoy things the way I used to
 - d. I don't get satisfaction out of anything any more
 - e. I am dissatisfied with everything
5.
 - a. I don't feel particularly guilty
 - b. I feel bad or unworthy a good part of the time
 - c. I feel quite guilty
 - d. I feel bad or unworthy practically all of the time
 - e. I feel as though I am very bad or worthless

6.
 - a. I don't feel I am being punished
 - b. I have a feeling that something bad may happen to me
 - c. I feel I am being punished or will be punished
 - d. I feel I deserve to be punished
 - e. I want to be punished
7.
 - a. I don't feel disappointed in myself
 - b. I am disappointed in myself
 - c. I don't like myself
 - d. I am disgusted with myself
 - e. I hate myself
8.
 - a. I don't feel I am any worse than anybody else
 - b. I am very critical of myself for my weaknesses or mistakes
 - c. I blame myself for everything that goes wrong
 - d. I feel I have many bad faults
9.
 - a. I don't have any thoughts of harming myself
 - b. I have thoughts of harming myself but I would not carry them out
 - c. I feel I would be better off dead
 - d. I have definite plans about committing suicide
 - e. I feel my family would be better off if I were dead
 - f. I would kill myself if I could
10.
 - a. I don't cry any more than usual
 - b. I cry more now than I used to
 - c. I cry all the time now. I can't stop it
 - d. I used to be able to cry but now I can't cry at all even though I want to
11.
 - a. I am no more irritated now than I ever am
 - b. I get annoyed or irritated more easily than I used to
 - c. I feel irritated all the time
 - d. I don't get irritated at all at the things that used to irritate me
12.
 - a. I have not lost interest in other people
 - b. I am less interested in other people now than I used to be
 - c. I have lost most of my interest in other people and have little feeling for them
 - d. I have lost all my interest in other people and don't care about them at all

13.
 - a. I make decisions about as well as ever
 - b. I am less sure of myself now and try to put off making decisions
 - c. I can't make decisions any more without help
 - d. I can't make any decisions at all any more
14.
 - a. I don't feel I look any worse than I used to
 - b. I am worried that I am looking old or unattractive
 - c. I feel that there are permanent changes in my appearance and they make me look unattractive
 - d. I feel that I am ugly or repulsive looking
15.
 - a. I can work about as well as before
 - b. It takes extra effort to get started at doing something
 - c. I don't work as well as I used to
 - d. I have to push myself very hard to do anything
 - e. I can't do any work at all
16.
 - a. I can sleep as well as usual
 - b. I wake up more tired in the morning than I used to
 - c. I wake up 1-2 hours earlier than usual and find it hard to get back to sleep
 - d. I wake up early every day and can't get more than 5 hours sleep
17.
 - a. I don't get any more tired than usual
 - b. I get tired more easily than I used to
 - c. I get tired from doing anything
 - d. I get too tired to do anything
18.
 - a. My appetite is no worse than usual
 - b. My appetite is not as good as it used to be
 - c. My appetite is much worse now
 - d. I have no appetite at all any more
19.
 - a. I haven't lost much weight, if any, lately
 - b. I have lost more than 5 pounds
 - c. I have lost more than 10 pounds
 - d. I have lost more than 15 pounds

20. a. I am no more concerned about my health than usual
b. I am concerned about aches and pains or upset stomach or constipation or other unpleasant feelings in my body
c. I am so concerned with how I feel or what I feel that it's hard to think of much else
d. I am completely absorbed in what I feel
21. a. I have not noticed any recent change in my interest in sex
b. I am less interested in sex than I used to be
c. I am much less interested in sex now
d. I have lost interest in sex completely

MICHIGAN ALCOHOLISM SCREENING TEST

PART IV

Code # _____

1.	Do you feel you are a normal drinker?	YES	NO
2.	Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening before?	YES	NO
3.	Does your spouse (or parents) ever worry or complain about your drinking?	YES	NO
4.	Can you stop drinking without a struggle after one or two drinks?	YES	NO
5.	Do you ever feel bad about your drinking?	YES	NO
6.	Do friends or relatives think you are a normal drinker?	YES	NO
7.	Do you ever try to limit your drinking to certain times of the day or to certain places?	YES	NO
8.	Are you always able to stop drinking when you want to?	YES	NO
9.	Have you ever attended a meeting of Alcoholics Anonymous (AA)?	YES	NO
10.	Have you gotten into fights when drinking?	YES	NO
11.	Has drinking ever created problems with you and your spouse?	YES	NO
12.	Has your spouse (or other family member) ever gone to anyone for help about your drinking?	YES	NO
13.	Have you ever lost friends or girl-friends/boyfriends because of drinking?	YES	NO

14.	Have you ever gotten into trouble at work because of drinking?	YES	NO
15.	Have you ever lost a job because of drinking?	YES	NO
16.	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
17.	Do you ever drink before noon?	YES	NO
18.	Have you ever been told you have liver trouble? Cirrhosis?	YES	NO
19.	Have you ever had delirium tremens (DTs), severe shaking, heard voices or seen things that weren't there after heavy drinking?	YES	NO
20.	Have you ever gone to anyone for help about your drinking?	YES	NO
21.	Have you ever been in a hospital because of drinking?	YES	NO
22.	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?	YES	NO
23.	Have you ever been seen at a psychiatric or mental health clinic, or gone to a doctor, social worker, or clergyman for help with an emotional problem in which drinking had played a part?	YES	NO
24.	Have you ever been arrested, even for a few hours, because of drinking behavior?	YES	NO
25.	Have you ever been arrested for drunk driving or driving after drinking?	YES	NO

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