INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

University Microfilms International
300 North Zeeb Road
Ann Arbor, Michigan 48106 USA
St. John's Road, Tyler's Green
High Wycombe, Bucks, England HP10 8HR

LIFE STRESSES AND ALCOHOLISM IN WOMEN

by

JEAN E. LITZ

A dissertation submitted to the
Graduate Faculty in Psychology
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy,
The City University of New York

1978

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

August 2, 1978
Date

Florence L. Denmark
Chairman of the
Examining Committee

August 7, 1978
Date

Florence L. Denmark
Executive Officer

Florence L. Denmark, Ph.D.

Barbara S. Dohrenwend, Ph.D.

Charles Winick, Ph.D.
Supervisory Committee

The City University of New York

ABSTRACT

Life Stresses and Alcoholism in Women

Jean E. Litz

Advisor: Professor Florence L. Denmark

This investigation sought to determine the relationship between life stresses and alcoholism in women. It attempted to study (a) the differences in the quantitative and qualitative impact of life stresses between alcoholic and nonalcoholic women and (b) the relationship between life stresses and the intake of alcohol. The study was also intended to identify the specific life events and the general life-event areas that discriminated between the female alcoholic and nonalcoholic. An attempt was also made to determine the role of precipitating events and predisposing factors in the development of alcoholism. Finally, the illness of alcoholism was studied with regard to three stages of its development: the periods prealcoholism, onset, and active alcoholism.

A sample of 200 women from New York City, of which 100 were alcoholic, were employed in the attempt to test the following hypotheses:

1. Alcoholic women experience (a) more femininity-threatening events than nonalcoholic women, (b) report more

events in the family area than the personal or work areas and (c) that (for the alcoholic women) these events are related to alcohol intake.

2. The greatest impact of life stresses is experienced during the onset of active alcoholism as compared with the period of prealcoholism.

3. In comparison with the years of prealcoholism, during the period of active alcoholism alcoholic women (a) experience a greater impact of life stresses, (b) experience more events that are within their control and (c) have more of their number using drugs.

4. The year in which the alcoholic women decide to stop drinking is the one in which they (a) experience the greatest amount of stress from the personal area of their lives and (b) attribute their life stresses in general to the use of alcohol.

The following results were obtained:

1. The alcoholic women reported a greater number of femininity-threatening events during their prealcoholic years than their nonalcoholic counterparts and that these events, for the alcoholic women, were significantly and positively related to alcohol intake. Additionally, events in the family area were reported to have a significantly greater impact on alcoholic women than events in the

personal and work areas. The readjustments caused by these events too were significantly and positively correlated with intake of alcohol.

2. As compared with the previous years, alcoholic women reported significantly more stressful life events during onset. However, conceptual problems relating to the determination of onset required that further study of this issue be conducted before unequivocal conclusions concerning this stage can be drawn.

3. The alcoholic women experienced a greater impact of life stresses, an increased number of events considered within their control and increased drug use during the stage of active alcoholism than during the prealcoholic stage.

4. Events in the personal area and attributions of life stresses to alcohol intake predominated in the year preceding recovery.

In addition, the results indicated that the specific events were so numerous and diverse that no identifiable event or cluster of events adequately discriminated between alcoholics and nonalcoholics.

There were several limitations, including those relating to the determining of the stages of alcoholism, and the assessment of the locus of responsibility variable,

that were noted. One consequence is that a clear-cut determination of the roles of predisposing and precipitating factors in the development of alcoholism must await further research.

Aknowledgements

"The squirming facts exceed the squamous mind"

Wallace Stevens
Collected Poems, p.215

Appreciation to Salomon Rettig and Walter Weiss for providing the "contextual background" for the event: "Begin school or training program," and to Stanley Milgram for his contribution to its categorization as an "objective gain event" on my Personal LES. Most special thanks to Florence Denmark, Barbara Dohrenwend, and Charles Winick who mediated the impact of this recent event: "Long period of time doing dissertation" and helped me to remain within the low-risk range (150-199 LCU, POS) during the years preceding REC.

****

II. I was of three minds,
Like a tree
In which there are three blackbirds.

VIII. I know noble accents
And lucid, inescapable rhythms;
But I know, too,
That the blackbird is involved
In what I know.

Wallace Stevens
Collected Poems, pp. 93, 94.

Thus
To my mother
Because she couldn't;
To Geoffrey Richstone
Because he did.
To penguins because they, too, are blackbirds.

Table of Contents

List of Tables

Although female alcoholism is a problem of growing concern in the United States, research in this area is sparse in comparison with that on male alcoholism (Lisansky, 1957). The causes of alcoholism are unknown, yet the number of theories that have been advanced are vast. Theories concerning the etiology of female alcoholism can be grouped into one of two classes: (a) developmental or predisposing factors, and (b) precipitating or situational factors. In most instances, insufficient evidence has been presented to support the contentions of either theoretical position (Sutherland, 1950).

The search for a single cause of alcoholism may be an unrealistic goal, and at this stage of research on alcoholism it is important to empirically investigate some of the crucial factors from both classes of theory and their association with alcoholism and its progression.

Factors from both theoretical positions can be subsumed under the rubric of stressors. Although this kind of conceptualization has not been made in the area of alcoholism, it has been made for other mental and physical illnesses, and is used in the present investigation of female alcoholism.

Definition of alcoholism

Definitions of alcoholism are varied and numerous and no one has yet come up with an entirely satisfying one which would permit all to agree upon who is and who is not an alcoholic. In this study, the term "female alcoholic" is applied to any women whose repeated use of alcoholic beverages causes her physical or emotional harm, interferes with her family, social, or economic functioning and who has lost control over her alcohol intake. This definition closely follows the one adopted by the World Health Organization (1955).

Loss of control is said to have occurred when any consumption of alcohol sets into motion compulsive drinking. That is, once the woman has begun to drink, she cannot stop until she becomes too ill to drink any more or "passes out." Although the drinker is unable to stop once she starts drinking, she is generally able to decide when to start again (Jellinek, 1960). Once loss of control has occurred, it is generally agreed that complete cure, in the sense that the woman might learn to drink again in moderation, is nearly impossible. If the individual is to recover, permanent abstinence must be the goal (Keaton, 1966; Weeks, 1972; Fox & Leach, 1970; Glasscote, Plaut, Hammersley, O'Neill, Chafetz, & Cumming, 1967; Lippencott, 1966; Trice, 1966).

Drug Abuse and Alcoholism

Curlee (1970) found that the abuse of tranquilizers and sedatives has become a serious pattern to female alcoholism in recent years. The pattern involves "exceeding the recommended dosages, and feeling dependent upon the medication" (p. 244).

In many instances, drugs are prescribed too freely and without careful evaluation of the patient, resulting in this dependency. Cooperstock (1971) found that there is a tendency for physicians to prescribe mood-modifying drugs more readily for women patients than for men. Another survey found that American women in general use more drugs than men and that "not employed housewives" were the occupational group with the largest percentage of users of barbiturates, antidepressants, amphetamines, minor tranquilizers, and sedative/hypnotic drugs (N.Y. Narcotic Control Commission, 1971).

These drugs are not necessarily used for psychiatric illnesses, but rather as substitutes for, or in addition to alcohol. "Drugs and alcohol share two characteristics essential to understanding their abuse: (1) they facilitate interpersonal communication and relieve psychic pain, and (2) they are useful in coping with or adapting to life" (Bruhn, 1973, p. 186). This issue was addressed in an editorial statement in JAMA (1972):

> Often the physician will prescribe barbiturates for a patient who is an alcoholic or problem drinker. It is well known that alcohol and barbiturates can be fatal if used at the same time. . . . He should address himself to the problem of improving the status of patients who are abusers of drugs and alcohol. (p. 1749)

Social Significance

Alcohol is the most abused drug in the United States (AMA, 1969). The extent of problems related to alcoholism, such as disintegration and disruption of the family, criminal offenses, and highway accidents, is increasing and has reached major proportions (Chafetz, 1972). The American Medical Association has defined alcoholism as a disease rather than a moral issue: "Alcoholism is a complex disease with biological, psychological, and sociological components" (1971). As such, it is the third leading cause of death in the United States and, because of its toxic and irritating effect on tissues, contributes to the etiology of the first two causes of death, heart disease and cancer, respectively (Chafetz, 1971).

The National Council on Alcoholism estimated the number of alcoholics at nine million in this country. This is consistent with several other survey estimates (Efron & Keller, 1970; Cahalan, Cisin, & Crossley, 1969; Harris, 1971). Menninger (1957) has said that for any other illness, if it affected as many people as does

alcoholism, we would call a national emergency.

The ratio of male to female alcoholics has not been statistically determined. Keller and Efron (1955) estimated the number of female alcoholics to be between 3/4 of a million and 1 million. Block (1965) and Fox (1966) estimated that there are 4.5 million female alcoholics; that is, they estimated a 1:1 male-female ratio. Even if the lower estimate is correct, the number of women afflicted still makes this an important social problem, affecting not only the individual alcoholic, but her family, friends and employers as well.

Many gaps in information in the area of female alcoholism exist. This is due, in part, to the fact that several studies which did investigate this problem were inadequate for various reasons (Sutherland, 1950).

Some studies have utilized public institutions because of the ready availability of subjects (Kinsey, 1966; Cramer & Blacker, 1963). In these cases, the results and conclusions of these studies were based on a population which was overrepresentative of women from lower socioeconomic groups. Very little is known, for example, about the "hidden drinker," who does not find her way into jail or other public institutions, who publicly appears well-integrated, and who performs well socially

(Kinsey, 1966; 1968).

It is reasonable to assume that the majority of female alcoholics would fit the "hidden drinker" category, based on knowledge of the pejorative social and cultural attitudes concerning the use of alcohol by women, females in bars, and female inebriates. Some examples of these attitudes are:

> There's no such thing as a beautiful drunk . . . The drunken female evokes no laughter, no sympathy, no reaction at all except contempt and utter disgust. (Karpman, 1948, p. 1)

> It is more traditionally acceptable for men to drink in the first place . . . Drunkenness and alcoholism in women are socially disapproved but are tolerated and condoned in men . . . A woman who becomes alcoholic must be very disturbed because she flies in the face of rigid social conventions and runs the risk of social ostracism. (Blane, 1968, p. 118)

> Moralistic attitudes toward the female alcoholic have been especially severe since female inebriety involves serious violations of deeply ingrained mores in American culture. (Kinsey, 1966, p. 4)

Finally, Lisansky (1958) wrote:

> Alcoholism in women is more disturbing because it represents the breaking of strong taboos against drinking and intoxication in women, because it runs so strongly counter to American ideals of the self-controlled, lady-like behavior, and because it probably produces even greater disruption in family life than alcoholism in men. (p. 73)

Therefore, it is likely that the majority of alcoholic women attempt to remain concealed from public view. Although their problems with alcohol are as serious as those of men, it is probable that they do not generally come to the attention of researchers.

Other studies of female alcoholism have used case record analyses. These too were somewhat limited because much of the information contained in these records is vague and insufficient and the behavioral descriptions are so broad that they can be interpreted in various different ways. For example, Lisansky (1958) stated that many records and items had to be discarded because they were ill-defined and inconsistent. In some records "there was a vague 'don't get along,' . . . and in others, detailed accounts of quarrels" (p. 594). Another study (Wall, 1937) referred to "loose heterosexual activity," which could mean anything from one affair before marriage, through extramarital affairs, to prostitution (p. 947).

Schuckit (1972) reviewed several studies in which patients were interviewed or tested while in the hospital being detoxified and/or sedated. Many of the conclusions formed about the female alcoholic's personality and psychopathology were confounded with the effects of withdrawal and/or medication. Libb and Taulbee (1971)

administered that MMPI to alcoholic patients within 1 to 3 days after admission to the hospital. They found that a number of these patients exhibited psychotic-type profiles. The MMPI was readministered 2 to 4 weeks later and the scores indicated a significant reduction or disappearance of psychotic symptoms. This study suggested that women in these situations do demonstrate a wide variety of emotional disturbance, such as lability of affect, poor impulse control, suicidal ideation, and anxiety, but that the picture changes after a period of sobriety. Even in nonalcoholic medical or surgical patients, hospitalization in itself can produce behavioral changes and emotional disturbance. This effect can also occur in an out-patient clinic, since the setting, and its accompanying role expectations, differ considerably from the person's natural environment.

In addition, women who are relatively free from psychiatric syndromes other than alcoholism should not be taking psychoactive drugs for more than a week (Bissell, 1975). If they were taking these medications, it could not be concluded that alcoholism was the sole or even main disease syndrome studied. When uncomplicated by other syndromes, alcoholism is treated solely by (a) elimination of alcohol, (b) psychotherapy, and (c) nutritional

rehabilitation. In general, drugs are contraindicated after the first few days of detoxification, since the end result could be iatrogenic addiction (Bissell, 1975).

Therefore, if one is to draw appropriate conclusions, it seems desirable to delay investigation of the alcoholic person until a period of sobriety has been achieved.

Statement of the Problem

The purpose of this study is to (a) explore the relationship between stress and the drinking behavior of women who become alcoholic, (b) identify the precipitating factors or stressful events which may be associated with the change in the woman's drinking pattern from social to alcoholic drinking, (c) investigate the relationship between stress and the decision process involved in arresting the disease, and (d) explore the relationship between alcohol and drug abuse.

In an attempt to avoid some of the problems encountered in the previously mentioned studies, the present investigation intended to interview women who were (a) representative of various socioeconomic classes, (b) drug and alcohol free, and (c) in a natural setting.

Although women who were taking prescribed psychiatric medication at the time of the interview were excluded from study, women who were cross-addicted during their years

of active alcoholism were included, since "alcohol and drug addiction or dependence are viewed as linked and springing from similar roots" (Stewart, 1971, p. 31).

Review of the Literature

The literature of alcoholism and related substance abuse is vast. Theories, speculations, anecdotal information and to a lesser extent, data, are as abundant as they are contradictory. Therefore, no attempt was made to evaluate the entirety of the literature. This review presents only those studies closely related to the present one. It attempts to encapsulate the present basic understanding of (a) precipitating or situational factors, (b) predisposing or developmental factors, and (c) the relationship of stress to alcohol and drug abuse.

Precipitating or Situational Factors

The literature is generally supportive of the contention that precipitating factors have a powerful impact upon female alcoholics. Specific life experiences, it is argued, seem to play a significant role in the onset of alcoholism in women. Wall (1937) stated that for women "excessive drinking did not grow out of the ordinary type of social indulgence. A definite personal problem . . . marked the beginning" (p. 946). Lisansky (1957) found that the overwhelming majority of alcoholic women studied could trace the onset of alcoholism to specific past events--such as death of a parent, divorce, and unhappy

love affairs.

Lolli (1953) cited childbirth and menopause as etiological precipitants. Belfer, Shader, Carroll, and Hammatz (1971) found that 20 of 39 women studied related their drinking to menstruation. Curlee (1968) also noted that certain types of events which have to do with female biological functions may precipitate drinking. One such event was the "empty nest syndrome," a middle-age identity crisis involving menopause and children growing up and leaving home. Finally, Wilsnack (1972) found that 24 of the 26 alcoholic women interviewed experienced some type of crisis shortly before the onset of excessive drinking. All of these studies pointed to the importance of precipitating or situational factors in female alcoholism.

Predisposing or Developmental Factors

In addition to the precipitating factors, many studies of female alcoholism have cited developmental or predisposing factors as crucial elements in the onset of this disease. Examples of such factors included: kinds of parental behavior during childhood, personality traits or states, identity and self-concept problems, and motivation. There has, however, been consistent lack of agreement with regard to the importance of any one cluster of factors.

Lindbeck (1972) reviewed the literature and found

that feelings of depression, self-depreciation, insecurity and inadequacy in the sex role, and social ineptness were the factors which were repeatedly identified in studies of female alcoholics.

Shuckit (1972) detected a slightly different composite. In his review, affective disorders, suicidal behavior, disruption of early home life, inability to relate to authority figures, and poor impulse control emerged as the key variables.

Cantanzaro (1967) listed the following characteristics as the important features leading to alcoholism: lack of emotional maturity, high levels of interpersonal anxiety, feelings of isolation, a tendency toward grandiosity, ambivalence toward authority, perfectionism, compulsiveness, feelings of guilt, sex-role confusion, angry-over-dependency, and an inability to express angry feelings adequately.

Sutherland (1950) reviewed 37 studies which attempted to discover clusters of underlying factors that differentiated alcoholics from nonalcoholics. His conclusions were that there was no satisfactory evidence that persons of one type are more likely to become alcoholics than persons of another type. Thompson (1956) supported this position. He argued that no conclusive evidence of a single ensemble

of traits is invariably associated with alcoholism.

Other investigators have placed special emphasis on one or two hypothesized underlying factors which were thought to be predictive of alcoholism, rather than attempting to isolate a cluster of personality variable.

Winokur, Reich, Rimmer, and Pitts (1970) hypothesized that affective disorders in the individual and her relatives were important etiological factors. Winokur and Clayton (1968) emphasized depressive reactions and delusions.

Jones (1971) said that inadequate coping devices and manipulative tendencies differentiate female alcoholics from nonalcoholics. High scores on the Neurotic Scale of the MMPI were also found to identify the female alcoholic (Zelen, Fox, Gould, & Olson, 1966). Finally, Pollmer (1955) claimed that the female alcoholic is characterized by a high degree of anxiety, the origin of which is unknown and about which there is an inability to do anything.

A number of studies emphasized parental influences. DeLint (1964) noted that these women were frequently without one or both natural parents in the first five years of life--an observation also made by Rathad and Thomson (1971). Where parents were present, the mothers were found to be domineering (Kinsey, 1968). Fathers were reported, in many cases, to be psychotic or alcoholic

(Wood & Duffy, 1966).

These data are supported by the findings of Bleuler (1955) that upper-class alcoholic patients tended to have parents who were either alcoholic and/or behaviorally disordered, and by McCord and McCord (1960) who reported that the parents of alcoholics experienced, on the average, significantly more psychopathology than parents of nonalcoholics. This type of parentage was thought to result in sex-role confusion (McCord & McCord, 1960).

The problem of sex-role confusion has been regarded as particularly pertinent and accordingly received much attention. Wood and Duffy (1966) stated that alcoholic women have overidentified with, and were overattached to, alcoholic fathers. It was suggested that their fathers served as role models for later drinking behavior. They contended that the alcoholic woman is inclined to marry a man who, like her mother, is cold, domineering, and emotionally uncommunicative. When her emotional needs are then frustrated, she, like her father, turns to alcohol. Since there is poor female identification, the anxieties also concerned giving and accepting love and accepting children. Therefore, they suggested that women resort to alcohol in order to relieve anxieties about role confusion.

Marital choices were studied by Busch, Kormondy, and

Feurlein (1973). They found masculine self-concepts in alcoholic women complimented by feminine self-concepts in their husbands, which supports the findings of Wood and Duffy. Although the alcoholic female sometimes marries a man who drinks excessively, the incidence of these marriages is not thought to be greater than that found in the general population. However, choice of an alcoholic mate is especially likely to occur in second and subsequent marriages (Ullman, 1952), which is somewhat inconsistent with Wood and Duffy.

Sherfey (1955), Lisansky (1957), and Friedan (1963) have also cited role-confusion as a particularly significant factor in the development of female alcoholism. However, their view was that role confusion was not necessarily a result of identification with the father, but a reflection of changing and confusing societal expectations, and an ambiguous mixture of limitations and demands. Confusing social roles, rather than intrapsychic role confusion, was therefore the critical factor in the "apparent increase" in alcoholism among young women today.

Wilsnack (1973) also noted the importance of role confusion to the etiology of female alcoholism but preferred a notion of "incomplete feminine identification." Her data "failed to support the rather common assumption that female

alcoholics' masculine tendencies reflect identification with the fathers" (p. 259). She found identification occurred with masculine-acting mothers, which in turn conflicted with the women's conscious femininity or stereotypical ideal. Drinking, then, was for the purpose of conflict-resolution by enabling the woman to feel and behave more in accord with her feminine "sex-typed" attitudes, interests, and values. This finding was in accord with those of Kinsey (1966), who used a seventeen-item questionnaire to tap femininity, and Belfer, et al. (1971), who used the California Psychological Inventory's Femininity Scale. Both studies revealed normal conscious femininity scores.

McClelland, Davis, Kalin, and Wanner (1972) conducted extensive investigations of male alcoholism. They found that males drink to enhance feelings of personal power. Using similar techniques, Wilsnack (1972) found that both alcoholic and nonalcoholic women drink to enhance feelings of femininity. She reported that heavy drinkers attained higher scores on projective measures of masculinity prior to drinking than did light drinkers. She stated: "These women may experience some degree of insecurity about their own femininity, and drinking may temporarily reduce this insecurity by making them feel less 'masculine' or more

'feminine' than they usually do" (p. 360). For alcoholic women, she found conscious femininity, stylistic or behavioral masculinity, and unconscious masculinity to be characteristic. According to Wilsnack, the potential female alcoholic "turns to alcohol in an attempt to gain artificial feelings of womanliness . . . [and eventually] new threats to her sense of feminine adequacy cause her to drink even more heavily, until her nondrinking alternatives for feeling womanly are severely restricted (p. 362).

In one of the few studies of middle-class women alcoholics Wall (1937) also found many to have behavioral masculinity. He provided the following psychosexual descriptions of his subjects:

> Prior to puberty they were active and energetic . . . They were fond of boys games and sports, frequently expressing openly their intolerance of the interests of their female associates . . . In their schoolwork, they were above the average. There were 48 married women (N=50). Their attitude toward their children was either one of indifference or neglect . . . Naturally these women derived little satisfaction from homemaking and domestic duties. They were bored and unhappy. There was a restless aggressive part of their personality without outlet for expression . . . Among them were women of considerable accomplishment . . . the larger number showed unconventional social and moral standards . . . Emotional instability was present in 28 of the patients, the usual manifestations being mild depressions associated with excessive drinking. (p. 945)

Wall (1937) illustrated his general findings with several "representative case histories." However, it is not clear whether he viewed female alcoholism as correlated with failure to accept the wife-mother role, or with failure to find an additional, appropriate outlet for aggression.

Hirsch (1962) apparently opted for the former relationship. According to him the woman's position "is molded by centuries of biological and cultural conditioning to the wife-mother role." When alcoholism begins to disrupt the home, which is the woman's bio-social core, it "disintegrates the very bedrock upon which her status and prestige rest." This leads to still more excessive drinking which "may explain the seriousness of alcoholism in women not only to themselves but to everyone around them" (p. 249). This formulation is consistent with Wilsnack's (1973) in that it, too, suggests that female alcoholism is to some extent related to sex-role problems.

Lisansky (1958) offers still another interpretation of the contribution of sex role to alcoholism. She suggested that the rise in alcoholism among women in the decades following World War II was related to the new pressures and strains in women's lives as a result of the

change in the culture's definition of feminine behavior. She stated:

> Pressures have piled up, produced by changes in the role and status of women, the swiftness of such changes, the vagueness of new standards, the strains of competing in what used to be men's work, and the conflicts of opposite and mutually exclusive goals. Coupled with the increase in the sense of strain felt by many women is the increased acceptability of women's drinking. (p. 74)

This elaboration of her earlier work (1957), while remaining in agreement with Sherfey and Friedan, clearly differs from Wilsnack's theory in that it points to cultural rather than childhood factors. However, Wilsnack's motivational theory remains applicable. Regardless of the mode of acquisition of their sex-role confusion, that they drink to enhance feelings of womanliness is tenable.

Curlee (1967) concurred with the socio-cultural etiology of role confusion. Boys begin to drink with the goal of being able to "drink like a man" in order to prove their adulthood. Drinking may be an informal ritual, for some boys, which signifies passage from adolescence into the adult male community. For girls, biological events have traditionally indicated this change in status. For example, breast development and, more important, menses, declare that the girl can do what women do. They can attract a mate and bear children. However, these events

do not connote an ability to perform in any other capacity. Since drinking among girls is increasing (Chafetz, 1974), it is possible that they are doing so not to demonstrate that they are female adults, but that they are equal to male adults and can "do anything men can do." Later on, "this process of assuming a masculine role in an area of activity which is often subject to social disapproval, creates for the woman who drinks a great deal of ambivalence, which Ullman (1960) considers to be an important factor in alcoholism" (Curlee, 1967, p. 156).

Curlee's (1967) motivational theory would seem to be in opposition to Wilsnack's in that women drink to acquire masculine rights, power, and status rather than to feel feminine. However, she also speculated that drinking may simply be a small part of the role confusion involved in the basic decision to seek a career. This is compatible with Wilsnack's theory, in that seeking a "male" role or a career, rather than homemaking, may also threaten feelings of femaleness, creating a need to enhance womanly feelings.

Finally, Connor (1963) investigated the self-concepts of alcoholics as influenced by the length of time of sobriety. He found that in the first few months of sobriety, the alcoholic's self-descriptions manifested a "diffuse lack of structure and of organization of the

self" (p. 561). He stated that these characteristics were "related to findings so frequently reported in the literature that the alcoholic has difficulty with personal identification and sex identity" (p. 461). In addition to sex-role confusion, he also found a heightened need for "primary relationships . . . which remains stable and pronounced" even with "lengthening sobriety" (p. 465).

Although the literature on the etiological factors of alcoholism is often contradictory, a pattern does emerge which suggests that female alcoholics have inadequate feelings of femininity and sex-role confusion which are accompanied by heightened needs for primary relationships (Lindbeck, 1972; Wilsnack, 1972, 1973; Schuckit, 1972; Connors, 1962).

Lindbeck (1972) hypothesized that these predisposing factors may sensitize the individual to further traume or to later situational or precipitating events. This was supported by studies on field-dependency which found that female alcoholics were significantly more field dependent and more sensitive to environmental events than male alcoholics and both male and female nonalcoholics (Witkin, 1949; Karp, Poster, & Goodman, 1963). In this way, the two theoretical classes of predisposing and precipitating factors are related. The first sets up a psychological

vulnerability to the latter, both of which can then be seen as factors in disease onset.

The Relationship of Stress to Alcoholism

The concept of stress, as generally used in the literature, is ambiguous, connoting either an environmental force, a hypothetical construct, a behavioral reaction, or a combination of these (Krebs, 1969).

A pioneer in stress research is Cannon (1929) who described physiological changes in relation to stressful events. Some changes were seen as protective, others as maladaptive. Selye (1946) and Wolff (1950) were also in the vanguard of stress research. Selye defined stress as the nonspecific response of the body to any demands made upon it.

Wolff theorized that the individual involved in a situation mediated the effect of a given stress by the amount of importance he attached to it.

This serves to connect the concept of stress with the notion that alcoholic women have increased sensitivity to environmental or precipitating situations. In other words, due to predisposing factors arising from childhood, the prealcoholic woman developed a greater sensitivity to external trauma. Stressful situations, then, are more significant for her than for women who have not been developmentally sensitized. The choice of turning to

alcohol and drugs follows. Not only does she drink to enhance feelings of femininity, but both alcohol and drugs aid in coping and adapting to stressful situations--in addition to being easily obtained and, initially, socially acceptable (Bruhn, 1973).

In the present study, stressors are conceived of as internal and external events which significantly disrupt the woman's quotidian or usual daily life, changing in either a positive or negative direction the physical or emotional steady state.

This is very similar to the description given by Holmes and Rahe (1967), who stated:

> The occurrence of each event usually evoked, or was associated with, some adaptive or coping behavior on the part of the involved individual. Thus each item was construeted to contain events whose advent is either indicative of, or requires a significant change in, the ongoing life pattern of the individual. The emphasis is on change from the existing steady state and not on psychological meaning, emotion, or social desirability [underlining mine]. (p. 217)

In describing his work on stress, Rahe (1972) reported:

> Subjects were asked to review their life changes and illness histories over the 10 preceding years and record these data on the Schedule of Recent Experience questionnaire. There appeared to be little falloff of recording due to difficulty in remembering

> events or illness occurring several years prior to the study compared to those years more recent in occurrence. (p. 254)

These studies resulted in 43 unique situations or life events which were found to cluster for individuals prior to the onset of disease. For Rahe (1972) stress is measured in terms of "the amount and duration of life change and readjustment inherent in [the occurrence of] the event" (p. 252).

The items or events were assigned a magnitude, according to the psychophysical method of magnitude estimation which was patterned after Stevens (1965). People are always making subjective estimations of the magnitude of things or events. The problem involved in this concerns the type of relationship which exists between the magnitude of physical quantities and the magnitude of the corresponding subjective sensations. Stevens addressed this in his power law (1957), which states that the magnitude of the subjective sensation depends on the intensity of the physical stimulus raised to some power. Since the distribution of judgments of a number of Ss is usually skewed, the geometric mean is used as a measure of central tendency. The geometric mean is the nth root of the product of n numbers: $M_g = \sqrt[N]{M_1 x M_2 x M_3 x M_n}$.

In line with this method, Holmes, et al.(1967), told respondents that the first stimulus, or event, Marriage, had been arbitrarily assigned the value of 500; subjects were requested to assign a value to the remaining events in terms of the amount of readjustment of life required in relation to this number and event. The obtained values were the Life Change Units or LCUs. These studies resulted in the Social Readjustment Rating Scale (SRRS).

Masuda, et al. (1967) reported that a high degree of consensus existed between different socio-cultural groups in relation to the assessment of the amount of change an event required or the LCU. He reported that the high correlations found for the various socio-cultural groups studied "indicated a universal agreement . . . that transcended differences in age, sex, marital status, education, social class, generation American, religion and race (Masuda & Holmes, 1967, p. 228).

However, many studies revealed divergent results, such as were found for Mexican-Americans and white middle-class Americans (Komaroff, Masuda, & Holmes, 1968), Swedish subjects living in Stockholm and comparable Seattlites (Rahe, Lundberg, Bennett, & Theorell, 1971), and Japanese subjects and Americans (Masuda & Holmes, 1967).

Casey, Masuda, and Holmes (1967) studied reliability

of recall. They found that the items responded to most consistently over time were those with higher item value; they were the more salient items. "If an individual responds consistently to the same item on two separate occasions, nine months apart, it is apparent that the item event has salience for him and his consistent recall may well be a reflection of validity of recall" (p. 246).

The relationship between saliency of event and consistency of recall was found to be highly significant, $p = .0005$. However, Rahe (1974) reported that reliability estimates have varied from as high as .90 to as low as .26. He suggested several things which accounted for the falloff in reliability. Those relevant to the present study are: "the education level, and probable intelligence level, of the subjects, the time interval over which subjects' recent life changes are summed, and the wording and format of the questions"(p.83).

Many retrospective and prospective studies have found that high life change values occurred closely before the onset of a wide variety of physical and mental illnesses, such as tuberculosis, psychomatic illness, and psychoneurosis (Brown & Birley, 1968; Hawkins, Davies, & Holmes, 1957; Myers & Lindenthal, 1971; Star, 1949; Rahe, Mahan, & Arthur, 1970).

However, Brown (1974) questioned the validity of stress research, especially in retrospective studies. He explained that a life event questionnaire is subject to response sets; that some subjects may report or "recall" more events in order to explain the occurrence of later symptomatology. This limitation is applicable to the present study.

To summarize the relationship between these stressful life events and the onset of illness:

> The magnitude of life change was observed to be highly significantly related to time of disease onset. The greater the magnitude of life change (or life crisis), the greater the probability that the life change would be associated with disease onset, and the greater the probability that the population at risk would experience disease. There was also a strong positive correlation between magnitude of life change (life crisis) and seriousness of the chronic illness experienced. The major health changes observed covered a wide range of psychiatric, medical, and surgical diseases. (Holmes & Masuda, 1974, p. 68)

However, since mediating factors may interact in determining response to stress, it is not always easy to distinguish one effect from the other, especially in retrospective studies. What is crucial in understanding the relationship between life events and psychopathology is "whether the events involve physical illness or injury" and most important to the present study "whether or not

their occurrence is outside the subject's control (Dohrenwend, 1974, p. 304). That is, events reported that are within the control of the respondent may represent an intervening predispositional personality variable. Events reported that are not within the control of the respondent would be more representative of actual environmental stress. Therefore, the present study included a measure of the locus of responsibility of the events reported by the respondents studied.

Internal Stressors

Goldfarb and Bierman (1949) hypothesized that alcohol acted as an internal stressful agent "causing an adrenocortical discharge (i.e., hyperfunction followed by exhaustion and hypofunction)" (p. 420). The endocrine system is an "exquisitely sensitive" one which reacts rapidly to the ingestion of moderated amounts of alcohol (Chafetz, 1971). (Pathology, however, occurs only after prolonged abuse, the time scale varying among individuals. Margraff, 1967; Merry, 1969))

Drugs other than alcohol are also internal stressful agents. The repeated use of some drugs induces dependence and addiction. Seevers and Deneau (1963) characterize physiological dependence as a state of latent hyperexcitability in the cells of the CNS, manifested as an

abstinence syndrome upon termination of the drug. Among the symptoms which can develop are hallucinations, anxiety, convulsions, coma and death. Severe discomfort and anxiety are almost always present representing a very stressful situation (Domino, 1971). The combined use of alcohol and drugs is a serious problem causing death for many alcoholics (Sundby, 1967).

The theories directed at explaining drug addiction and dependency have been formulated around the principle of homeostasis. This refers to the self-regulating aspects of bodily mechanisms, in which a tendency toward change is counteracted by factors which resist change (Cannon, 1932). This is similar to Selye's generalization that stress is anything affecting the dynamic steady state. The homeostatic compensation that occurs as a result of tolerance is assumed to continue in the absence of the drug and to produce a physiological reaction of its own which is no longer counteracted by the effects of the drug. The result is increased excitability or the abstinence syndrome (Schuster, 1970).

The initiation of drug-taking behavior has been attributed to sources such as anxiety or euphoria, with the avoidance of the abstinence syndrome being the motivation for the maintenance or continuance of drug usage

(Schuster, 1970; Schuster & Thompson, 1969).

That both alcohol and drugs are internal stressful agents is clear. The extent of the derangement varies among individuals depending upon the rate and amount of intake and the chronicity of addiction.

In addition, use of these substances may produce external stressful situations. Thought, judgment, and restraint are disrupted at blood alcohol levels of about .05% (Chafetz, 1971). This level would be reached by an individual weighing 150 pounds, who has consumed two typical drinks (3/4 of an ounce of alcohol) in an hour. If the individual is also taking drugs, the effects are potentiated. As greater amounts are consumed, sensation, perception, and motor performance are impaired. Normal amounts of fear in risky situations is also decreased (Cohen, Dearnaley, & Hansel, 1958). Furthermore, feelings of aggression and hostility are released against the self and others (Pittman & Gordon, 1958; Tinklenberg, 1972). The high correlation between alcohol abuse and suicide, accidents, and violent crimes exemplifies the notion that alcohol use may generate stressful events.

In this way, during active alcoholism, a reciprocal relationship between alcohol use and stressful life events can be seen to exist. The woman drinks to feel

feminine, avoid the abstinence syndrome, and oope with stressful events. Drinking impairs CNS functioning. The impairment creates an increased chance of undesirable and unfeminine behavior. When this behavior is remembered in the sober state, anxiety is increased. To counteract this anxiety and avoid symptoms of withdrawal, the alcoholic resumes her drinking. That is, the drinking affects behavior, which in turn leads to increased drinking. Drug use too may be initiated in order to alleviate some of the unpleasant symptoms. In this way, both alcohol and drugs are seen as internal stressors which produce external stressors.

Summary

It has been suggested that research on alcoholism adopt a multifaceted approach which incorporates elements from two or more theoretical positions. "Work is needed to better identify the association between alcohol use and all aspects of physiological response, predispositions, attitudes and the social context and consequences of drinking" (Chafets, 1971, p. 67).

It was explained that the female alcoholic has both emotional sensitivity to environmental events and physiological reduction in ability to cope or adapt to the environment due to predisposing factors and, later, to

disruptions in the bodily coping mechanisms (Gitlow, Bertani, Dziedzic, & Wong, 1971; Jenkins & Connally, 1972; Noble, 1972).

Since alcohol was seen to enhance feelings of femininity, aid in coping and adapting to stressful situations, is easily obtained and is socially acceptable, the use of it by the potential female alcoholic seems natural. Stressful life events may exacerbate her problems and mark the beginning of a vicious cycle culminating in the woman's loss of control over drinking. The abuse of alcohol was seen as beginning a self-perpetuating cycle, in which drinking may produce stressful situations which may, in turn, lead to further drinking.

The use of drugs may also be part of the cycle in so far as drugs may alleviate some of the unpleasant symptoms of withdrawal.

Therefore, this study is based, in part, upon the motivational theory espoused by Wilsnack (1972) which states that alcoholic women drink to feel more feminine, Connor's (1962) postulation that alcoholics have a greater need for primary relationships, Holmes and Rahe's (1967) theory that stress is associated with disease onset, and those theories which describe the self-perpetuating aspects of alcohol and drug-taking behavior (Domino, 1971; Seevers & Deneau, 1963; Chafetz, 1971).

Statement of the Hypotheses

Femininity-Threatening Events. Alcoholism in women is in part a function of sex-role insecurity. The traditional feminine role is usually portrayed as the successful performance of the woman as wife, helpmate and mother. The amount of success achieved is to some extent dependent upon possession of certain attributes such as being physically attractive and feminine in appearance, having social skills, homemaking and culinary crafts, the ability to bear and nurture children and please one's husband. If something happens which challenges, threatens, or reduces the ongoing or stable level of success in this role, it will also reduce the woman's feelings of femininity which, according to Wilsnack (1973), will lead the prealcoholic woman to drink in order to enhance feelings of femininity.

Based on the theorists who emphasize that environmentally-anchored stress is related to illness, it is hypothesized that:

1a. Prealcoholic women will experience a significantly greater number of Femininity-Threatening Events and higher accompanying LCU values than nonalcoholic women.

Based upon Wilsnack's theory it is hypothesized that:

1b. The number of Femininity Threatening events and their LCU values experienced by prealcoholic women will be significantly related to their alcohol intake.

The alcohol intake of the nonalcoholic woman, for whom the relationship between Femininity-Threatening events and alcohol intake is not theorized, will be unrelated to the number of Femininity-Threatening events and their LCU values that she experiences.

Events in the Family area of life. For married women the dominant source of self-esteem and identity is the family unit. These women define their identities in terms of the traditional female role (Sanford, 1962). If these women are also employed, they see this role as an extension of, or secondary to, the major traditional role (Hartley, 1960). Studies have indicated that prealcoholic women have a greater need for primary relationships than nonalcoholic women and that on the other hand they have been handicapped by sex-role confusion and feelings of inadequacy in the sex-role. Therefore, it is hypothesized that:

> 2a. Prealcoholic women will experience a greater number of events and have higher LCU values in the Family area than in the Personal or Work areas.

Based on Wilsnack's reasoning it is hypothesized that:

> 2b. The number of events in the Family area and their LCU values experienced by the prealcoholic woman will be significantly related to her alcohol intake.

For the nonalcoholic women, for whom the theorized link between life events (stresses) and alcohol intake is not made, it is hypothesized that events in the Family area will be unrelated to alcohol intake.

Life events and the Onset of alcoholism. Based on the theoretical formulations and the empirical findings of Masuda and Holmes (1967) and Holmes and Rahe (1967), in which the onset of disease was linked to the clustering of stresses which closely preceded it, it is hypothesized that for the disease of alcoholism in women:

3. There will be a significantly higher total number of events and total LCU value in the year of onset than in the preceding prealcoholic period.

The reason that the one-year period was chosen, as opposed to a two- or three-year period prior to the onset of alcoholism, was because the development of alcoholism in women is considered by many theorists (Jellinek, 1962; Lisansky, 1957) to be "telescoped."

Life events and active alcoholism. Alcoholism and drug-taking behavior have been attributed to sources such as anxiety reduction and reduced feelings of womanliness. The avoidance of the abstinence syndrome was cited as the motivation for its continuation. Drinking impairs thought, judgment and restraint, and leads to an increase in

undesirable and unfeminine behavior. The discomfort of the hangover or abstinence syndrome is accentuated by memories of this behavior. Therefore, drinking is resumed in order to obliviate these memories, avoid newly-created problems, and reduce symptoms of withdrawal. In this way, during active alcoholism a reciprocal relationship between alcoholism and stressful events exists. Therefore, it is hypothesized that:

> 4a. During the period of active alcoholism the number of events and the amount of required readjustment, or LCU values, will be greater than during the prealcoholic period for the alcoholic women.
>
> 4b. There will be a significantly greater number of events judged within the control of the alcoholic respondent during active alcoholism than in the prealcoholic period.

During active alcoholism, it is common for the alcoholic to "go on the wagon" and to "booze fight." Since withdrawal is extremely unpleasant, drugs other than alcohol are used to alleviate its symptoms. Therefore, it is hypothesized that:

> 4c. A significantly greater number of alcoholic women will use drugs during the period of active alcoholism than during the prealcoholic period.

Events in the Personal area of life and Recovery. As long as the woman perceives alcohol as a substance which makes her feel better, aids in the solution of problems,

helps her face difficult or anxiety-producing situations, and gets her through times of trouble or misfortune by diminishing emotional discomfort, she will continue its abuse. If she recognizes that alcohol no longer helps her, but rather creates difficulties, increases the magnitude of other-caused problems, and cannot be depended upon for comfort, since its side effects are more unpleasant than its main effects, she may begin to devalue alcohol and begin the decision-making process to abstain. Many events in the Personal area of life, as compared with the Family and Work areas, are the direct result of alcoholic drinking (i.e., "attempted suicide," "major change in personal habits"). Therefore, events in this area, as compared with the other areas, would be expected to induce recognition of effects of alcohol use in the alcoholic woman. Upon recognition that alcohol use is causing major problems in the woman's life, many events will be seen as attributable to her drinking. This recognition would mark the beginning of the decision to stop drinking. Therefore, it is hypothesized that alcoholic women will make the decision to stop drinking in the year when:

5a. The number of events and their LCU values in the Personal area reach the highest point of the period of active alcoholism.

5b. Drunking attribution scores reach their highest point of the period of active alcoholism.

Since all respondents are recovered alcoholics, the year preceding the year they stopped drinking (the year before recovery) is the hypothesized year of decision.

CHAPTER II

Method

The field interview technique was selected as the most appropriate method for the study since the nature of the information sought--detailed accounts of past events--would not be accessible through other methods. Short of a prospective study of high-risk women, the interview was thought to be the method most conducive to the elicitation of highly personal and sensitive information.

Subjects

A sample size of 200 women, consisting of 100 alcoholic and 100 nonalcoholic married women, were selected from diverse socio-economic classes in the borough of Manhattan. The women were matched on five demographic variables: (a) geographic location, (b) age, (c) occupation, (d) income, and (e) education. Family income levels ranged from $3,000 to over $70,000 per annum. Levels of educational attainment ranged from respondents holding M.D., Ph.D. and J.D. degrees to women who did not hold high school diplomas. The range of occupations, too, was quite broad; it included both professionals and domestics and service workers. The age range was 20 to 49 years; 20 women in each group were aged 20 to 29 years, 50 women in each group were 30 to 39

years of age, and 30 women in each group were 40 to 49 years old. This age distribution approximated the general age distribution of women in Alcoholics Anonymous and is consistent with Cahalan's (1970) finding that drinking problems were most frequently reported by women in their thirties and forties. The demographic data are presented in Appendix A.

1. Criteria for the Alcoholic Sample

Because there is a need for research on alcohol abuse in women (Lisansky, 1957; Wilsnack, 1972), only female respondents were sampled. In the present study, white women were chosen rather than black women in order to prevent possible bias due to social-distance effects (Williams, 1964)--which may have resulted had blacks been interviewed by the white interviewer. Another reason blacks were not sampled was that they may differ from whites in drinking patterns and may also have different reasons for maintaining drinking behavior (Cahalan, Cisin & Crossley, 1969; Harris, 1971).

The age range of 20 to 49 was selected because findings indicate that the highest proportion of heavy drinking among women occurred within this range (Cahalan, Cisin & Crossley, 1969).

Each respondent was required to have been sober for

the three-month period immediately preceding the interview and to have had experienced her period of active alcoholism not more than two years ago. An additional requirement was that the women were not taking prescribed psychotropic medication during the three-month period immediately prior to the interview. The three-month period of sobriety was required because many women are confused about past experiences during the first few momths of recovery (Bissell, 1975). The two-year maximum was chosen in order to ensure that the recollection of drinking history was relatively fresh in the respondents' memory. (The restriction of drug use was explained in Chapter I.) Of the women who met the criteria, very few who had been unmarried during their prealcoholic years were available. Therefore, unmarried females were excluded from the present investigation.

2. Criteria for the Nonalcoholic Sample

As with the alcoholic group, respondents in the nonalcoholic group were both white and married during the assigned prealcoholic period. None of these women, according to her self-report, was ever alcoholic--as operationally defined in Chapter I.

3. Selection of the Alcoholic Respondents

In order to better understand the alcoholic

respondents, the three rehabilitation facilities from which they were drawn are briefly described.

Alcoholics Anonymous (AA), from which 54 alcoholics were selected, is the largest of the three rehabilitation facilities employed in this study. Its purpose is to help alcoholics achieve and maintain sobriety. A report by the American Medical Association (1967) stated that AA was still the most effective means of treating alcoholism. In this report, Ruth Fox, former medical director of the National Council on Alcoholism, said, "AA has undoubtedly reached more cases than all the rest of us together" (p. 28).

Smithers Clinic, an out-patient facility which is associated with the Roosevelt Hospital Alcoholism Unit, was the source of 26 alcoholic patients in the current study. Twenty respondents were outpatients at the Accept Clinic which is associated with Columbus Hospital. These respondents had also been referred to the clinic after detoxification at the parent hospital.

Both clinics employed trained counselors, usually psychiatrists and psychologists, as therapists. All 46 respondents were receiving individual and/or group therapy at the time of the interview. Respondents from these clinics comprised most of the alcoholic group's lower

income levels. No respondents from these facilities reported annual incomes of more than $15,000.

4. Recruitment of the Alcoholic Group

In order to ensure adequate representation of the population of AA members in the borough of Manhattan, geographically representative groups from among the total number of AA groups in Manhattan were selected. Specifically, Manhattan was subdivided into eight geographic regions (see Appendix A). Each region had approximately 11 different group meetings per week. From among these 11 groups, 6 were randomly selected. The random selection was accomplished by assigning a number to each group, and then using a table of random numbers. The six numbers selected determined the target groups in each of the eight geographic regions. This procedure was repeated for each geographic region. Thus, a total of 48 different AA groups, covering all of Manhattan's neighborhoods south of 96th Street, were selected.

Following the selection of AA groups, the secretary of each group was asked to introduce the investigator to the group members. The group was then informed that the investigator was a student conducting research on women and alcoholism, and that volunteers were being sought for participation in a study. They were told that it would

require approximately two hours of their time. Additionally, they were informed that only married females between the ages of 20 and 49 were being sought. The prospective respondents were asked to meet with the investigator at the close of the meeting. At that time, an appointment for the interview was scheduled. If the prospective respondent did not know her schedule, she was phoned the next day to set up an appointment. On the average, 1 to 3 women were recruited at each meeting. Although no attempt was made to determine the percentage of eligible women who did not volunteer, the impression was gained that of those eligible women who were asked to volunteer, about 50% did so.

The remaining 46 alcoholic women were recruited from the Smithers and Accept Clinics. A notice requesting female alcoholics to phone the investigator and volunteer for a study on alcoholism was posted in the waiting rooms of these clinics. When the women phoned, they were told that the investigator was a student conducting research on alcoholism and women, and was seeking volunteers to be interviewed during a two-hour session. The notices remained posted for several weeks but very few women responded to it. Therefore, those women who did respond, and who were in group therapy at their respective clinics, were requested to ask other group members to volunteer. Many more women

responded to these requests than to the notice.

In summary, 54 alcoholics were selected from AA groups, 26 alcoholics from the Smithers Clinic and 20 from the Accept Clinic. These 100 respondents constituted the alcoholic group.

5. The Nonalcoholic Group

The criterion for selection was a self-report by the respondent that she is not an alcoholic as defined in Chapter I. In order to attain comparability with the alcoholic group, only white females who were married during the assigned prealcoholic period were selected.

6. Selection of the Nonalcoholic Group

The 100 nonalcoholic respondents were Alanon members and their friends. Alanon is an organization designed to help the relatives, friends and employees of alcoholics and has 30 different groups in the borough of Manhattan. Each of these 30 groups was addressed by the investigator and given the same instructions as the AA groups. Visits to all 30 Alanon groups, which are approximately 1/10 the size of AA groups, yielded a subject pool of 47 respondents. Ten respondents were eliminated from this pool because it was ascertained that they were not married during the assigned prealcoholic years. This resulted in a subtotal of 37 respondents from

Alanon.

Each of the 37 respondents was asked to provide several volunteers--who were not Alanon members--to contact the investigator for participation in the study. This procedure yielded a subject pool of 63 respondents--all of whom met the requirements for selection. Thus, the total group of nonalcoholic respondents was comprised of 37 members of Alanon and 63 of their friends.

Materials

1. The Life Event Scale

The Life Event Scale (LES) employed in the present investigation consists of 72 events and was adapted from the Social Readjustment Rating Scale (SRRS) developed by Holmes and Holmes and Rahe (1967). The SRRS has been used to investigate and evaluate the relationship of life-change to the occurrence of disease. Each item of the SRRS

> . . . has been constructed to contain life events whose advent is either indicative of or requires a significant change in the ongoing life pattern of the individual. The emphasis is on change from the existing steady state, and not on psychological meaning, emotion, or social desirability. . . . Only some of the events are negative or "stressful" . . . [and/or] socially undesirable. . . . Many are socially desirable . . . (Holmes & Rahe, 1967, p. 217)

Holmes and Masuda stated that "clustering of social or life events achieves etiologic significance as a necessary,

but not sufficient cause of illness and accounts in part for the time of onset of disease" (1974, p. 48).

The SRRS contains 43 items which are divided into two categories:

> . . . those indicative of the life style of the individual, and those indicative of occurrences involving the individual. Evolving from mostly ordinary, but some from extraordinary, social and interpersonal transactions, these events pertain to major areas of dynamic significance in the social structure of the American way of life. These include family constellation, marriage, occupation, economics, residence, group and peer relationships, education, religion, recreation and health. (Holmes & Rahe, 1967, p. 216)

In subsequent formulations (Rahe, 1972), the total number of life events was divided into four major areas: Family, Personal, Work and Financial.

Holmes and Rahe (1967) theorized that each event usually evoked some adaptive or coping strategy on the part of the individual to whom it occurred. Thus, each event requires, to a greater or lesser extent, "a significant change in the ongoing life pattern of the individual" (p. 217). Accordingly, each event was assigned a life-change unit (LCU) value, a value that quantifies the amount of readjustment required by the occurrence of the event. The following SRRS life events and their corresponding LCU values are illustrative:

Area	Event	LUC
Family:	Death of a spouse	100
	In-law troubles	29
Personal:	Detention in jail	63
	Vacation	13
Work:	Being fired from work	47
	Major change in working conditions	20
Financial:	Major change in financial state	38
	Mortgage or loan less than $10,000	17

2. Reliability and Validity Data. Masuda and Holmes (1967) reported that a high degree of consensus existed between different socio-cultural groups. The correlation coefficients for Negroes and whites was .82, for Orientals and whites .94, and for foreign-born Americans and third-generation Americans .92 (Masuda & Holmes, 1967).

Many studies have revealed discrepancies in both LCU values and in the ranking of life events between various socio-eultural groups. Divergent findings were reported for Mexican-Americans and white middle-class Americans (Komaroff, Masuda & Holmes, 1968); Swedish subjects living in Stockholm and Seattlites of Swedish descent

(Rahe, Lundberg, Bennett & Theorell, 1971); Japanese and Americans (Masuda & Holmes, 1967) and urban and rural Americans (Miller, Bentz, Aponte & Brogan, 1974).

Casey, Masuda, and Holmes (1967) reported on the reliability of recall. The items to which subjects responded most consistently over time were those with higher item values--indicating that they were the more salient items. The relationship between saliency of event and consistency of recall was found to be highly significant ($p = .0005$). However, Rahe (1974) reported that reliability estimates of the questionnaire have ranged from .90 to .26.

3. Description of Life Event Scale

The Life Event Scale, which, as indicated previously, was adapted from the SRRS, contains 72 items which fall under three life event areas: Family (23 events), Personal (26 events) and Work (23 events). This adapted version offers the advantage of having the sample of events and their LCU values tailored to the experiences of the population under investigation. The procedure of adjusting the list of life events to the group under study, however, has the disadvantage of making it inappropriate for any other dissimilar group. Additionally, in the absence of independent validity and reliability studies it may not be assumed that the modified scale is either reliable or valid.

The assumption underlying the use of independent raters from a sociocultural group similar to the population under study is that these raters represent the subgroup to a greater extent than a larger body of raters from many and diverse sociocultural groups. As explained by Dohrenwend (1974):

> There may be universal agreement about some events, or there may be agreement within quite broad sociocultural groupings about events in certain crucial domains. At present, however, all we know is that we must be wary of generalizing measures of the stressfulness of life events beyond the particular sociocultural group from whom the ratings of events were obtained. (p. 327)

4. Development of the Life Event Scale

The items selected for the LES emerged during the pilot research for this project. In this pilot study, groups of alcoholic and nonalcoholic women were interviewed and observed. From these interactions emerged a list of life events that were considered by the subjects to have required readjustment of life patterns. All events on this list which were reported by 5% or more of the respondents were included in the Life Events Scale.

5. Assignment of LCU Values

The procedure for assigning LCU values was adapted from Holmes and Rahe (1967). Two independent

judges rated each event and assigned it an LCU value. (The specific instructions to the judges are presented in Appendix I.) The geometric mean of the two assigned values for each event was then obtained. These mean values constitute the LCU values for the 72 events. The list of the events and their LCU values are presented in Appendix C.

6. Determining Femininity-Threatening Events

The events were also designated as being either femininity-threatening (FT) or not femininity-threatening. For example, the event of "Divorce" was considered FT, and the event of "Loss of Driver's License" was not FT. There are a total of 26 FT events in the LES: 16 in the Family area, 5 in the Personal area, and 5 in the Work area. Six additional events were designated as potentially FT because the specific account of the event was used to determine whether or not it was judged FT. For example, the event of "Major Personal Illness or Injury" would probably have been judged as FT if the injury were a facial scar. However, a broken leg, in all likelihood, would have been judged as not FT. The judgments concerning threat to femininity were made by two independent judges. An event was designated as FT if both judges agreed that it was, in fact, so threatening. Events which failed to achieve complete

rater agreement were designated as not FT. Appendix C lists the 27 FT events and the 5 potential FT events.

The LES was incorporated into a questionnaire which taps the contextual background (referred to as Specific Event) of each event. It specifies the LCU value, number of occurrences and month and year of occurrence of each event. The questionnaire also asks whether or not the occurrence of each event was attributed to drinking and whether it was perceived as desirable or undesirable.

7. Description of the Interview

A schedule standardized interview was used to elicit demographic information and alcohol and drug histories. The interview also included administrations of the Life Event Scale (LES) and the Alcadd Test (Manson, 1963). Appendices H1, H2, H3 and H4 present the specific questions and instructions relating to these topics, respectively. The wording and sequence of all questions were determined in advance of all the interviews. The same questions were asked of all respondents in the identical sequence. The responses were recorded verbatim. Because the sample was heterogeneous some departures from the exact wording of the schedule were necessary in order to (a) clarify instructions and (b) permit the respondent to amplify her responses.

In the first part of the interview the demographic information was collected. This consisted of the following variables: (a) age of the respondent; (b) level of education, (c) employment position, (d) amount of income per annum, (e) occupation, (f) number of children, (g) marital status and (h) duration of period of sobriety.

The second part of the interview was intended to determine the respondent's alcohol and drug history.

Drinking history refers to the amount and type of alcohol consumed by each respondent over her entire life. Dates of the respondent's first drink and each subsequent change in amount or type of alcohol consumed were recorded. In all, 11 questions concerning amount and type of alcohol intake, dates of its use and stages of the development of alcoholism were asked.

The drug history included questions on the type and amount of drug used and the dates of their use. A chart showing pictures of various commonly used drugs was used to help respondents identify the drugs they had taken. It also asked whether or not the drug was prescribed by a physician.

The third part of the interview, in which the LES was administered, used four types of questions to obtain information about past life events. For example, the

yes-no type was used for questions like "Did this event take place?" The open type was used to elicit specific descriptions of the events. The selection type was employed for questions like "Was the change it made in your life . . . a change for the better . . . or a change for the worse?" This part of the interview yields the number and type of events which occurred to the respondents, the specific event descriptions, the dates of occurrence, whether the event was desirable or undesirable, and whether or not the event was the result of the respondent's drinking.

During the fourth part of the interview, the Alcadd Test was administered. The Alcadd Test is a forced-choice test designed to diagnose the presence of alcohol addiction. Its chief function is to identify alcoholics prior to their hospitalization, employment, training or military service. An item analysis of 160 diagnostic questions which had been administered to groups of alcoholics and nonalcoholics resulted in the development of the 60-question test. A cross-validation study compared 123 alcoholics with 159 nonalcoholics. It accurately diagnosed 97% of the female alcoholics and 96% of the female nonalcoholics. Test-retest reliability for a two-week period was .96 (Manson, 1963).

All the tests were manually scored with the

accompanying scoring key by the investigator. A second rater, who was unaware of the original scores, was employed to re-score 20% of the test protocols. Scorer reliability was .98.

The administration of the Alcadd Test was followed by the fifth and final part of the interview in which the time periods of Prealcoholism, Onset, Active Alcoholism, and Recovery were determined. (See Appendix H5.)

Judges

Two female, married graduate students, one in a doctoral program in Psychology and the other in an English program, were employed as judges in the present investigation. All ratings and judgments were made by these two judges.

One female undergraduate was employed to attend the AA meetings where she recorded the life events and drinking histories.

Procedure

All respondents were interviewed at a time and a place that was convenient for them. Approximately 95% of the respondents were interviewed in their homes. The rest were interviewed in the investigator's home. All interviews were conducted by the investigator. The respondents were given the choice of being interviewed in their own

homes because (a) they were not paid for their participation and (b) it was assumed that they would feel more comfortable in their own homes which would, in turn, allow for freer and more candid discussion of personal matters.

Respondents were told that they were participating in a study on female alcoholism. They were not told anything else about the study. (The investigator offered to explain the results of the study after its completion.) The interviews lasted from 2 to 5 hours depending upon the respondent's verbosity. The information was recorded on the data sheets at the time of the interview.

Two of the respondent characteristics that motivate participation in research studies, altruism and emotional satisfaction (Richardson, Dohrenwend & Klein, 1965), appeared to be operative in the present study. Many of the women in both groups expressed the desire to contribute to the body of knowledge on alcoholism of women. The second characteristic, "emotional satisfaction," may have been gained from talking at length about themselves and the things that happened to them.

For most respondents, rapport was easily established and maintained throughout the interview.

In the first part of the interview demographic information was obtained. The second portion of the

interview required the respondents to describe their complete drinking history. In general, recall of drinking history was not difficult for the alcoholic group since this is encouraged in the therapeutic process in which they were engaged. The respondents were also asked to relate their history of drug use. As with the alcohol history, this was done chronologically--to facilitate recall. If the respondent did not know the name of the drug she used, the investigator showed her the drug chart.

Following this, the Life Event Scale was administered. Each respondent was shown the list of events and was requested to indicate which of the events occurred to her, and the dates of their occurrence. If the main event occurred, the respondent was asked to describe the specific nature of the event. She was then requested to indicate whether the change in her life caused by the event was desirable or undesirable at its time of occurrence. For many events the respondents were in fact unable to make this determination. Therefore, the total number of positive and negative events is less than the number of main events and specific events. The respondent was then asked the drinking attribution question; that is, whether the event would have happened had she not been drinking.

In the final part of the interview the Alcadd Test

was administered to all subjects. This test was employed to augment the self-reports of the respondents in determining (a) that a period of active alcoholism did in fact exist for the alcoholic group and (b) that members of the nonalcoholic group were presently nonalcoholic.

The alcoholic subjects were instructed to respond to the items of this test as they would have during their period of alcoholism. No subject in either group was eliminated from her group on the basis of her classification on the Alcadd Test. In other words, alcoholic subjects whose scores placed them within the nonalcoholic range were not excluded from the alcoholic group; and nonalcoholic subjects whose scores placed them in the alcoholic or borderline-alcoholic range were not eliminated from their group.

For the purposes of determining the independent variable of group membership the sole determinant was the subject's drinking history. The criteria for group membership and for the establishment of the periods of alcoholism are discussed in the following section.

Returning to the Alcadd Test, all subjects reported having no difficulty reading the items. While the respondents were taking the test their drinking histories were reviewed.

Determination of the Stages of
Alcoholism and Group Membership

The periods of Prealcoholism, Onset, Active Alcoholism and Recovery were determined on the basis of the subjects' drinking history. The three years that preceded the year of onset of alcoholism were designated as the Prealcoholic period (PREAL 1, PREAL 2 and PREAL 3). The criterion for Onset was the first year in which the subject experienced loss of control.

Loss of control was tapped by the following questions in the Drinking History (Appendix H2):

1. During this time were you able to stop drinking when you felt you had had enough? (No)

2. Did you usually become intoxicated when you drank? (Yes)

3. Did you find that you couldn't stop drinking once you started? (Yes)

Loss of control was considered to have taken place when she responded to these questions in the indicated direction.

The third period, Active Alcoholism (ACTAL), was designated as the three years that immediately preceded Recovery (ACTAL 1, ACTAL 2 and ACTAL 3). Recovery was the year in which the woman stopped drinking.

To provide a check on the accuracy of the drinking

history of the alcoholic subjects, a female undergraduate attended AA meetings whenever one of the alcoholic respondents was speaking. On the blank questionnaire provided, she recorded those events mentioned by the respondent which were also tapped by the questionnaire.

Comparisons of the undergraduate's data with the respondent's questionnaire yielded a 60% rate of agreement between the two accounts.

Determining Locus of Responsibility

Two independent judges reviewed each Specific Event and attempted to classify it into one of two categories: (a) events probably controlled by the respondent and (b) events probably not controlled by the respondent. Agreement between the raters was required in order to classify an event into one of the two categories. When there failed to be agreement between the judges, or when one or both of them could not decide as to the locus of responsibility, the item was not classified in either category.

Limitations

1. The alcoholic subjects in the present investigation were limited to married (during the prealcoholic stage), female Caucasians who were in treatment in either AA or the Accept or Smithers Clinics.

2. The subjects were also limited to women who volunteered to participate.

3. The information concerning the occurrences of events was limited to the subjects' recollection of them. It is reasonable to assume that many subjects forgot events (Bartlett, 1932). Such forgetting is a function of elapsed time between the moment of recall and the occurrence of the event (Weiss, Davis & Lotquist, 1971). In the present study, because the period of active alcoholism extended in many cases to as much as twenty years, the accuracy of much of the information is brought into question.

4. If, as Mooney (1962) suggests, events having greater importance are better recalled than events of lesser importance, and life events are perceived by alcoholics as a justification for their illness (Dohrenwend, 1974), then cognitive dissonance theory would predict that these events would be considered more important to alcoholics than to nonalcoholics. Therefore, it is possible that recall of these events will be greater for the alcoholics than the nonalcoholics. This need of alcoholics to justify their illness may also result in their <u>overreporting</u> of events in comparison to the nonalcoholics.

5. AA members regularly recount their drinking histories at AA meetings. Because it is likely that this

practice serves to preserve those memories, this subgroup may have recalled, and therefore reported, more events than alcoholics who were not members of AA and nonalcoholics. On the other hand, repression has been suggested as a reason for underreporting (Cannell & Kahn, 1968). That is to say that although an event is sufficiently important and recent to be recalled under normal circumstances, it may be pushed from conscious memory because of the emotional stress it elicits. Therefore, if it is assumed that alcoholism is an emotionally-stressful period, then events associated with this period will also tend to be emotionally stressful and, therefore, repressed.

6. Motivation is affected by the respondent's perception of the social desirability of the event. Accordingly, extent of over- or underreporting may be, in part, a function of this variable. The need to maintain self-esteem and to be perceived by the interviewer as a person who does not violate social norms, was also a potential source of response bias.

7. The present study was also limited by the instruments it employed. Specifically, the lack of reliability and validity data for the Life Event Scale seriously limits its usefulness as an indicator of the association between life events and alcoholism.

8. This investigation was limited by the fact that self-reports were used as the criterion for the determination of the different levels of the independent variable. That is, because there was no way of empirically establishing the onset of alcoholism it was required to rely upon the self-reports of the respondents. This limitation is especially cogent since the studies reviewed in Chapter I were criticized for their reliance upon this type of data.

CHAPTER III

Results

The results of the statistical tests are presented in this chapter. Appendix A summarizes the demographic characteristics of the sample, including their geographic location, age, marital status, number of children, occupation, income, and level of education. Inspection of Appendix A reveals that the goal of heterogeneity was achieved.

A frequency distribution of each event in the Family, Personal and Work areas, including Femininity-Threatening Events, for each of the three alcoholic periods is presented in Appendix B.

Hypothesis 1

The first hypothesis predicted that: (a) femininity-threatening events (FT) would have a greater impact on prealcoholic women than on women who do not become alcoholic and (b) that these events were related to alcohol intake in this group.

Differences in impact were tested by four one-way analyses of covariance. Impact, as defined in Chapter I, refers to the number of events and their LCU values. The independent variable was group membership (Alcoholic [MA] and Nonalcoholic [MNA]), and the dependent variable was the

number of FT events. The covariate was the total number of events which were not FT. The three prealcoholic years, as well as the combined three-year period, were analyzed individually. Table 1 presents the results of these tests. The adjusted means for the number of events and their LCU values are presented in Table 2. The results indicated that there was a significantly higher mean number of FT events for the MA group in all three years and in the combined three-year period, $\underline{F}(1,197) = 5.01$, $\underline{p} < .03$; $\underline{F} = 4.15$, $\underline{p} < .04$; $\underline{F} = 21.73$, $\underline{p} < .001$; $\underline{F} = 27.28$, $p < .001$. Differences in total LCU values for FT events were tested by means of four one-way analyses of covariance. The results of these analyses are presented in Table 3. No significant differences were found in the mean LCU values for the FT events between the MA and MNA groups for the first year of the prealcoholic stage (PREAL 1), $\underline{F}(1,197) = .004$, $\underline{p} = .95$. In the second year of the prealcoholic stage (PREAL 2), significantly higher mean LCU values were found for the MA group, $\underline{F}(1,197) = 8.09$, $\underline{p} = .008$. In the third year of the prealcoholic stage (PREAL 3), the year before Onset, a significantly higher mean LCU value was found for the MA group, $\underline{F}(1,197) = 14.29$, $\underline{p} = .001$. Finally, no significant differences for the combined three-year period were found, $\underline{F}(1,197) = .873$, $\underline{p} = .35$.

Table 1

Analysis of Covariance for the Mean Number of Femininity-Threatening Events for the Three Prealcoholic Years and the Combined Three-Year Period

PREAL Year 1

Source	MS	df	F	p
Covariate (number of Not FT Events	(49.71)	(1)	(23.12)	(.001)
Group (MA vs. MNA)	10.78	1	5.01	.026
Error	2.15	197		
Total	434.49	198		

PREAL Year 2

Source	MS	df	F	p
Covariate (number of Not FT Events	(6.52)	(1)	(3.24)	(.074)
Group (MA vs. MNA)	8.34	1	4.15	.043
Error	2.01	197		
Total	2.07	198		

(continued)

Table 1

(continued)

PREAL Year 3

Source	MS	df	F	p
Covariate (number of Not FT Events	(19.61)	(1)	(7.08)	(.009)
Group (MA vs. MNA)	156.52	1	21.73	.001
Error	7.20	197		
Total	8.17	198		

Combined Three-Year Period

Source	MS	df	F	p
Covariate (number of Not FT Events	(100.13)	(1)	(7.08)	(.009)
Group (MA vs. MNA)	385.94	1	27.28	.001
Error	14.14	197		
Total	17.56	198		

Table 2

Adjusted Means for the Number of Femininity-Threatening Events and Their LCU Values

Prealcoholic Period	Mean Number of Events		Mean LCU Values	
	MA	MNA	MA	MNA
PREAL 1	.71	.21	228	224
PREAL 2	.63	.18	282	142
PREAL 3	1.96	.02	315	54
Combined three-year period[a]	3.66	.26	766[b]	429

[a]Mean number of events per respondent for the combined three-year period.

[b]Mean LCU value per respondent for the combined three-year period.

Table 3

Analysis of Covariance for the Mean LCU Values of Femininity-Threatening Events for the Three Prealcoholic Years and the Combined Three-Year Period

PREAL Year 1

Source	MS	df	F	p
Covariate (LCU of Not FT)	(490915.25)	(1)	(9.92)	(.003)
Group (MA vs. MNA)	173.68	1	.004	.953
Error	245544.50	197		
Total	2172962.0	198		

PREAL Year 2

Source	MS	df	F	p
Covariate (LCU of Not FT)	(120537.37)	(1)	(2.96	(.09)
Group (MA vs. MNA)	327752.37	1	8.07	.008
Error	40614.52	197		
Total	50810.66	198		

(continued)

Table 3

(continued)

PREAL Year 3

Source	MS	df	F	p
Covariate (LCU of Not FT)	(1786921.00)	(1)	(22.53)	(.001)
Group (MA vs. MNA)	114247.00	1	14.29	.001
Error	7994.00	197		
Total	60360.10	198		

Combined Three-Year Period

Source	MS	df	F	p
Covariate (LCU of Not FT)	(4547125.00)	(1)	(40.43)	(.001)
Group (MA vs. MNA)	98235.00	1	0.87	.357
Error	112465.12	197		
Total	235254.87	198		

Relationship to alcohol use. The second part of the hypothesis was tested by a series of multiple regression analyses. These were performed in order to determine whether or not the number of FT events and their LCU values were significantly related to alcohol intake. Each group was analyzed separately for each of the three years. The results indicated that no significant relationships exist between number of FT events and alcohol intake for any of the three years for the MNA group. For the MA group, there were no significant relationships between number of FT events and alcohol intake for the first two years of the prealcoholic stage. For the third year, a significant positive relationship between FT events and alcohol use emerged, Beta weight $F(2, 97) = 5.12$, $p < .05$. FT events accounted for 8.6% of the variance of alcohol intake ($R = .293$).

For the MA group the multiple regression analyses revealed a nonsignificant relationship between the LCU values of the FT events and alcohol intake for PREAL 1 and PREAL 2. For PREAL 3, however, a significant relationship between the FT LCU values and alcohol intake was found, Beta weight $F(2, 97) = 5.58$, $p < .05$. The contribution of this variable accounted for 7.2% of the variance of alcohol intake ($R = .265$).

For the MNA group, no significant relationships between LCU values of FT events and alcohol intake for any of the three prealcoholic years were found.

In summary, the first hypothesis, which predicted that femininity-threatening events would have a significantly greater impact upon the alcoholic group than on the nonalcoholic group during the prealcoholic period was partially confirmed. Insofar as the total number of FT events was concerned, significant differences in the predicted direction were found for all three years of the prealcoholic stage and for the three-year combined period. From the standpoint of the amount of readjustment of life patterns required by these events, however, definitive conclusions cannot be reached. That is, the lack of statistically significant differences between the groups in mean LCU values for the first year of the prealcoholic period and for the combined three-year period renders the results inconclusive.

The second part of the hypothesis, which predicted a significant relationship between impact of Femininity-Threatening events and alcohol intake, attained only equivocal support. The reason for this was the failure to find a significant relationship between the two variables in the first two years of the prealcoholic stage.

Hypothesis 2

The second hypothesis predicted that (a) events in the Family area would have a greater impact on the prealcoholic women than events in the Personal and Work areas, and (b) these events would be significantly related to alcohol intake for the alcoholic group but not for the nonalcoholic group.

Number of Events

Differences in number of events were tested by a one-way repeated measures analysis of variance. The means and standard deviations are presented in Tables 4 and 5, for the MA and MNA groups, respectively. The tables indicate that for the MA group there were consistently more events in the Family area than in the other two areas (Personal and Work) and that the number of events increased as the years approached Onset.

No significant differences between the number of events in the three areas for the MA subjects were found for any of the three years. However, when the years were combined, the mean number of events in the Family area was significantly greater than those in other areas, $F(2, 198) = 6.33$, $p = < .002$. The results of the repeated measures analyses for the MA group are presented in Table 6.

F tests indicated that the number of events in the

Table 4

Means and Standard Deviations for Number of Events in Each Area for the Three Years for the MA Group

Areas	Years					
	PREAL 1		PREAL 2		PREAL 3	
	X	SD	X	SD	X	SD
Family	1.49	3.94	1.55	3.12	2.98	4.73
Personal	0.81	2.22	0.67	2.50	1.98	4.55
Work	0.64	2.60	0.92	4.17	1.58	4.33

Table 5

Means and Standard Deviations for Number of Events in Each Area for the Three Years for the MNA Group

Areas	Years					
	PREAL 1		PREAL 2		PREAL 3	
	X	SD	X	SD	X	SD
Family	0.66	1.91	0.69	2.05	0.39	1.11
Personal	0.24	0.71	0.12	0.38	0.48	1.93
Work	0.24	0.73	0.50	2.16	0.30	1.66

Table 6

Summary Table of Repeated Measures Analysis of Variance for the Number of Events in the Three Areas of the Life Event Scale for the Alcoholic Group

Year of PREAL 1					
Source	Sum of Squares	df	Mean Square	F	p
Between People	1019.41	99	10.29		
Between Areas	40.04	2	20.02	2.35	.09
Residual	1686.20	198	8.51		
Year of PREAL 2					
Source	Sum of Squares	df	Mean Square	F	p
Between People	1232.22	99	12.44		
Between Areas	41.10	2	20.55	1.95	0.14
Residual	2085.43	198	10.53		
Year of PREAL 3					
Source	Sum of Squares	df	Mean Square	F	p
Between People	2521.49	99	25.46		
Between Areas	103.63	2	51.81	2.83	.06
Residual	3613.47	198	18.24		

(continued)

Table 6

(continued)

Years of PREAL 1, 2 and 3 Combined

Source	Sum of Squares	df	Mean Square	F	p
Between People	6645.94	99	67.13		
Between Areas	496.22	2	248.11	6.33	.002
Residual	7750.58	198	39.14		

Family area for the MNA group was significantly higher than the number of events in the other areas for PREAL 1 and PREAL 2, $F(2, 198) = 3.76$, $p < .02$; $F(2, 198) = 3.31$, $p < .03$. No significant differences were found for the third year, PREAL 3, or for the combined three-year period. Table 7 presents these results.

Thus, for the MA group no significant differences between the Family area and the other two areas were found for any one of the prealcoholic years. There were, however, significantly more events in the Family area for the combined prealcoholic period.

LCU Values

The means and standard deviations for the LCU values for the MA and MNA groups are presented in Tables 8 and 9, respectively. Differences in LCU values between the three areas were tested by a one-way repeated measures analysis of variance. The results of these tests are presented in Tables 10 and 11 for the MA and MNA groups, respectively. For the MA group, there were no significant differences between the areas in PREAL 1. However, for PREAL 2 and PREAL 3, LCU values in the Family area were significantly higher than those in the Personal or Work areas for the MA group, $F(2, 198) = 5.57$, $p = < .004$; $F(2, 198) = 14.49$, $p < .001$.

Table 7

Summary Table of Repeated Measures of Variance for the Total Number of Events in the Three Areas of the Life Event Scale for the Nonalcoholic Group

Year of PREAL 1					
Source	Sum of Squares	df	Mean Square	F	p
Between People	159.63	99	1.61		
Between Areas	11.69	2	5.84	3.76	.02
Residual	307.18	198	1.55		

Year of PREAL 2					
Source	Sum of Squares	df	Mean Square	F	p
Between People	392.89	99	3.96		
Between Areas	16.85	2	8.42	3.31	.03
Residual	503.94	198	2.54		

Year of PREAL 3					
Source	Sum of Squares	df	Mean Square	F	p
Between People	357.53	99	3.611		
Between Areas	1.49	2	0.74	0.36	0.69
Residual	410.22	198	2.07		

(continued)

Table 7

(continued)

Years of PREAL 1, 2 and 3 Combined					
Source	Sum of Squares	df	Mean Square	F	p
Between People	1206.79	99	12.18		
Between Areas	44.34	2	22.17	2.54	0.08
Residual	1727.25	198	8.72		

Table 8

Means and Standard Deviations for LCU Values for the MA Group for Family, Personal and Work Areas

Areas	Years					
	PREAL 1		PREAL 2		PREAL 3	
	X	SD	X	SD	X	SD
Family	169.5	321.9	253.0	406.2	473.0	671.1
Personal	111.5	355.1	79.5	229.4	173.5	379.2
Work	88.03	265.5	94.4	543.5	128.4	366.4

Table 9

Means and Standard Deviations for LCU Values for the MNA Group for the Personal, Family and Work Areas

Areas	Years					
	PREAL 1		PREAL 2		PREAL 3	
	X	SD	X	SD	X	SD
Family	94.5	210.3	136.0	325.1	97.0	234.7
Personal	69.5	221.2	28.2	102.6	41.7	127.3
Work	72.6	256.3	90.4	531.1	55.7	220.4

Table 10

Summary Table of Repeated Measures Analysis of Variance for the LCU Values of the Three Areas of the Life Event Scale for the Alcoholic Group

Year of PREAL 1

Source	Sum of Squares	df	Mean Square	F	p
Between People	12958974.32	99	130898.73		
Between Areas	351681.17	2	175840.58	2.07	0.12
Residual	30076989.43	198	100591.93		

Year of PREAL 2

Source	Sum of Squares	df	Mean Square	F	p
Between People	18001168.21	99	181829.98		
Between Areas	1848317.27	2	924158.63	5.57	.004
Residual	32801208.72	198	175662.67		

Year of PREAL 3

Source	Sum of Squares	df	Mean Square	F	p
Between People	24205237.30	99	244497.34		
Between Areas	7015515.97	2	3507757.98	14.49	.001
Residual	47925602.84655	198	242048.49		

(continued)

Table 10

(continued)

Years of PREAL 1, 2 and 3 Combined

Source	Sum of Squares	df	Mean Square	F	p
Between People	69742542.21	99	704470.12		
Between Areas	20883760.00	2	10441880.00	20.23	.001
Residual	1021924.35	198	516123.40		

Table 11

Summary Table of Repeated Measures Analysis of Variance for the LCU Values of the Three Areas of the Life Event Scale for the Nonalcoholic Group

Year of PREAL 1					
Source	Sum of Squares	df	Mean Square	F	p
Between People	6553808.25	99	66200.08		
Between Areas	36969.25	2	18484.62	0.39	0.67
Residual	9175825.74	198	46342.55		
Year of PREAL 2					
Source	Sum of Squares	df	Mean Square	F	p
Between People	17778690.48	99	179582.73		
Between Areas	585702.95	2	292851.47	2.67	.07
Residual	21654496.16	198	109866.14		
Year of PREAL 3					
Source	Sum of Squares	df	Mean Square	F	p
Between People	4994803.96	99	50452.56		
Between Areas	165270.10	2	82635.05	2.37	.09
Residual	6875790.90	198	34726.21		

(continued)

Table 11

(continued)

Years of PREAL 1, 2 and 3 Combined					
Source	Sum of Squares	df	Mean Square	F	p
Between People	52380573.88	99	529096.70		
Between Areas	1782689.01	2	891344.50	4.59	.01
Residual	38436126.91	198	194121.85		

For the MNA group, no significant differences between the areas for any of the three years was found. However, when the three years were combined, the LCU in the Family area was found to be significantly higher than the other two areas, $F(2, 198) = 4.59$, $p < .01$.

In summary, for the alcoholic group, there was a significantly greater number of events in the Family area than in the Personal and Work areas in the combined three-year prealcoholic period. The mean LCU values for the Family area was significantly greater than the other areas for the 2nd, 3rd and combined prealcoholic period.

For the nonalcoholic group, significant differences in the number of events in the Family area were found for years 1 and 2 only. For the dependent variable of LCU, no significant differences were found for any of the prealcoholic years. In the combined three-year period, however, a statistically significant level was reached.

Relationship between events and alcohol use. A series of multiple regression analyses were conducted to determine whether or not the number of events in the Family area and the LCU values were related to alcohol intake. There were no significant relationships between number of Family area events and drinking for either group for any of the prealcoholic years.

There was, however, a significant relationship between LCU values in the Family area and alcohol intake in the third year of the prealcoholic stage, for the alcoholic group, Beta weight $F(3, 96) = 7.79$, $p < .05$. This variable accounted for 7.6% of the variance of alcohol intake ($R = .275$). For the nonalcoholic group, no significant relationship for any period was found.

The first part of Hypothesis 2, which predicted that events in the Family area would have a significantly greater impact on prealcoholic women than events in the Personal and Work areas, was partially supported. This was based upon the significantly greater number of events and total LCU values for the three years of prealcoholism.

The second part of the hypothesis, which predicted that there is a significant relationship between impact of Family area events and alcohol intake for the alcoholic group, was rejected.

The hypothesis that no significant relationship exists between impact of Family area events and alcohol intake for the nonalcoholic group was not rejected.

Hypothesis 3

The third hypothesis predicted that Onset, the year loss of control over drinking occurred, would be the year in which there is a clustering of stresses. Specifically,

it was hypothesized that there would be a significantly greater impact in the life event areas than in any of the prealcoholic periods.

This hypothesis was tested by a series of one-way repeated measures analyses of variance. Tables 12 and 13 present the means and standard deviations of the number of events and the LCU values, respectively, for both groups for the four periods (PREAL 1, PREAL 2, PREAL 3, and Onset). Inspection of the tables reveals that, for the alcoholic group, the number of events and the LCU values increased each year.

The results of the analysis of variance for the MA group indicated that the year of Onset had a significantly higher mean number of events and mean LCU value than the prealcoholic years, $F(3, 297) = 12.45$, $p < .001$; $F(3, 297) = 13.01$, $p < .001$. The results for the MA group for the number of events and their LCU values are presented in Tables 14 and 15, respectively. Comparisons among means by the Scheffé method indicated (a) a significant difference in number of events between Onset and PREAL 1 and PREAL 2 ($p < .05$) and (b) a nonsignificant difference between Onset and PREAL 3. Comparisons among the mean LCU values revealed that the Onset period was significantly higher than each of the three PREAL years ($p < .05$).

Table 12

Means and Standard Deviations of Number of Events for the Four Years

Years	MA		MNA	
	X	SD	X	SD
PREAL 1	2.70	5.10	1.10	2.10
PREAL 2	2.79	5.10	1.12	2.81
PREAL 3	5.94	7.91	1.06	2.82
ONSET	7.11	7.63	1.85	5.31

Table 13

Means and Standard Deviations of LCU Values for the Four Years

Years	MA		MNA	
	X	SD	X	SD
PREAL 1	335.49	556.49	229.02	373.24
PREAL 2	390.99	601.94	220.19	560.09
PREAL 3	725.99	796.82	273.19	338.37
ONSET	1353.75	2371.84	330.69	354.41

Table 14

Summary Table of Repeated Measures Analysis of Variance for the Total Number of Events for the Three Years Before Onset and Onset for the Alcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	5218.20	99	52.70		
Between Years	1497.68	3	499.22	12.45	.001
Residual	11904.80	297	40.08		

Table 15

Summary Table of Repeated Measures Analysis of Variance for the LCU Values of the Three Years Before Onset and Onset for the Alcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	18697936.31	99	1888683.19		
Between Years	65640924.94	3	21880308.24	18.01	.001
Residual	499294109.39	297	1681124.94		

As indicated in Tables 16 and 17, no significant differences were found for the MNA group in the (a) mean number of total events and (b) mean LCU values between the year of Onset and the three-year prealcoholic period.

A chi-square technique was employed to test the degree of association between group membership (MA vs. MNA) and stress (the attainment of highest LCU values and total number of events) during Onset. The results indicated a significant association between membership in the MA group and the clustering of stress, $\underset{\sim}{X}^2$LCU = 9.27, $p < .01$; $\underset{\sim}{X}^2$Events = 11.96, $p = .01$.

The significant chi-square should not be interpreted to mean that the year of onset was the one in which the alcoholics, in general, experienced the greatest number of events and the highest total LCU values. In fact, only 42% of the alcoholic group members reported the highest number of events for the year of onset. Furthermore, only 45% of these subjects had their highest LCU scores during this period. Therefore, although the hypothesis in its broadest sense was supported, it should be borne in mind that the majority of the alcoholic subjects did <u>not</u> experience the greatest stress in the year of onset. If stress is, in fact, related to onset, as it appears to be, then the following question is brought into focus. Was

Table 16

Summary Table of Repeated Measures Analysis of Variance for the Total Number of Events for the Three Years Before Onset and Onset for the Nonalcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	1871.83	99	18.90		
Between Years	45.13	3	15.04	1.52	0.20
Residual	2935.85	297	9.88		

Table 17

Summary Table of Repeated Measures Analysis of Variance for the LCU Values of the Three Years Before Onset and Onset for the Nonalcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	34430484.92	99	347782.67		
Between Years	187591.04	3	62530.34	0.54	0.65
Residual	34189442.81	297	115115.96		

the year of onset adequately determined for this group? The issue of using the respondents' self-reports as the sole determinant for the establishment of the levels of the independent variable, as mentioned in Chapter I, is a troublesome one and is in need of clarification.

It seemed especially important then to determine whether or not there was a significantly greater amount of alcohol intake during Onset than in the Prealcoholic years. As a partial test, the mean daily amount of alcohol intake in ounces for the total prealcoholic period was compared with the year of Onset for the MA and the MNA groups. A t test for correlated samples was employed to determine significant differences in the means. Results of the t test indicated that there was a significantly greater amount of mean alcohol intake for the alcoholic group in the year of Onset than in the prealcoholic period, t (99) = 5.78, p = .001. For the nonalcoholic group the difference was nonsignificant, t (99) = 1.54, p = 0.08.

Despite the significant t value, the issue of the adequacy of the determination of the year of Onset is still unresolved. In the following chapter, an attempt is made to clarify some aspects of this issue.

In summary, the finding of a significantly greater mean number and mean LCU value for the total number of

events for the year of Onset, as compared with the prealcoholic period, supports the third hypothesis.

Hypothesis 4

The fourth hypothesis predicted that during the three-year period of active alcoholism (ACTAL):

1. the total number of events and their total LCU values will be significantly higher than the prealcoholic period;

2. the number of events judged as within the control of the respondent will be significantly higher than the prealcoholic period;

3. the number of women who used drugs will be significantly greater than in the prealcoholic period.

Eight t tests for correlated samples were employed for comparing differences between the three years of prealcoholism and the years of active alcoholism (the three years that preceded Recovery). The results of these tests for the alcoholic group are summarized in Table 18.

Table 18 indicates that (a) the number of events and (b) their LCU values were significantly higher in the period of active alcoholism than in the prealcoholic years, t (99) = 6.44, $p < .001$; t = 5.29, $p < .001$.

The number of events judged as within the control of the respondent was significantly higher in the period of

Table 18

Summary of t-Tests for the Three Prealcoholic Years and the Three Years of Active Alcoholism for the Alcoholic Group

Variable	Years		Years		t	p
Total Number of Events	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	11.34	12.88	26.00	21.30	-6.44	.001
Life Change Unit Values	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	1518	1128	2864	2462	-5.29	.001
Total Number of Events Within Control	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	2.14	2.10	4.21	3.32	-5.93	.001
Total Number of Events Not Within Control	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	0.36	0.71	0.31	0.67	.48	.634

active alcoholism than in prealcoholism, t (99) - 5.03, $p = .001$. Differences in the number of events judged as not within the respondent's control were nonsignificant. This finding is discussed in some detail in the following chapter.

T tests for a correlated sample were also conducted on these variables for the nonalcoholic group. The results are summarized in Table 19. It shows that both (a) the number of events and (b) their LCU values were significantly higher in "active alcoholism" as compared with the prealcoholic years, t (99) = 3.91, $p < .001$; t (99) = 4.04, $p < .001$.

The number of events judged as within control was also significantly higher in the years of "active alcoholism," t (99) = 2.69, $p < .01$.

For the alcoholic sample, just eight women used a mean daily amount of 61 mgs. per day during the prealcoholic period. During the period of active alcoholism, 25 women used a daily mean of 103 mgs. per day. The remaining 92% and 75% of the women in the prealcoholic and active alcoholic periods, respectively, used no drugs at all. For the nonalcoholic group, only 1 woman used any drugs at all during the "prealcoholic period," and 6 women, whose average mean daily amount was 51.31 mgs., used drugs in the

Table 19

Summary of t-Tests for the Three Prealcoholic Years and the Three Years of Active Alcoholism for the Nonalcoholic Group

Variable	Years		Years		t	p
Total Number of Events	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	2.85	4.73	7.06	10.29	-3.91	.001
Life Change Unit Values	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	700	468	1205	1144	-4.04	.001
Total Number of Events Within Control	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	1.25	1.73	2.10	2.81	-2.69	.01
Total Number of Events Not Within Control	PREAL Mean	S.D.	ACTAL Mean	S.D.		
	0.15	0.43	0.63	1.16	-3.81	.001

period of "active alcoholism." The remaining women reported not using drugs at all.

Because the overwhelming majority of subjects in both groups used no drugs at all during both periods, little information would have been gained from analyzing the differences in drug use between the periods for either group.

Drugs prescribed by the respondents' physicians included Librium, Valium, Seconal, Nembutal, and Tofranil. The other drugs reported by the respondents were Cocaine, LSD, Marijuana, Mescaline, Hashish, and angel dust. The list given by the respondent is probably not exhaustive.

The fourth hypothesis received only partial support. Total number of events and their LCU values were significantly higher during the period of active alcoholism. Although they were also significantly higher for the MNA group, when total number of events and total LCU values for the two groups were compared for the period of active alcoholism, significant differences in both number of events and LCU values, in favor of the alcoholic group, were obtained, t_{number} (198) = 8.0, $p < .001$; t_{LCU} (198) = 6.11, $p < .001$.

For the variable of locus of control, significantly higher mean values were obtained for both the MA and the MNA groups. These significant differences were observed

in (a) events judged as within the control of the respondent and (b) events not within the control of the respondent, for the nonalcoholic group. For the alcoholic group, the significant differences obtained only for the events judged as within the control of the respondent. When the two groups were compared, the results indicated that the alcoholic group experienced a significantly greater mean number of events judged within their control than the MNA group for the period of active alcoholism, $t(198) = 4.85$, $p < .001$. When compared on the variable of events judged not within the respondent's control, the pattern was reversed, $t(198) = 2.37$, $p < .02$. This suggests that during the period of active alcoholism, the events that happen to alcoholics are largely a result of their own doing. The implications of this finding are considered in Chapter IV.

Hypothesis 5

The fifth hypothesis predicted that alcoholic women would make the decision to seek help and abstain from drinking, during the year in which they experienced (a) the highest number of events and LCU values in the Personal area and (2) the highest drinking attribution scores. Therefore, in the year before recovery, the third year of active alcoholism (ACTAL 3), all three variables were

predicted to be significantly higher compared to the two preceding years (ACTAL 1 and ACTAL 2).

Number of events in the Personal area. Differences in the number of events in the Personal area for the three years of active alcoholism were tested by means of one-way repeated measures analyses of variance. The number of events in the Personal area was significantly higher in ACTAL 3 as compared with the preceding two years, $F(2, 198) = 10.40$, $p < .001$. The results of this test are presented in Table 20. The means of standard deviations for the number of events in the Personal area for the three years of active alcoholism are presented in Table 21.

The F value for the MNA group, as indicated in Table 22, failed to reach a statistically significant level for differences between any of the three years of Active alcoholism.

Differences in the number of events in the three life event areas for the third year of active alcoholism (ACTAL 3) were tested by means of one-way repeated measures analyses of variance. Table 23 presents the means and standard deviations for both groups for the number of events in each area during ACTAL 3. The results of the analysis of variance for the MA group, presented in Table 24, indicated that there were a significantly greater

Table 20

Summary of Repeated Measures Analysis of Variance for the Number of Events in the Personal Area for the Three Years of Active Alcoholism for the Alcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	9907.39	99	100.07		
Between Years	1180.84	2	590.42	10.40	.00
Residual	11237.15	198	56.75		

Table 21

Means and Standard Deviations for Number of Events in the Personal Area for Both Groups

Years	MA		MNA	
	X	SD	X	SD
ACTAL 1	3.08	5.79	0.55	2.27
ACTAL 2	4.66	8.45	0.65	2.04
ACTAL 3	7.85	10.42	0.46	1.62

Table 22

Summary of Repeated Measures Analysis of Variance for the Number of Events in the Personal Area for the Three Years of Active Alcoholism for the Nonalcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	552.81	99	5.58		
Between Years	1.80	2	0.90	0.28	0.75
Residual	633.52	198	3.19		

Table 23

Means and Standard Deviations for the Number of Events in the Family, Personal and Work Areas for ACTAL 3 for Both Groups

	MA		MNA	
Area	X	SD	X	SD
Family	1.64	3.99	1.33	3.64
Personal	7.85	10.42	0.46	1.62
Work	3.58	6.69	0.58	2.22

Table 24

Summary of Repeated Measures Analysis of Variance for the Number of Events in the Three Areas for the Alcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	6067.29	99	61.28		
Between Areas	2017.73	2	1008.86	18.65	.001
Residual	10709.60	198	54.08		

number of events in the Personal area than in the other two areas, $F(2,198) = 18.65$, $p < .001$. The results for the MNA group are presented in Table 25. For this group, a significant F ratio was obtained, $(F2,198) = 3.84$, $p < .02$. However, it was not the Personal area, but the Family area in which the highest mean was obtained. This finding suggests that for the year preceding recovery, the constellation of life events is drastically different for alcoholics and nonalcoholics. That is, for the nonalcoholic, the greatest number of events are in the Family area. While this was also true for the alcoholic group in the prealcoholic stage, in ACTAL 3 events in the Personal area predominate.

LCU values in the Personal area. Differences in the LCU values in the Personal area for the three years of active alcoholism were tested by one-way repeated measures analyses of variance. For the MA group, the LCU value in the Personal area was significantly higher in ACTAL 3 than in ACTAL 1 or ACTAL 2, $F(2,198) = 11.16$, $p < .001$. Table 26 presents the results of this analysis test. Table 27 presents the results for the MNA group, and indicates no significant differences between the years for LCU values in the Personal area. The means and standard deviations of the LCU values in the Personal area for

Table 25

Summary of Repeated Measures Analysis of Variance for the Number of Events in the Three Areas for the Nonalcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	921.33	99	9.30		
Between Areas	44.39	2	22.19	3.84	
Residual	1143.68	198	5.77		

Table 26

Summary of Repeated Measures Analysis of Variance for the LCU Values in the Personal Area for Three Years of Active Alcoholism for the Alcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	114095002.25	99	1152474.77		
Between Years	12940774.68	2	6470387.34	11.16	.000
Residual	114761833.98				

Table 27

Summary of Repeated Measures Analysis of Variance for the LCU Values in the Personal Area for the Three Years of Active Alcoholism for the Nonalcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	11180847.52	99	112937.85		
Between Years	99296.02	2	49648.01	0.67	0.51
Residual	14571106.64	198	73591.44		

ACTAL 1, ACTAL 2 and ACTAL 3, for both groups, are presented in Table 28.

Differences in LCU scores in the three areas for ACTAL 3 were tested by repeated measures analyses of variance (ANOVA). The ANOVA for the MA group yielded an F value of 3.86 (df = 2, 198, $p < .02$)--indicating that scores in the Personal area were significantly higher than scores in the other two areas. Table 29 presents the results of this test. Scores in the Family area were significantly higher than those in the Personal or Work areas for the MNA group, $F(2, 198) = 3.39$, $p < .03$. Table 30 presents the results of this test. The means and standard deviations of the LCU scores in each area for ACTAL 3 are presented in Table 31.

A chi-square technique was used to test the degree of association between group membership and the attainment of highest scores on both variables in ACTAL 3, as compared with the preceding two years. The results indicated a significant association between membership in the MA group and attainment of LCU and number of events in the Personal area in ACTAL 3, X^2 Events = 57.93, $p < .001$; X^2 LCU = 50.46, $p < .001$. Fifty-seven percent of the MAs had the highest number of events in ACTAL 3, compared to ACTAL 1 and ACTAL 2 (cf. MNA = 6%). Similarly, 65% of the MAs had

Table 28

Means and Standard Deviations for the LCU Values in the Personal Area for Both Groups

Years	MA		MNA	
	X	SD	X	SD
ACTAL 1	330.65	543.14	120.72	389.18
ACTAL 2	484.56	871.32	92.70	226.09
ACTAL 3	827.54	1121.37	76.70	239.87

Table 29

Summary of Repeated Measures Analysis of Variance for the LCU Values in the Three Areas for ACTAL 3 for the Alcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	98330212.31	99	993234.46		
Between Areas	3223766.80	2	1611883.40	3.86	.02
Residual	82601247.79	198	417178.01		

Table 30

Summary of Repeated Measures Analysis of Variance for the LCU Values in the Three Areas for ACTAL 3 for the Nonalcoholic Group

Source	Sum of Squares	df	Mean Square	F	p
Between People	9114662.63	99	92067.29		
Between Areas	402588.87	2	201294.43	3.39	.03
Residual	11753777.77	198	59362.51		

Table 31

Means and Standard Deviations for the LCU Values in the Family, Personal and Work Areas for ACTAL 3 for Both Groups

Area	MA		MNA	
	X	SD	X	SD
Family	206.00	551.09	161.50	311.46
Personal	827.54	1121.37	76.70	239.87
Work	375.57	857.04	93.69	237.14

their highest LCU scores in the Personal area in ACTAL 3 (cf. MNA = 14%). Thus, both the number of events and the LCU values in the Personal area reached a peak, that is, were significantly higher in ACTAL 3, as compared with ACTAL 1 and ACTAL 2, for slighly more than 1/2 of the alcoholic subjects.

Drinking attribution scores. A frequency distribution of the number of events--in all areas--attributed to drinking by the MA group is presented in Table 32. In ACTAL 1, 66% of the MAs reported 1 to 7 events, 8 MAs attributed 5 or more events to drinking. In ACTAL 2, 69% of the MAs reported that 1 to 8 events were attributable to drinking; 6 reported 5 or more events. In ACTAL 3, 81% of the MA group reported events attributable to drinking (range = 1-13); 17 reported 5 or more such events.

Differences between the three years were tested by a one-way repeated measures analysis of variance. The F test showed that drinking attribution scores were significantly higher in ACTAL 3 than in ACTAL 1 or ACTAL 2, $F(2, 198) = 11.21$, $p < .001$. Table 33 presents the means and standard deviations of these scores for the three years and Table 34 presents the results of the ANOVA. It was found that only 41% of the MAs had highest drinking attribution scores in ACTAL 3, as compared with ACTAL 1 and ACTAL 2. Thus,

Table 32

Frequency Distribution of Number of Events Attributed to Drinking During Each Year of Active Alcoholism for the Alcoholic Group

ACTAL 1		ACTAL 2		ACTAL 3	
Number of Events	N	Number of Events	N	Number of Events	N
0	34	0	31	0	19
1	26	1	31	1	28
2	19	2	16	2	17
3	9	3	11	3	11
4	4	4	5	4	7
5	4	5	1	5	9
6	2	6	4	6	3
7	2	8	1	7	3
	100		100		
				12	1
				13	1
					100

Table 33

Means and Standard Deviations for Drinking Attribution for Both Groups

Years	MA		MNA	
	DKAT $\bar{X}$	DKAT SD	DKAT $\bar{X}$	DKAT SD
ACTAL 1	1.32	1.39	0.0	0.0
ACTAL 2	1.53	1.66	0.0	0.0
ACTAL 3	2.44	2.55	0.1	0.1

Table 34

Summary of Repeated Measures Analysis of Variance for the MA Group for the Three Years of Active Alcoholism

Source	Sum of Squares	df	Mean Square	F	p
Between People	489.53	99	4.94		
Between Years	70.88	2	35.44	11.21	.001
Residual	625.78	198	3.16		

drinking attribution scores reached a peak in ACTAL 3 for less than 1/2 of the MA group.

The fifth hypothesis, which predicted that women in the alcoholic group would experience the greatest number of events in the Personal area and have their highest total LCU values during the last year of alcoholism, was supported.

The second part of the hypothesis, which predicted that there would be a significantly greater number of events attributed to drinking during the last year of alcoholism, was also supported.

Alcadd Test

The Alcadd Test (Manson, 1963) was administered to both groups in order to augment their self-reports in determining (a) that a period of active alcoholism did, in fact, exist for the alcoholic group and (b) that the "nonalcoholic group" was presently nonalcoholic. The results of the analysis of the protocols indicated that 78% of the alcoholic group were considered alcoholic for their period of reported alcoholism. For the nonalcoholic sample, 89% were diagnosed, on the basis of their Alcadd scores, as nonalcoholic, and 11% fell within the alcoholic or the borderline-alcoholic range.

It should be noted, however, that the alcoholic group was asked to respond to the items as though they were in

their period of alcoholism. Responses given under this set of circumstances may not be comparable to those given in the standardized test situation. The use of the diagnostic classifications, then, may not have been appropriate for the group of alcoholics. That limitation notwithstanding, partial support was lent for the use of the respondents' self-reports for determining the independent variable of group membership.

CHAPTER IV

Discussion

Consideration of the results reported in the preceding chapter will be made in view of the limitations described in Chapter II. Most important, however, are the limitations associated with a retrospective study, from which inferences of causality, and therefore etiological factors, cannot be drawn. The discussion, then, will be restricted to an analysis of the relationships between life events and alcoholism in women.

Hypotheses 1 and 2

The relationship of Femininity-Threatening events and events in the Family area to Alcohol Intake. It was predicted that alcoholic women would experience (a) a greater number of femininity-threatening events than nonalcoholic women and (b) that these events would be related to alcohol intake for the alcoholic subjects. It was also predicted that alcoholic women would experience a greater number of events in the Family area than in the Personal or Work areas, and that these events, too, would be related to alcohol intake.

The results revealed that the alcoholic women experienced (a) a significantly greater number of FT

events in all three prealcoholic years and in the combined three-year period, (b) a significantly greater mean LCU value for PREAL 2 and PREAL 3, and (c) a significantly greater impact of Family area events for the combined three-year period. The results also indicated that the number of FT events and their LCU values and the LCU values of Family area events were significantly related to alcohol intake for the alcoholic sample.

Significance of PREAL 3. The fact that a significantly higher number of events and LCU values for the MA group were found for PREAL 3 only and that a significant relationship between alcohol intake and the impact of FT events was also obtained for this period, can be interpreted in one of two ways.

1. The relationship between the impact of FT events and alcohol intake may not begin to cement until the year immediately preceding onset (PREAL 3). That is to say that the FT experiences of the first two years of the prealcoholic period may serve to sensitize the prealcoholic woman to events in later years which are related to alcohol intake. This is analogous to Lindbeck (1972) who argued that the early experiences of the prealcoholic woman set the stage for greater psychological vulnerability to future experiences. This explanation is also consistent

with Wilsnack's (1972) profile of the female alcoholic who ". . . may manage to cope with her fragile sense of feminine adequacy for a number of years, but when some new threat severely exacerbates her self-doubts, she turns to alcohol in an attempt to gain artificial feelings of womanliness" (p. 81).

2. The possibility exists that the different levels of the independent variable were not adequately established. That is, the crucial prealcoholic period may, in fact, not have begun until the year immediately preceding onset.

The essential distinction between the two explanations is whether or not the years of prealcoholism, and especially PREAL 3, are considered discrete or continuous variables.

Regardless of the explanation, the fact that a significant relationship between LCU values in the Family area and alcohol intake existed for PREAL 3 only, in addition to the relationship between impact of FT events and alcohol intake in PREAL 3, supports the contention that the third year of the prealcoholic stage is either qualitatively or quantitatively different from the other two.

The following question, however, was raised. Since the majority of the items in the Family area are also FT

events, and vice versa, what support is lent to this contention from the finding of a relationship between Family LCU values and alcohol intake? Although this question is a valid one, the fact that a significant relationship in the number of FT events, but not in the number of Family events was found, indicates that some degree of independence between these two variables does exist.

Alternatively, it is possible that the significant relationship observed for Family LCU values and alcohol intake was based upon several Family area events with high LCU values. These events, in turn, may also have been those judged as femininity-threatening.

Inspection of Appendix B indicates that this may have been the case. The events in the Family area that most sharply discriminated between alcoholics and nonalcoholics included fertility and sexual problems, serious illness or injury to loved one, separation from or death of a husband, or abortion--most of which have relatively high LCU values.

This brings into question whether or not the list of Family area events is in any meaningful sense different from the list of Femininity-Threatening events. Stated differently, does Hypothesis 1 differ from Hypothesis 2? This question was not, however, addressed in the present

investigation. In order to determine whether or not the hypotheses differ, a factor analysis is required. This analysis would yield the percentage of the contribution of each factor to the variance of the sums of squares between groups (SS_b groups). If it were found that the Family factor did not contribute significantly beyond the contribution of the FT factor, it would be eliminated.

The close correspondence between events in the Family area and FT events, the factor analysis notwithstanding, gives rise to a third question. The results indicated that the number of FT events and their LCU values were significantly related to alcohol intake in PREAL 3, but for the Family area only LCU values were related to alcohol intake; the number of events, however, was not.

If the FT events and the Family area events correspond very closely, as they do, how is the nonsignificant relationship between number of events in the Family area and alcohol intake accounted for?

One explanation may lie in the fact that the relationship between the number of FT events and alcohol intake is a weak one ($R = .29$); one which accounts for only 8.6% of the variance of alcohol intake. Since there is not a 1:1 correspondence between events in the two groups, the discrepancy ($R_{FT} = .29$ vs. $R_{Family} = .19$) may have been

caused by those events that were not included on both lists.

Interpretation of the findings. If the limitations cited in Chapter II, such as more accurate recall, overreporting of events, justification of alcoholism, the use of instruments of questionable reliability and validity, and methodological inadequacies did not appreciably affect the significant F value that was obtained, it could be concluded that prealcoholic women experience a greater number of events which are threatening to their femininity than nonalcoholic women. Why did the prealcoholic woman experience more femininity-threatening events?

A speculative account for the greater number of Femininity-Threatening events experienced by the prealcoholic woman relates to the possibility that these events are self-generated.

According to Lindbeck (1972) the prealcoholic woman is insecure in her sex-role and is socially inept. Kinsey (1968) added that she lacks the emotional preparation for fulfilling her role as wife and mother. Yet Connors (1960) found that the potential female alcoholic places great emphasis on primary relationships and Gomberg (1974) reported that the prealcoholic woman has an intense need

for love and reassurance but experiences difficulties in establishing a trusting relationship. Finally, Cananzaro (1967) found that she has low self-esteem, is emotionally immature, and experiences a high level of anxiety in interpersonal relationships. If one accepts these views, then the married alcoholic woman may require an excessive amount of reassurance that she is loved by her husband, children, and friends. She might, for example, as one prealcoholic in the present study did, unwittingly create difficulties with her in-laws in an attempt to force her husband into choosing between his family and herself. This maneuver, though precipitated by an attempt to enhance her feelings of femininity, may often result in situations which actually diminish them.

The need for reassurance, in general, may also lead the prealcoholic woman to seek additional social contacts (Curran, 1937). If Cantanzaro (1967) is correct in stating that the prealcoholic woman experiences a high level of interpersonal anxiety, then it seems reasonable to assume that she will fail in many of these endeavors. This failure may result in further decrements in her perceived sense of femininity--which in turn would lead to greater interpersonal anxiety and an increased need to seek out social relationships. In this way, a vicious

cycle is established, which results in a disproportionately large number of FT and Family area experiences.

Alternatively, it is possible that many prealcoholic women do not react in this fashion. When confronted with situations that they perceive as femininity-threatening, they tend to withdraw, thereby isolating themselves from the potentially aversive consequences produced by these situations. This coping strategy was evident from the self-report of one prealcoholic respondent who reported that after years of unsuccessful attempts at establishing meaningful social relationships, she supplanted the few social contacts she did have with the companionship of a bottle of wine.

The speculation that the prealcoholic woman creates many FT and Family events might have been tested in part by judging these events with respect to their locus of responsibility. Indeed, an attempt to do this was made. However, methodological problems resulted in a very small number of events that were categorized according to their locus of responsibility. This is elaborated upon in greater detail in the section discussing the results of hypothesis 4.

Identification of specific events. An attempt was made to determine whether or not any Specific FT or Family

events were characteristic of the prealcoholic women. It was found that very few similar Specific events were reported. In fact, there were almost as many Specific events as there were women. Had a frequency distribution been generated for this enormously diverse number of events it would have been unwieldy and more confusing than illuminating.

Alcohol Intake vs. Alcoholism. It was suggested that the impact of Femininity-Threatening and Family area events were related to alcohol intake. But is there a relationship between these events and alcoholism? Obviously, the results obtained from the testing of hypotheses 1 and 2 relate only to differences between the alcoholics and nonalcoholics in event impact and their relationship to intake of alcohol. To conclude that FT or Family events cause alcoholism would be extrapolating beyond the data.

Hypothesis 3

Onset of alcoholism and life events. The third hypothesis stated that the year of onset would be the year in which the number of events and their accompanying LCU values would reach a peak compared to the preceding years.

The analyses of variance demonstrated that both the number of events and the LCU values were significantly

higher in Onset than the preceding years for the alcoholic group. Although these findings generally support the hypothesis, they still leave many questions unanswered. For example, it was found that 42% of this group had their highest total LCU score in Onset and 45% experienced their highest number of events during the year of Onset than in the preceding years. Slightly more than 1/2 of the group had higher scores prior to Onset. Several explanations may account for this finding.

Unequal sampling of the twelve-month time period. The year established as Onset was the one in which the woman reported that loss of control (the criterion for Onset) had occurred. Since the women were unable to report the month of Onset, it is likely that Onset occurred in the beginning of the year for some women, in the middle of the year for others, and at the end of the year for still others. Therefore, the hypothesis would predict that those women who experienced Onset at the end of the year would have their highest scores in the year of Onset. But those women for whom Onset occurred in the beginning or middle of the year would have had their highest scores in the third year of the prealcoholic stage (PREAL 3).

Therefore, the finding that only about 40% of the alcoholic women experienced their highest scores during

Onset may be accounted for by the possibility that only about 40% experienced loss of control near the end of the Onset year. The remaining 60% of the subjects may have experienced loss of control earlier in the Onset year and would not have experienced the peak impact during the year of Onset but in PREAL 3. Some support is lent to this explanation by the finding that, indeed, there was a significantly higher mean LCU value for PREAL 3 than for PREAL 1 and PREAL 2. Furthermore, the mean number of total events for PREAL 3 was greater (although not significantly so, $p = .10$) than PREAL 1 and PREAL 2.

Patterns of Onset. The finding that 60% of the alcoholic women did not report that stresses peaked during the year of Onset may be related to the problem associated with determining this period. For example, several women described themselves as "periodic" alcoholics. These women lost control each time they drank, but abstained from alcohol for long periods between drinking bouts. One woman described this pattern in the following way:

> I can't remember ever drinking socially or in moderation. I had my first drink when I was sixteen . . . I got drunk, sick, blacked out, passed out, and hungover. . . . I would drink for three or four days around the clock, until I got so sick I couldn't drink any longer. Once I stopped I stayed sober for six or more months. Then something would happen and I'd do it again. That's how it was . . . it never changed.

The year in which the first incidence of loss of control occurred was designated as the year of Onset in the present study. Whether the period of Onset had actually begun for these subjects is really unknown.

Some women reported still another drinking pattern. This subgroup recalled drinking socially for many years. Episodes of uncontrolled drinking were sprinkled throughout these years. These "binges" were followed by a resumption of social drinking. That is, these women shifted from social drinking to alcoholic drinking and back to social drinking. This group is distinguished from the former group in that social drinking occurred between bouts of alcoholic drinking. The year recorded as Onset for these women was the first year they reported that drinking was consistently out of control. However, once again this raises the question, when did Onset occur? Was it the year of the first episode of uncontrolled drinking or the one that was designated as such?

A third pattern, in which loss of control occurred with the first drink, was reported by several women. They reported becoming so ill that they abstained from alcohol for many years. When they resumed drinking they again lost control quickly. This group of alcoholics is distinguished from the two former groups in that neither social drinking

nor binge drinking occurred during the period of abstention. Their year of Onset was determined as the year they resumed drinking. It was unclear whether the year of Onset should have been the year of the first drink, or whether the year recorded was more accurate. The rationale for choosing the latter date was that it seemed inappropriate to consider a woman to be alcoholic after having had only one experience with alcohol that was followed by a long period of abstinence.

For another group of women there was a considerable amount of ambiguity in the minds of the respondents as to when the loss of control actually took place. The alcoholics in this group were able to recall a year in which there was definite loss of control. What they were unable to recall was whether there was considerable loss of control in the preceding years. In the words of one alcoholic:

> After he [husband] left, I had a lot of time on my hands. I started having a few drinks in the late afternoon with some of the other mothers . . . but I wouldn't say I lost control then. I crossed the "invisible line" rather slowly . . . 19__ was the first year I remember getting drunk <u>every time</u> I took a drink. Before that, I think I could stop once I started if I had to . . . But that year it got the best of me . . . I was out of control.

Therefore, it seems possible that the period of prealcoholism assigned to these women was in fact a period of active alcoholism.

In summary, for many of the women there was considerable doubt as to when the Onset period began. This has obvious implications for the designation of the Prealcoholic period for these women. If this assumption is correct, there is now an answer to the question raised earlier in regard to the reason significant findings were reported for PREAL 3 but not for PREAL 1 and PREAL 2. Quite simply, "PREAL 3" was, in reality, part of Onset, rather than PREAL 3, for some women.

Several studies suggested that the process of alcoholic addiction in women represents a very vital, but largely neglected, aspect of the development of alcoholism in women (Lisansky, 1957; Kinsey, 1966). In a study of the drinking patterns of alcoholic women, Lisansky (1957) emphasized that for women the interval between moderate drinking and problem drinking is especially in need of study.

Some studies have indicated that alcoholism in women is "telescoped" in comparison to alcoholism in males and that the shift from social drinking to alcoholism occurs within a short time period (Karpman, 1948;

World Health Organization, 1952; Glatt, 1955; Selzer & Holloway, 1957). In describing loss of control in males, Jellinek (1952) stated: ". . . the loss of control does not emerge suddenly but rather progressively . . . and becomes fully established several years after the first intoxication" (p. 675). However, he added: "For alcoholic women, the phases are not as clear cut as in men, and the development is frequently more rapid" (p. 675).

Our findings suggested that this rapid development was applicable to some women, in whom the shift to alcoholism seemed to take place practically overnight. For example, in recalling Onset, one woman stated:

> I'll never forget it . . . he hadn't come home for a week . . . when he did, he said he wanted a divorce . . . and then [he] stayed for about two more weeks . . . he left again . . . and I realized it was permanent . . . During the time he was back, I got pregnant with my third child . . . he left without knowing . . . when I found out I was pregnant and he wasn't coming back I started drinking with no holds barred. I had been drunk once or twice in my life before this. But once I started I couldn't stop and I didn't want to . . . until five years later.

This pattern, in which the development of Onset is "telescoped," is consistent with Lolli's (1953) conclusion that women abstain or drink in moderation until confronted with an overwhelming situation which "precipitates excessive and uncontrolled drinking" (p. 10).

Although this is undoubtedly true in some cases, it was also found that for some women the shift is not an all-or-none phenomenon, but a gradual one.

Fox (1955) theorized that two types of alcoholics can be identified: the primary addict and the secondary addict. According to Fox, the primary addict

> . . . from the first introduction to . . . alcohol, uses it as an aid to adjust to his environment. From the onset it is for him a magical substance . . . the predisposing traits are so developed and so marked that his first recourse to this socially approved narcotic is only a matter of time . . . his addiction is, if unchecked, rapid. (p. 138)

The secondary addict does not show the same early psychological dependence upon alcohol. "Generally, they pursue . . . social drinking for years and the predisposing traits . . . are developed over a long period of time" (p. 138).

The diverse reports concerning the interval between abstinence or moderate drinking and alcoholic drinking suggest that a multiplicity of patterns exists. In this study five distinct patterns of development of alcoholism were identified. This suggests that the speculation of Karpman (1948), Jellinek (1952), Lolli (1953), Glatt (1955) and Selzer and Holloway (1957), which describe the onset of alcoholism as rapid, precipitous and developing in an

all-or-none fashion, are premature and, as Lisansky (1957) has urged, in need of further study.

Life events and the onset of alcoholism. The major problem which mitigates against drawing conclusions from the finding that a significantly greater number of stresses were experienced by the alcoholic during Onset is that many of the events reported may have been the result rather than the precipitators of Onset. As discussed in the previous section, knowledge of the month in which loss of control occurred is crucial. Since this remained unknown, it was impossible to determine what percentage of the events that occurred during the year of "onset" actually preceded the day control was lost (which was the information sought by this investigation), and what fraction of these events followed loss of control (events which would be generated by the drinking itself and serve to confound the issue). Unfortunately, as mentioned previously, the respondents, who in many cases were giving these reports many years after Onset, could not recall the exact month, if there ever was such a month, in which loss of control occurred.

This confound renders the identification of precipitating events (if such events exist) which discriminate between the alcoholics and nonalcoholics, fruitless. Had such a list emerged for an Onset period that was accurately

determined, a clearer understanding of the relationship between environmentally-anchored stress and alcoholism would have been achieved. It is therefore recommended that in future investigations, special attention be given to the establishment of the Onset period.

An additional criticism relating to the Life Event Scale, which is crucial to any investigation of the relationship between life events and illness, was also noted. Four events which are the manifestations, rather than precipitators of alcoholism, were included in the Personal area. When events that are part of a disorder are used to predict the disorder, all explanatory value may be lost. As Dohrenwend (1974) stated: ". . . there is nothing that predicts the symptomatology that defines disorder like a portion of the very same symptomatology . . ." (p. 305).

These events were: (a) long period of loneliness (number of MAs experiencing this event = 4, MNA = 0), (b) hospitalized for drugs or alcohol abuse (MA = 1, MNA = 0), (c) major personal loss in blackout (MA = 0, MNA = 0, and (d) attempted suicide (MA = 1, MNA = 0). Since very few women reported these events during Onset, it is unlikely that they contributed significantly to the results.

Hypothesis 4

Testing of hypothesis 4 indicated that (a) the total number of events and their impact were significantly greater during the period of active alcoholism than in the prealcoholic years, (b) a significantly greater number of these events were judged as within the control of the respondent and (c) a greater number of prealcoholic women used drugs during the period of active alcoholism as compared with the prealcoholic stage.

For the nonalcoholic sample, significantly higher values during the "alcoholic period" were obtained for (a) number of events and their LCU values and (b) events judged as within the control of the respondents. The number of women who used drugs increased during this period too.

Impact of events. The findings of significant differences for the MNA group are perplexing. One possible explanation for the increase in the impact of life events is that events of all kinds increase with age--up to a certain point. This explanation is entirely speculative, and no support for it has been found in the literature. It should be noted, however, that although increases in the number of LCU values of life events were reported for the MA and the MNA groups, in every case these increases

were at least twice as high for the MA group.

As mentioned at the end of the previous section, the number of events that occurred to the alcoholic during the period of active alcoholism may have been influenced by her use of alcohol itself. It was hypothesized that during active alcoholism a vicious cycle exists, in which intoxication gives rise to events, which in turn give rise to more drinking. This tragic cycle was poignantly described by one of the respondents. She stated:

> . . . eventually, I drank when something had happened, since who wouldn't. You need a drink at a time like that. I also drank when something good happened . . . You have to celebrate . . . And of course, I drank when nothing happened because I was bored. Once I drank, something usually happened, and either I wasn't bored, or something had happened, or something good happened . . . you see what I mean?

Locus of responsibility. For the variable of locus of responsibility, significant differences between the periods of active alcoholism and prealcoholism were obtained for both groups. The mean number of events judged to be within the control of the alcoholic respondents, upon which the *t* value was based, was 2.29 for the prealcoholic period and 4.84 for the years of active alcoholism. The mean number of events judged as not within control were 0.36 and 0.31 for the prealcoholic and active

alcoholic periods, respectively.

A still lower mean number of events was obtained for the MNA group. For these subjects, the mean number of events judged as within control was 1.25 and 2.10 for the prealcoholic and "active alcoholic" periods, respectively. The mean number of events judged as not within control for the same periods were 0.15 and 0.63.

Comparisons between the alcoholic and nonalcoholic groups within the two periods for events both within and not within the control of the respondents, lends support to the hypothesis that many of the events that occur in the period of active alcoholism to the alcoholics are generated by their use of alcohol. This is demonstrated by the findings that for the MA subjects there was a 100% increase ($p < .001$) in the number of events judged within their control from the prealcoholic period to the active alcoholic period. Although a similar increase was also observed for the MNA subjects, their mean number of events judged not within control increased by approximately 300% ($p < .001$). For the MA group, however, no difference in the mean number of events judged as <u>not</u> within control was found. It was therefore concluded that the heightened impact of events for the alcoholic subjects during active alcoholism was related to their intake of alcohol.

Little justification, however, can be made for drawing conclusions from such findings. The reason for the extremely low number of events judged as within and not within the control of the respondent was based on what appears to be methodological inadequacies. As explained in Chapter II, the criterion for designating an event as either within or not within the control of the respondent was the perfect agreement between the two raters. In situations in which there was disagreement as to what category an event should be placed in, or even when one or both raters could not decide as to the classification of the event, the event was not designated as either within or not within the control of the respondent. For example, a specific event given in response to the main Event of "Divorce" illustrates the methodological problem. One respondent reported:

> He told me I had no choice in the matter. He told me he could have me thrown in jail and take the kids away. What could I do?

This specific event was judged by one rater as not within the control of the respondent. The other rater could not decide.

This attempt at being conservative as to the classification of events resulted in the elimination of the majority of events from the analysis of the locus of

control variable. Unfortunately, this variable is crucial to any analysis of the relationship between life events and illness. Without knowing whether or not the events were within the control of the women, the question of whether or not the alcoholic woman does in fact experience more stressful events that are the result of her intake of alcohol remains unanswered. Stated differently, the possibility that alcoholic women experience more "bad luck," independent of her drinking, requires further study.

It is therefore recommended that in future studies this variable be accurately assessed. This may be accomplished by having the judges rate each event on a five-point continuum anchored at both extremes, which would range from entirely beyond the control of the respondent to entirely within the control of the respondent. The geometric mean of the ratings would be designated as the locus of responsibility score. By employing a dependent variable which is continuous, as recommended, parametric analyses of the relationships between this variable and other independent variables would be facilitated.

Drug use. As indicated in Chapter III, relatively few women in either group used drugs during the prealcoholic or active-alcoholic periods.

The self-reports of those few alcoholic subjects who

did use drugs revealed that in all cases, upon complaining of nervousness and tension, their physicians prescribed tranquilizing and/or sedating drugs. By prescribing drugs for symptoms that the respondents reported were caused by the use of alcohol and the abstinence syndrome, the physicians may have been inadvertently substituting one addictive substance for another. The case of one respondent typifies the beginnings of cross-addiction for some of the women.

> After a while, I found it [alcohol] just didn't work for me anymore. It turned on me . . . I couldn't get drunk, and I couldn't get sober. I was a nervous wreck . . . I needed help . . . My doctor gave me some Valium. . . .

This respondent was later hospitalized for drug detoxification. It is apparent that at least in some cases women who go for treatment for alcoholism end up addicted to other substances in addition to alcohol.

Hypothesis 5

This section attempts to discuss the relationship between events in the Personal area and the decision to stop drinking in ACTAL 3. As indicated in Chapter I, the rationale for this hypothesized relationship was a theoretical one. It is reasoned that the events in the Personal area, such as inability to dress oneself, "landing on the

flight deck of Bellevue" without any idea of how one came to be there, and hosts of other humiliating, depersonalizing and degrading events are more likely than events in the Family or Work areas to bring her to recognize that (a) alcohol is now her major problem, (b) she alone is responsible for the creation of these events and (c) only she can alter their course.

It seems that her responsibility for the consequences of the events in the Personal area are more difficult to rationalize, project onto others or deny than events in which other people, including her husband, children, friends, co-workers and employers, are involved. It argued that as long as the alcoholic woman perceives alcohol as an "enabler" that aids in the solution of problems, reduces anxiety, and, in general, is perceived as a useful part in her coping strategy, she will continue abusing it. When she (a) recognizes that alcohol in fact is not an "enabler" but gives rise to side effects that are more unpleasant than its main effects, and (b) perceives it as ineffective in reducing anxiety, then the first step towards recovery--recognition of the problem--has been achieved. Once the realization that alcohol itself has become a major problem, and the drinking attribution has been accurately assessed, she will actively consider abandoning it in favor of more

adaptive alternatives. Thus, the recognition of the problem and the accurate assignment of the attribution spring from situations in her personal life. From this theory it was predicted that in ACTAL 3, the year immediately preceding Recovery, the female alcoholic experiences the greatest number of problems in the Personal area. Hypothesis 5, which predicted a significantly greater number of events in the Personal area than in the Family or Work areas for the period of ACTAL 3, is the embodiment of this prediction. The finding of a significantly greater impact in the Personal area was seen as lending support to this theoretical position. The theory was lent further support by the finding that significantly higher drinking attribution scores were obtained in ACTAL 3 as compared with the preceding years of alcoholism.

However, not all the alcoholic women achieved their highest scores in the third year. The drinking attribution score was highest for only 41% of the women, the number of events for 57%, and the LCU values for 64%. Two possible explanations are offered in an attempt to account for these subjects.

Events in other areas. Several studies have suggested that difficulties in the Family area motivate the alcoholic woman to seek treatment (Sclare, 1970; Edwards, Hensman &

Peto, 1972). Indeed, in the present study several women did report a concentration of events in the Family area during ACTAL 3. Although it is possible that for these women events in the Family area were more instrumental in the decision to seek help than events in the Personal area, none of the women indicated this in the event descriptions.

Gomberg (1974) concluded that men most often seek help because of trouble at work. In the present study several women also had a cluster of events in the Work area during the third year of active alcoholism. Although it is possible that these women were motivated to seek help for the same reasons as men, no evidence that this was the case was found in the event descriptions.

The event descriptions did indicate that it was events in the Personal area which were most important in the decision to stop drinking.

Relapses. It was naively assumed that recovery was an all-or-none phenomenon. Although the majority of women did succeed on their first attempt to achieve abstinence, others succeeded only after several unsuccessful attempts. The hypothesis would predict that these women would have their highest scores in the year in which they decided to stop drinking, rather than in ACTAL 3. Therefore, had the year in which the first decision to abstain been used, it

is likely that the findings would have been relevant for a higher portion of the group.

Events in the Personal area. A review of the literature failed to uncover any theoretical or empirical formulations that relate directly to these findings. Accordingly, discussion of these findings will necessarily focus on the descriptions given by the alcoholic women in this study.

Many women in the present study recognized that drinking was the cause of most of their problems but continued to drink for several years. The decision-making process was a lengthy one. For example, one woman said: "I had a haunting feeling that perhaps I would need to stop soon, and the feeling was a most saddening one . . . but it wasn't until 2-1/2 years later that I stopped." On the other hand, some women indicated that it took several years for them to recognize that alcohol was the cause of their problems, but once they did they stopped almost immediately thereafter. For these women, the process was rather brief. For example, one woman said, "Once I finally realized it was only alcohol I was relieved. I could do something about that--I wasn't crazy or cursed. I was just a drunk. I called AA and haven't had a drink since.

What did these women have in common? While impact was an important factor in the decision to stop drinking,

it was also found that one specific event was also important. Although the specific circumstances surrounding the events differed, the majority of women indicated that 1 of 7 events resulted in the decision to seek help. That is, although many events brought about recognition of the problem, one event precipitated the decision to do something about it. It was interesting that a large number of alcoholic women reported that these events were precipitating factors in their decision to stop drinking, despite the fact that this information was unsolicited. It is entirely possible that an even greater number of women would have identified these or other specific events had the question been posed.

It is therefore recommended that in future studies this question should be asked.

The events were: (a) major change in living conditions, (b) hospitalization for alcohol or drug use, (c) change in personal habits, (d) sleep disturbances, (e) attempted suicide, (f) personal illness or injury, and (g) Christmas or other holidays--all events in the Personal area.

(a) Twenty-two women reported a change in living conditions during active alcoholism. Twelve reported that drinking was the major reason for the change and that it precipitated the decision to stop drinking. The following comment was typical:

> I couldn't live with my roommate anymore.
> I was too embarrassed about my drinking.
> I took a room in a hotel and stayed drunk
> around the clock until I finally called AA.

(b) Fifty-nine women were hospitalized for alcoholism. Sixteen of these women attributed their recovery to this event. These women, characteristically, described overall feelings of "despair" prior to hospitalization and feelings of "hope" afterward. That hospitalization is an important factor in recovery is illustrated by the following comment:

> I thought I was going insane, but they made me realize I had a problem with alcohol and had a chance of being sane . . . and functioning again if I stopped drinking.

Another woman said:

> They told me I had a disease [alcoholism] that could be arrested if I stopped drinking. I was completely beaten by then . . . in the pits . . . and they gave me hope.

(c) Fifty-nine women reported a major change in personal habits of which 21 indicated that this change resulted in the conviction to seek help. For some women the change involved a dramatic gain in weight. For example, one respondent recalled:

> I was drinking all the time now. I was used to at least being attractive . . . but suddenly, within three months, I gained 65 pounds. I went on a diet, no food, only alcohol . . . and only "Finlandia" because it was so potent it put me to sleep . . . and I rationalized that the more I slept, the less I would drink and the more weight I'd lose. I finally realized

> how crazy that was . . . I quit drinking and went to my doctor.

(d) Other women said sleep disturbances were important to the decision. One woman recalled:

> I didn't go to sleep and wake up. I passed out and came to. I'd wake up and it would be dark outside. The clock would say 6 . . . I wouldn't know if it was 6 in the morning or 6 at night. I also didn't know what day it was . . . sometimes I lost whole days. I never knew what happened . . . I might have gone out, stayed home, called people . . . I was a vegetable. I finally couldn't take it anymore. I waited for an ad on TV about alcoholism and called the number.

Another woman said:

> I used to shake so much that I couldn't put makeup on . . . in fact, I couldn't even change my clothes. I lived in the same shmata for weeks . . . it was filthy . . . so was I . . . so was the bed . . . I also had become incontinent . . . so you can imagine what it was like . . . I was ready to give up but didn't know where to go . . . The delivery man from the liquor store left a note in my package with AA's number on it. I called that day.

Many other women also stated that once they decided to stop drinking, or were ready to do something about it, they didn't know where to find help. Since a great number of them also stated that their only recreational activity towards the end of their drinking period was watching television and listening to the radio, these would be important media for the dissemination of information about

alcoholism and treatment facilities.

(e) Eleven of the 42 women who reported suicide attempts said that it took this drastic measure to effect the decision to abstain from alcohol. Several indicated that it was the first time friends or relatives acknowledged their problem and offered assistance. They said that "after facing death" and with the "support of even one other human being" they had "hope" for the first time in years. One woman said:

> I didn't really want to die, but I couldn't go on living like that . . . I didn't expect help from anyone . . . Afterward, I realized that I didn't have to be alone and miserable anymore . . . I had nothing to lose . . . only my alcoholism . . . it was my only hope. I wasn't <u>giving up</u> anything, I was <u>getting rid</u> of something.

(f) Twenty women reported major personal illnesses or accidents. Of these, eight reported that an accident precipitated recovery. A typical report was:

> I . . . fell down the stairs and fractured my jaw . . . there was no one to blame but myself . . . it really jolted me into realizing that I had to stop drinking.

(g) The last event cited as important to the decision to stop drinking was Christmas or other major holidays. Ten women reported that a holiday marked the turning point. For example, one woman commented:

> It was New Year's day . . . I was filled with despair . . . all alone again . . . I decided I couldn't stand another year like this . . . I was going to get help and if that didn't work, kill myself.

The descriptions presented in the anecdotal accounts dramatically illustrated that many of the alcoholic women experienced one specific event in the Personal area that they perceived as being primarily responsible for initiating their recovery. Coincident with this perception was the realization for most of these respondents that alcohol itself had become their major problem.

Thus, both hypothesized factors (a) that the impact of events in the Personal area and (b) that drinking attribution scores would be highest in PREAL 3--the year in which the decision to embark upon recovery was made--were tentatively supported by these anecdotal reports.

It is possible that the vicious cycle of alcoholism is broken only when the belief in alcohol as a magical enabler is completely shattered. However, the need to reduce cognitive dissonance may produce an irrational overvaluation of the benefits of alcohol. This would make the accurate attribution of problems to alcohol especially difficult. Therefore, it is suggested that it is not until the alcoholic is beset by a host of personal tragedies that culminate in one specific event in the Personal area,

that she finally relinquishes her irrational attitudes towards alcohol. An implication of this suggestion is that emphasizing to the alcoholic the relationahip between her personal tragedies and her use of alcohol may be an effective approach to employ as soon as the diagnosis of alcoholism is suspected. The use of the drinking attribution questions might be a useful tool in the confirmation of this diagnosis. In short, one objective of intervention should be to focus the alcoholic's attention on her singular responsibility for the events that she is experiencing and to impress upon her that she is the main person affected. Too often, "women are deluged with information about how alcohol affects their husbands, how it affects youth, and how it affects society" (Sandmaier, 1976, p. 24). But they are not accustomed to hearing about how alcohol affects women. Alcoholism must also be put forth as a woman's issue--the lack of this could result in tragedy.

Additional Findings

An interesting adjunct to the analysis of the factors relevant to recovery was that events in the Family area were cited as those which precipitated relapse. This finding is consistent with Marlatt's (1973) study of situations in which relapsed-male patients took their first drinks after leaving the hospital. He found that

almost 1/3 of all relapses occurred when the patient was frustrated and angry--usually in an interpersonal context.

The majority of alcoholic women in the present study were either divorced or separated. Many reported that their relapses were associated with their marital status. These women stated that they "built up resentments" chiefly in relation to the problems which arose as a result of being the "sole caretaker" of the family. As in the Marlatt study, these women too felt mistreated and angry. However, the respondents emphasized that it was the lack of opportunity to effectively express anger or assert themselves that triggered the relapse.

For example, one woman whose situation was typical of this group reported having a relapse after a meeting with her ex-husband about child support payments. She stated:

> J's tuition payment was due . . . and by the time it got to Family Court my son would be out of luck. When I asked [my husband] for back payments he screamed "no more money." He became obnoxious, screaming at me . . . humiliating me . . . I just tried to be as nice as I could . . . and stay calm . . . I was afraid to say anything back, especially for J's sake . . . After he left, I just figured "what's the use." I had a few drinks and that was the beginning of it all over again.

One sad observation made by Mundy (1975) is that when women are prevented from expressing anger, one psychological

"solution" they employ is alcohol.

Another situation commonly reported in connection with relapse was problems with Family Court or other social institutions. In these settings, women often believed they could not assert themselves without endangering their outcomes. For example, one woman reported:

> [My husband] had put all of our money into her [new wife's] name . . . Most of it was the money my mother left me which he took when he left . . . I had three little kids to support . . . the social worker kept telling me I had to be more understanding of his [my husband's] problems . . . that he had a new family now . . . I was so angry and frustrated . . . but I needed [the social worker's] help . . . I finally got drunk again, in complete frustration and disgust.

This woman, and others, believed that they had to suppress their anger in order to obtain and satisfy their family's basic needs. In addition to the belief that self-assertion was futile, many women stated that they had never learned how to assert themselves, or that they did not do so because they "felt more comfortable taking the abuse than standing up for [themselves]." As Wilsnack (1974) observed: "A woman may feel comfortable being assertive, but she is trapped in a society that demands traditionally feminine behavior" (p. 14). This problem is so prevalent that AA has recently started to have meetings for women only which

focus on helping them handle these difficulties more effectively.

Differences in opinion about the alcoholic women do, however, remain. Blane (1968), for one, believes that the alcoholic woman "demonstrates an aggressive insistence that her needs be fulfilled" (p. 108). He continued:

> She does not apologize for her requests; the deference typifying the . . . alcoholic man are usually not apparent . . . The alcoholic woman is proud, even arrogant, in her demands, whereas the man is apologetic and humble . . . the woman gives no thanks; the man can't thank you enough. (pp. 108-109)

There is apparently disagreement in the literature concerning the issue of assertion.

Conclusions

What did emerge from the investigation was an empathy with the researchers whose studies were criticized in Chapter I. One of the few techniques that did serve to illuminate the problems of the alcoholic woman was the self-reports of the respondents--a technique criticized earlier in the study.

It would seem that many of the investigations that preceded this one have encountered, and some of those that will follow may encounter, methodological problems comparable to the ones described herein. Therefore, it was attempted to make recommendations that might be of value

in future research.

If the limitations did not appreciably affect the findings, these conclusions could be tentatively drawn.

1. Alcoholic women experience a greater impact of femininity-threatening and family area events than nonalcoholic women and these events are positively related to alcohol intake during, or within a year of, the loss of control over drinking.

2. In the year in which loss of control occurs, compared with the period of prealcoholism, alcoholic women experience a greater impact of life stresses.

3. In comparison with the years of prealcoholism, alcoholic women (a) experience a greater impact of life stresses, (b) experience more events that are within their control and (c) have more of their number using drugs during the years of active alcoholism.

4. It is during the year in which the decision to stop drinking is made that alcoholic women experience (a) the greatest amount of stress from the personal area of their lives, (b) one specific event in this area that they consider to be the event that caused them to stop drinking and seek help and (c) attribute their life stresses, in general, to drinking.

If this study has made a contribution, it is in that

it served to point out the complexity of the issue of alcoholism in women and the difficulties in assessing it. It is an enormously fertile field of study; and if this investigation was helpful in directing the focus of future research, then a contribution has been made.

APPENDIX A

Frequency Distribution of the Sample

Characteristic	Alcoholic	Nonalcoholic
Location		
East Side:		
Village to 14th St.	11	3
15th St. - 45th St.	15	10
46th St. - 75th St.	20	19
76th St. - 96th St.	21	16
West Side:		
Village to 14th St.	4	9
15th St. - 45th St.	7	7
46th St. - 75th St.	11	19
76th St. - 96th St.	11	17
Age		
20 to 29	20	20
30 to 39	50	50
40 to 49	30	30
Marital Status		
Married	27	74
Separated	9	7
Widowed	5	0
Divorced	59	19
Number of Children		
None	50	27
1	20	27
2-3	22	39
4^{+}	8	7
Group		
Alcoholics Anonymous	54	0
Other	46	0
Alanon		37
Other		63
Length of Sobriety		
3 months - 1 year	50	0
13 months - 2 years	50	0

Characteristic	Alcoholic	Nonalcoholic
Occupation		
Professional	8	4
Managers, Proprietors, and Kindred	7	5
Semi-professional	27	23
Craftswomen	15	10
Clerical, Sales, and Kindred	26	12
Service Workers and Domestics	1	6
Housewives	14	36
Unemployed	1	0
Student	1	3
Part-time Work	0	1
Family Income		
$3,000 to $6,000	4	1
$6,001 to $10,000	13	11
$10,001 to $15,000	34	13
$15,001 to $25,000	17	33
$25,001 to $40,000	19	27
$40,001 to $70,000	10	13
$70,001 +	3	2
Education		
Some High School	2	2
High School	37	32
Some College or Associate Degree	4	9
College	32	42
Nursing School	8	4
Some Graduate School	6	3
Master's Degree	2	5
Ph.D., M.D., LLB	8	3

APPENDIX B1

Frequency Distribution of Alcoholic and Nonalcoholic Women for the Three Alcoholic Periods for the Events in the Family Area

Event Number	Event Name	Stage	Number of Individuals Experiencing Events — Group MA	MNA
1.	Marriage	PREAL	46	56
		ONSET	0	0
		ACTAL	9	10
*2.	Problems with in-laws	PREAL	5	0
		ONSET	0	0
		ACTAL	1	5
*3.	Birth of first child	PREAL	17	10
		ONSET	8	0
		ACTAL	10	20

* = Femininity-Threatening event
** = Potentially Femininity-Threatening event
MA = Married Alcoholic MA = Married Not Alcoholic
PREAL = 3 years of prealcoholism
ONSET = 1 year of onset
ACTAL = 3 years of Active Alcoholism

Event Number	Event Name	Stage	Number of Individuals Experiencing Events	
			Group	
			MA	MNA
*4.	Birth of other children	PREAL	7	4
		ONSET	3	1
		ACTAL	3	1
*5.	Stillborn	PREAL	3	0
		ONSET	0	0
		ACTAL	0	0
*6.	Abortion	PREAL	5	1
		ONSET	3	0
		ACTAL	11	2
*7.	Fertility problems	PREAL	6	2
		ONSET	2	0
		ACTAL	0	1

Event Number	Event Name	Stage	Number of Individuals Experiencing Events: Group MA	Group MNA
*8.	Sexual problems	PREAL	15	2
		ONSET	6	1
		ACTAL	6	4
*9.	Major change in family quarrels	PREAL	18	11
		ONSET	7	4
		ACTAL	40	31
10.	Major improvement in husband's employment	PREAL	10	8
		ONSET	1	6
		ACTAL	5	18
11.	Major trouble in husband's employment	PREAL	6	4
		ONSET	1	2
		ACTAL	13	0

Event Number	Event Name	Stage	Number of Individuals Experiencing Events	
			Group	
			MA	MNA
12.	Major change in type or place of residence	PREAL	25	7
		ONSET	6	5
		ACTAL	29	18
*13.	Serious illness of loved one	PREAL	12	4
		ONSET	4	1
		ACTAL	17	19
**14.	Serious accident or injury to loved one	PREAL	12	4
		ONSET	2	0
		ACTAL	5	10
**15.	Death of loved one	PREAL	12	4
		ONSET	5	1
		ACTAL	5	10

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
*16.	Separated from husband	PREAL	16	6
		ONSET	10	1
		ACTAL	50	31
*17.	Husband has custody of children	PREAL	2	0
		ONSET	3	0
		ACTAL	7	2
*18.	Divorce	PREAL	7	2
		ONSET	7	1
		ACTAL	44	16
*19.	Child or children in serious trouble	PREAL	1	0
		ONSET	0	0
		ACTAL	7	5

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
*20.	Major change in traditional role responsibilities	PREAL	6	1
		ONSET	0	0
		ACTAL	15	9
**21.	Major change in recreation or family gatherings	PREAL	9	1
		ONSET	2	1
		ACTAL	11	2
*22.	Son or daughter leaves home	PREAL	2	0
		ONSET	2	0
		ACTAL	7	11
*23.	Widowed	PREAL	8	1
		ONSET	2	0
		ACTAL	1	3

APPENDIX B2

Frequency Distribution of Alcoholic and Nonalcoholic Women for the Three Alcoholic Periods for the Events in the Personal Area

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
**24.	Major personal illness or injury	PREAL	4	3
		ONSET	2	0
		ACTAL	20	11
*25.	Broken love affair	PREAL	5	3
		ONSET	0	0
		ACTAL	23	5
26.	Major change in relationship with relatives or friends	PREAL	4	2
		ONSET	5	1
		ACTAL	31	7

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
**27.	Major change in recreation habits	PREAL	1	6
		ONSET	5	1
		ACTAL	48	13
28.	Begin school or training program	PREAL	61	47
		ONSET	2	1
		ACTAL	9	12
29.	Finish school or training program	PREAL	52	31
		ONSET	3	4
		ACTAL	10	20
30.	Major change in living conditions	PREAL	3	3
		ONSET	8	1
		ACTAL	22	11

Event Number	Event Name	Stage	Number of Individuals Experiencing Events	
			Group	
			MA	MNA
31.	Loss of driver's license	PREAL	0	0
		ONSET	1	0
		ACTAL	10	3
**32.	Personal surgery	PREAL	5	1
		ONSET	5	1
		ACTAL	14	5
33.	Engaged	PREAL	2	5
		ONSET	0	0
		ACTAL	6	4
*34.	Long period of loneliness	PREAL	3	0
		ONSET	4	0
		ACTAL	30	1

Event Number	Event Name	Stage	Number of Individuals Experiencing Events	
			Group	
			MA	MNA
*35.	Long period of time very active socially	PREAL	8	1
		ONSET	1	0
		ACTAL	17	6
36.	Christmas	PREAL	2	1
		ONSET	5	0
		ACTAL	20	3
37.	Vacation	PREAL	1	0
		ONSET	2	2
		ACTAL	6	5
*38.	Major change in personal habits	PREAL	0	2
		ONSET	1	0
		ACTAL	10	4

Event Number	Event Name		Number of Individuals Experiencing Events Group MA	MNA
39.	Major change in religious activities	PREAL	0	0
		ONSET	0	0
		ACTAL	15	4
40.	Major change in sleeping habits	PREAL	4	0
		ONSET	10	1
		ACTAL	25	5
41.	Major change in eating habits	PREAL	0	8
		ONSET	3	1
		ACTAL	24	7
42.	Minor trouble with police	PREAL	0	1
		ONSET	2	1
		ACTAL	14	6

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
43.	Arrested	PREAL	0	0
		ONSET	0	1
		ACTAL	3	2
44.	Jail	PREAL	0	0
		ONSET	0	1
		ACTAL	3	2
*45.	Outstanding personal achievement	PREAL	12	3
		ONSET	1	3
		ACTAL	6	10
46.	Institutionalized for drug abuse	PREAL	1	0
		ONSET	1	0
		ACTAL	59	2

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
47.	Major personal loss in blackout	PREAL	0	1
		ONSET	0	0
		ACTAL	24	8
48.	Attempted suicide	PREAL	0	1
		ONSET	1	0
		ACTAL	42	3
49.	Caused or was instrumental in harming another	PREAL	1	2
		ONSET	1	0
		ACTAL	34	4

APPENDIX B3

Frequency Distribution of Alcoholic and Nonalcoholic Women for the Three Alcoholic Periods for the Events in the Work Area

Event Number	Event Name	Stage	Number of Individuals Experiencing Events, Group MA	Group MNA
50.	Started to work for the first time	PREAL	15	14
		ONSET	9	1
		ACTAL	2	1
*51.	Long period of job hunting	PREAL	6	1
		ONSET	10	2
		ACTAL	15	1
*52.	Promotion or change to better position	PREAL	8	2
		ONSET	11	3
		ACTAL	6	5

Event Number	Event Name	Stage	Number of Individuals Experiencing Events by Group MA	MNA
*53.	Trouble with boss	PREAL	1	0
		ONSET	1	0
		ACTAL	17	5
*54.	Major change in work responsibilities	PREAL	5	0
		ONSET	6	2
		ACTAL	17	12
*55.	Major success in work	PREAL	8	2
		ONSET	2	1
		ACTAL	20	15
56.	Major change in financial status	PREAL	10	1
		ONSET	3	0
		ACTAL	32	14

Event Number	Event Name	Stage	Number of Individuals Experiencing Events	
			Group MA	MNA
57.	Refused work because of sexual status	PREAL	0	0
		ONSET	1	0
		ACTAL	3	1
58.	Joined professional organization	PREAL	4	1
		ONSET	10	2
		ACTAL	0	1
59.	Fired	PREAL	1	2
		ONSET	0	0
		ACTAL	33	3
60.	Retired or quit working	PREAL	7	7
		ONSET	6	0
		ACTAL	20	13

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
61.	Problems at home interfering with work	PREAL	8	2
		ONSET	9	0
		ACTAL	22	13
62.	Problem getting job--lack of skills	PREAL	4	3
		ONSET	5	2
		ACTAL	7	4
63.	Trouble with spouse or boyfriend over work	PREAL	6	0
		ONSET	3	1
		ACTAL	11	9
64.	Failure of own business	PREAL	0	0
		ONSET	1	0
		ACTAL	5	1

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
65.	Less pay than male counterpart	PREAL	1	0
		ONSET	6	1
		ACTAL	3	2
66.	Refused financing	PREAL	0	0
		ONSET	2	0
		ACTAL	8	1
67.	Problems with people at work	PREAL	0	3
		ONSET	1	4
		ACTAL	10	6
68.	Long period of good working situation	PREAL	30	10
		ONSET	9	4
		ACTAL	10	5

Event Number	Event Name	Stage	Number of Individuals Experiencing Events Group MA	MNA
69.	Major change in career	PREAL	4	2
		ONSET	1	0
		ACTAL	12	7
70.	Started to work with husband	PREAL	1	2
		ONSET	3	0
		ACTAL	1	1
71.	Works alone	PREAL	0	1
		ONSET	2	3
		ACTAL	6	3
72.	Reached point in job where upward mobility impossible	PREAL	1	0
		ONSET	0	0
		ACTAL	5	1

APPENDIX C

Life Event Scale

Area and Event		LCU
Family		
1.	Marriage	500
*2.	Problems with In-laws	370
*3.	Birth of First Child	450
*4.	Birth of Other Children	400
*5.	Stillborn Child	500
*6.	Abortion	390
*7.	Fertility Problems	440
*8.	Sexual Problems	390
*9.	Major Change in Family Quarrels	320
10.	Major Improvement in Husband's Employment	225
11.	Husband has Major Trouble at Work	360
12.	Major Change in Type or Place of Residence	325
*13.	Serious Illness to Loved One	400
**14.	Serious Accident or Injury to Loved One	430
**15.	Death of Loved One	1000
*16.	Separated from Husband	620
*17.	Husband has Custody of Children	520

* = FT Event
** = Potential FT Event

	Area and Event	LCU
*18.	Divorce	750
*19.	Child in Serious Trouble	350
*20.	Major Change in Role Responsibilities	250
**21.	Major Change in Recreation or Family Gatherings	235
*22.	Son or Daughter Leaves Home	200
*23.	Widowed	1000
Personal Area		
**24.	Major Personal Illness or Injury	370
*25.	Broken Relationship	320
26.	Major Change in Relationship with Relatives or Friends	255
**27.	Major Change in Recreation Habits	350
28.	Begin School or Training Program	250
29.	Finish School or Training Program	185
30.	Major Change in Living Conditions	330
31.	Loss of Driver's License	75
**32.	Major Personal Surgery	385
33.	Engaged	300
*34.	Long Period of Loneliness, Difficulty Making Friends	250
*35.	Long Period of Time Very Socially Active	200
36.	Christmas	180

	Area and Event	LCU
37.	Vacation	200
*38.	Major Change in Personal Habits and Grooming	230
39.	Major Change in Religious Activities	300
40.	Major Change in Sleeping Habits	185
41.	Major Change in Eating Habits	195
42.	Minor Trouble with Police	170
43.	Arrested	250
44.	Jail	400
*45.	Outstanding Personal Achievement	300
46.	Institutionalized for Drug/Alcohol Use	410
47.	Major Personal Loss in Blackout	350
48.	Attempted Suicide	470
49.	Caused or was Instrumental in Harming Another	265
Work Area		
50.	Started to Work for First Time	280
*51.	Long Period of Job Hunting	300
*52.	Promotion or Change to Better Position	285
*53.	Trouble with Boss	310
*54.	Major Change in Responsibilities at Work	400
*55.	Major Success at Work	410
56.	Major Change in Financial Status	300

	Area and Event	LCU
57.	Refused Work because Female	150
58.	Joined Professional Organization	50
59.	Fired	300
60.	Retired or Quit Work	400
61.	Problems at Home Interfering with Work	225
62.	Problems Getting Job--Lack of Experience	285
63.	Trouble with Spouse over Work	310
64.	Failure of Own Business	400
65.	Less Pay than Male Counterpart	50
66.	Refused Financing, Loans	200
67.	Problems with People at Work	225
68.	Long Period of Good Working Situation	50
69.	Major Change in Career	210
70.	Started to Work for Husband	225
71.	Working alone at Home; Little Contact with People	195
72.	Reached Point in Career where Upward Mobility Impossible	270

APPENDIX D

Demographic Information Data Sheet

Subject Number_____

Address_____

Group Membership (AA, Roosevelt, Accept, Alanon, or friend of Alanon)

_____

Length of Sobriety_____

Marital Status (Single; # of prior marriages, separated; divorced; widowed; married; # of years married

_____

Number of Children_____

Occupation (if person has changed occupations, ask for prior and present career)

_____

Income (personal and family_____

Age_____

_____

(Any additional observations the interviewer feels are necessary to note)

APPENDIX E

Alcohol History

Dates	Type of Alcohol	Amount	Frequency	Able to Stop?	Usually Intoxicated?	Could Not Stop?

APPENDIX F

DRUG HISTORY

Drug Name	Amount	Frequency	By M.D.	With Alcohol	Addicted Drug Alcohol

APPENDIX G

Life Event Scale and Data Sheet

Area and Life Event	Specific Event How did it happen? What led up to it? To whom? What did you do at the time? Was the change an improvement (+) or a loss (-)	Assigned LCU	Date and Frequency (# of times, month. year) #	M	Y	Drinking Attribution Yes	No	Locus of Responsibility (a)	(b)
Family									
Marriage		500							
*Problems with in-laws (what was the main problem?		370							
*Birth of first child		450							
*Birth of other children		400							
*Stillborn		500							

* = Femininity-Threatening Event (f-t)
** = Potential f-t Event, depending on specific event

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
*Abortion		390						
*Fertility problems		440						
*Sexual problems (in marriage)		390						
*Major change in family quarrels		320						
Major improvement in husband's employment		225						
Husband had major change and trouble at work; demoted, fired, not promoted when expected, fights with boss, loss of business, etc.		360						
Major change in type and place of residence		325						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
***Serious illness to loved one: child, husband,** other (who, what, where, how, what happened and was done?)		400						
**Serious accident or injury to loved one (who, as above)		430						
**Death of loved one (who, as above)		1000						
*Separated from husband		620						
*Husband has custody of children		520						
*Divorce		750						
*Child or children in serious trouble		350						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
*Major change in responsibilities which affect role of wife/mother (begin or end of outside work, lengthy family member illness, major change in relations with neighbors or in community status)		250						
**Major change in recreation and/or family gatherings		235						
*Son or daughter leaves home		200						
*Widowed (ask about circumstances)		1000						
Personal								
**Major personal illness or injury		370						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
*Broken relationship (length of relationsip? several broken in a row? broken engagement? after living together?)		320						
Major change in relationship with relatives and/or friends		255						
**Major change in recreation habits		350						
Begin school or training program		250						
Finish school or program (how? graduate? fail? quit?)		185						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Major change in living conditions (change from roommate to alone, or vice-versa? change from suburban to city? different type of neighborhood?)		330						
Loss of driver's license		75						
**Surgical history (abortions, gyn., obs., plastic, =*; others)		385						
Engaged		300						
*Long period of loneliness, with difficulty making friends		250						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
*Long period of time when very active socially, many friends		200						
Christmas (ask only about most memorable Christmas for each time period)		180						
Vacation (reason for?, e.g., to meet people, rest, be alone, with whom, what happened, what usually happens, what would like to happen		200						
*Major change in personal habits and grooming		300						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Major change in religious activities, beliefs, values, morals, spiritual life		300						
Major change in sleeping habits		185						
Major change in eating habits		195						
Minor trouble with police		170						
Arrested		250						
Jail		400						
*Outstanding personal achievement (in hobby, church, avocation, relationships, e.g., awards, prizes, community recognition)		300						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Institutionalized for drug use or drug-related problems		410						
Major personal loss in "blackout"		350						
Attempted suicide		470						
Caused or was instrumental in harming, to a major extent, another person		265						
Work Started to work for first time		280						
*Long period of time job hunting		300						
*Promotion or change to better position		285						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Trouble with boss (male or female, type of trouble, outcome)		310						
*Major changes in responsibilities, work conditions		400						
*Major success in work		410						
Major change in financial status		300						
Overtly refused job, by employer, because of sexual status		150						
First time joined professional organizations, political and union organizations, status, reason		50						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Fired		300						
Retired or quit working (reasons, circumstances)		400						
Problems getting things done at work because of home duties, children, house-work (not husband or male friend)		225						
Problems getting a job due to lack of experi-ence when housewife (no skills, "too old," "unattrac-tive," too anxious to look due to above)		285						
Trouble with spouse or boy-friend over work (own work)		310						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Failure of own business (reason)		400						
Less pay than male counterpart (what happened, what did you do, outcome?)		50						
Were you ever refused financing, bank loans, capitalization for your business? In your opinion, was it fair?		200						
Problems with people on the job (co-workers, clients, employees, administration, etc.)		225						
Long period of good working situation (S defines "good")		50						

Area and Life Event	Specific Event	Assigned LCU	#	M	Y	Drinking Attribution	(a)	(b)
Started to work with or for husband (how did or is it working out?)		225						
Works alone at home or office; little contact with pepole when working (e.g., writer, artist, craftswoman; has this changed since sober?)		195						
Reached point in job where further upward mobility (promotions, raises, higher status or prestige) is nearly impossible		270						

APPENDIX H

The Schedule Standardized Interview to be Used in Conjunction with Appendices A, B, C and D

Appendix H1

"Hello. My name is _____. As you know, this is a study concerned with alcoholism. Throughout the interview, I will read all instructions and questions to you, just as I am doing now. This is done to make sure that everyone who participates in the study is asked the same thing. If you wish, we will tell you the results of the study, by mail or phone, after it is completed. [PLACE A STAR NEXT TO PERSON'S NUMBER IF SHE WANTS RESULTS.] I am not going to put your name on any papers used for the study. You have been given a number instead, so that no one will be able to identify you, and since all the information will be analyzed together, names are not important. Your number is _____. If you are comfortable, we can begin now. In this first part, I just need some general information. [ASK FOR HER ADDRESS ONLY IF YOU ARE NOT INTERVIEWING HER AT HOME.] Which group do you belong to? [IF SHE DOES NOT UNDERSTAND, ASK IF IT IS: (1) AA, (2) ALANON, (3) ROOSEVELT, (4) FRIEND OF ALANON MEMBER, (5) ACCEPT.]

[IF S IS AN ALCOHOLIC] "How long have you been

sober?" [RECORD] "Are you married?" [RECORD] [IF S IS MARRIED] "How long have you been married?" [IF S IS UNMARRIED] "Were you ever married? [RECORD] "If you have children, how many do you have? [RECORD] "What is your current occupation?" [RECORD] "Have you always done _____, or have you changed jobs in the past few years?" [RECORD] "How old are you?" [RECORD] "Can you tell me your personal income? [RECORD] [IF S IS MARRIED] "What is your family income?" [GO TO APPENDIX H2]

Appendix H2

"In this part of the interview, I would like you to tell me the history of your use of alcohol and drugs or pills. Please start from the beginning, and describe it, as closely as possible, in chronological order, by month and year. If you cannot remember the exact month, tell me if it was the first part of the year, or the last."

1. "In what year did you have your first drink?" [RECORD]
2. "What kind of drink was it; that is, was it beer, wine, or spirits, like vodka, or scotch?" [RECORD]
3. "How much did you drink? I mean, was it one drink, several, or so much that you can't remember?" [RECORD]

[GO TO "ALCOHOL PARAGRAPH"; NEXT GO TO FOLLOWING PAGE, TO "DRUG PARAGRAPH." CONTINUE TO FOLLOW "ALCOHOL PARAGRAPH" WITH DRUG PARAGRAPH" FOR EACH SIX-MONTH PERIOD, UNTIL THE TIME WHEN THE RESPONDENT NO LONGER USES EITHER: FOR NONALCOHOLIC RESPONDENTS, CONTINUE UNTIL PRESENT TIME. RECORD DATA ON APPENDIX B, ALCOHOL AND DRUG USE HISTORY]

"ALCOHOL PARAGRAPH"

4. "During the next six months, how much were you drinking?" [RECORD]

5. "For example, did you drink daily, weekly, or occasionally, during this time?" [RECORD]

6. [IF DAILY] "How much did you drink a day at this time? Was it one or two drinks a day, or a pint a day, or was it more like a quart a day?" [RECORD]

   [IF WEEKLY] "How many drinks a week were you having? Was it just a few on weekends, or a pint a week, or a quart a week?" [RECORD]

   [IF OCCASIONALLY] "How many drinks a month would you say you had during this time?" [RECORD]

7. "During this same time, can you tell me the kind or type of drinks you usually had? For example, were you drinking beer, wine, or spirits, like

vodka or scotch?" [RECORD]

8. "Did you change or switch types of drinks a lot at this time? I mean, did you go from beer, to vodka, back to beer, and so on?" [RECORD]
9. "During this time, were you able to stop drinking when you felt you had had enough?" [RECORD]
10. "Did you usually become intoxicated when you drank, or did you just have a few and stop, during these six months?" [RECORD]
11. "Did you find that you couldn't stop once you started?" [RECORD]

"DRUG PARAGRAPH"

12. "Were you taking any drugs or pills at this time?" [RECORD] [IF S ANSWERS "NO," GO BACK TO "ALCOHOL PARAGRAPH."]
13. "Do you remember the name of the drug/drugs?" [RECORD] [IF NAMES ARE UNKNOWN, USE Q. 14 AND Q. 15.]
14. "I have a chart which shows pictures of commonly used drugs. Please look it over and see if you can find what you were taking during that time." [GIVE S TIME TO LOOK AT THE CHART]
15. "Is it one on the chart?" [RECORD; IF NOT ON CHART, RECORD DRUG DESCRIPTION AND ACTION]

16. "How often did you take [NAME, OR IT] ? Was it daily, weekly, or just occasionally?"
    [IF DAILY] "How many times a day did you take them?" [RECORD]
    [IF WEEKLY] "How many times a week did you take them?" [RECORD]
    [IF OCCASIONALLY] "How many times a month did you take them?" [RECORD]
17. "Did you get them from your friends or from your doctor?" [RECORD]
18. "Did you use them along with alcohol?" [RECORD]
19. "Do you feel that you were addicted to them during that time; were you uncomfortable when you were not taking them, and did you feel you really needed them?" [RECORD]
20. "Do you think you were also addicted to alcohol at this time?" [RECORD]

Appendix H3--Life Event Scale

"This part of the interview has to do with situations or circumstances that happen to people. You may look over the sheets which list the situation, if you like. [GIVE RESPONDENT TIME TO GLANCE THROUGH LIST] I will read each situation to you. For each one I will ask you what happened exactly. In other words, if the situation is

personal illness, I will ask you for the specific type of illness you had, and what happened. I will also ask you for the date on which it occurred. I would like to know it as exactly as you can recall it, but if you have difficulty with the particular month, try to tell me whether it occurred in the first half of the year or the last. Are there any questions so far? . . . I will also ask you how many times the situation occurred and the dates on which it occurred. We can begin now." [READ EACH EVENT: FOR EACH EVENT ASK THE FOLLOWING QUESTIONS AND THOSE WHICH APPEAR ON THE DATA SHEET]

1. "Did this ever happen to you?" [READ EVENT]
2. "Was the change it made in your life, or was the situation itself, an improvement, a change for the best; or was it a loss, or a change for the worse?" [RECORD]
3. "Can you tell me the month and year when it first happened?" [RECORD]
4. "Exactly what happened and how did it happen?" [RECORD]
5. "Did it ever happen again?" [IF YES, REPEAT Q. 2 and Q. 3 AGAIN; RECORD]
6. "Do you think it would have happened if you had not been drinking?" [RECORD "YES" OR "NO"]

[REPEAT FOR EACH EVENT]

Appendix H4--The Alcadd Test

"This is the final part of the interview. Here is a booklet with instructions on the front page." [GIVE RESPONDENT ALCADD TEST BOOKLET] "You don't have to fill in the upper part of the front page because I have already placed your number there. Please read the instructions and go ahead, unless you have questions.]

[WHILE THE RESPONDENT IS FILLING OUT THE ALCADD, GO OVER THE DATA SHEETS AND DETERMINE THE PREALCOHOLIC, ACTIVE ALCOHOLIC, AND RECOVERY TIME PERIODS]

[WHEN S IS FINISHED WITH THE ALCADD]

"Are you finished? Thank you." [COLLECT BOOKLET]

[FOLLOWING QUESTION FOR ALCOHOLIC Ss ONLY]

Appendix H5

"I have divided the dates you have given me into three time periods. The first is the prealcoholic period. That refers to the time before you had real trouble with alcohol. During this time, you could usually drink without getting drunk. The next period is the time when you were actively alcoholic, when you couldn't stop drinking once you started. The last one is recovery, when you gave up drinking. Would you look over the dates and tell me if you agree with me?" [SHOW DATES TO S AND RECORD HER OPINION]

"I am finished now. Do you have any questions or concerns about the interview?" [IF "YES] ANSWER QUESTIONS HONESTLY, AND AGAIN ASK HER NOT TO DISCUSS STUDY WITH OTHER RESPONDENTS] "I have one further request, and that is to ask you not to discuss your participation in this study with anyone else who may be also participating. This is just to make sure that other women don't form conclusions about it ahead of time. Thank you very much for helping with this study. Goodbye." [IF S ASKS FOR RESULTS, PLACE A STAR NEXT TO HER NAME ON DATA SHEET]

APPENDIX I

Instructions for Rating Life Events

1. Social readjustment includes the amount and duration of change in one's accustomed pattern of life resulting from various life events. As defined, social readjustment measures the intensity and length of time necessary to accommodate to a life event, regardless of the desirability of this event.

2. You are asked to rate a series of life events as to their relative degrees of necessary readjustment. In scoring, use all of your experience in arriving at your answer. This means personal experience where it applies as well as what you have learned to be the case for others. Some persons accommodate to change more readily than others; some persons adjust with particular ease or difficulty to only certain events. Therefore, strive to give your opinion of the average degree of readjustment necessary for each event rather than the extreme.

3. The mechanics of rating are these: Event 1, Marriage, has been given an arbitrary value of 500. As you complete each of the remaining events, think to yourself, "Is this event indicative of more or less readjustment than marriage?" "Would the readjustment take longer or shorter to accomplish?" If you decide the readjustment

is more intense and protracted, then choose a proportionately smaller number in the opposite blank. (If an event requires intense readjustment over a short time span, it may approximate in value an event requiring less intense readjustment over a long period of time.) If the event is equal to social readjustment to marriage, record the number 500 opposite the event. Rate each of the following events on a scale from 0 to 1000.

BIBLIOGRAPHY

Alcoholics Anonymous. The twelve steps and twelve traditions. New York: Harper & Brothers, 1953.

_____. Alcoholics Anonymous. New York: Alcoholics Anonymous World Services, Inc., 1955.

American Institute of Public Opinion. Gallup Political Index. Political, social and economic trends. Princeton, N.J.: 1966.

American Medical Association, Committee on Alcoholism and Drug Dependence. Guidelines for admission of alcoholic dependent patients to general hospitals. J.A.M.A., 1969, 210, 121.

_____. The illness called alcoholism. Chicago: AMA, 1969.

_____. Medical school education on abuse of alcohol and other psychoactive drugs. J.A.M.A., 1972, 219, 1746-1749.

_____. Resolution approved by the House of Delegates at American Medical Association Clinical Convention. Anaheim, Calif., December 1973.

_____. Standard nomenclature of diseases and operations. 5th ed. New York: McGraw-Hill, 1961.

_____. House of Delegates. The illness called alcoholism. 1971.

Bartlett, F.C. Remembering. London: Cambridge University Press, 1932.

Becker, H.S. Outsiders: Studies in the sociology of deviance. New York: Free Press, 1963.

Belfer, M.T., Sheder, R.I., Carroll, T., & Harmatz, J.S. Alcoholism in women. Archives of General Psychiatry, 1971, 25 (6), 540-544.

Bissell, L.C. Personal communication. 1975.

Blane, H.T. The Personality of the alcoholic. New York: Harper & Row, 1968.

Bleuler, M. Familial and personal background of alcoholics. In O. Diethelm, Etiology of chronic alcoholism. Springfield, Ill.: Charles C. Thomas, 1955.

Block, M.A. The physician and alcoholism. American Practitioners Digest of Treatment, 1953, 8, 694-699.

_____. Alcoholism: Its facets and phases. New York: John Day, 1965.

P. Bourne (Ed.). Alcoholism: Progress in research and treatment. New York: Academic Press, 1973.

Brown, G.W., & Birley, J.L. Crises and life changes and the onset of schizophrenia. Journal of Health and Social Behavior, 1968, 9, 203-214.

Brown, G. Meaning, measurement, and stress of life events. In B.S. Dohrenwend & B.P. Dohrenwend (Eds.), Stressful life events. New York: John Wiley, 1974.

Bruhn, J.G. Drug use as a way of life. Postgraduate Medicine, 1973, 53 (4), 183-188.

Busch, H., Kormendy, E., & Feuerlein, W. Partners of female alcoholics. British Journal of Addiction, 1973, 68, 179-184.

Cahalan, D., Cisin, I.H., & Crossley, H.M. American drinking practices; a national study of drinking behavior and attitudes, Monograph No. 6. New Brunswick, N.J.: Rutgers Center of Alcohol Studies, 1969.

Cahalan, D. Problem drinkers. San Francisco: Josey-Bass, 1970.

Cahalan, D., & Room, R. Problem drinking among American men. Monographs of the Rutgers Center of Alcohol Studies, 1972, 7. New Brunswick, N.J.: Rutgers Center of Alcohol Studies.

Cahalan, D., & Cisin, I. Report of a pilot study of the attitudes and behavior of naval personnel concerning alcohol and problem drinking. Washington, D.C.: Bureau of Social Science Research, Inc., February 1973.

Cannell, C.F., & Kahn, R.L. Interviewing. In Lindzey, G. & Aronson, E. (Eds.). The handbook of social psychology, 2. Massachusetts: Addison-Wesley Publishing Co., 1968.

Cannon, W.B. Bodily changes in pain, hunger, fear and rage. New York: D. Appleton & Co., 1929.

_____. The wisdom of the body. New York: Norton, 1962.

Cantanzaro, R.J. Psychiatric aspects of alcoholism. Pittman, David (Ed.), Alcoholism. New York: Harper and Row, 1967.

Casey, R.I., Masuda, M., & Holmes, T.H. Quantitative study of recall of life events. Journal of Psychosomatic Research, 1967, 11, 239-247.

Chafetz, M.D. A new day of hope for alcoholics. American Journal of Psychiatry, 1971, 129 (2), 118-119.

Chafetz, M.D., Blane, H.T., & Hill, M.J. Frontiers of alcoholism. New York: Science House, 1970.

Chafetz, M.E. Alcoholism prevention and reality. Quarterly Journal of Studies on Alcohol, 1971, 32, 687-698.

Chafetz, M.E. (Ed.). First special report to the U.S. Congress on alcohol and health. Washington, D.C.: Government Printing Office, 1971.

Chafetz, M.E. (Ed.). Proceedings of the second annual conference of the National Institute of Alcohol Abuse and Alcoholism. Washington, D.C.: Government Printing Office, 1972.

Chafetz, M.E. (Ed.). Fourth special report to the U.S. Congress on Alcohol and Health. Washington, D.C.: Government Printing Office, 1974 (in press).

Chafetz, M.D. (Ed.). Proceedings of the third annual alcoholism conference of the national institute on alcohol abuse and alcoholism. Washington, D.C.: U.S. Government Printing Office, 1974.

Cisin, I., & Cahalan, D. Comparison of abstiners and heavy drinkers in a national survey. Psychiatric Research Report, 1968, 24, 10-21.

Cleghorn, J.M., & Streiner, B.J. Prediction of illness behavior from measures of life change and verbalized depressive themes. Paper presented at the Annual Meeting of the American Psychosomatic Society, Denver, 1971.

Cohen, J. Some statistical issues in psychological research. In B.B. Wolman (Ed.), Handbook of clinical psychology. New York: McGraw-Hill, 1965.

_____. Multiple regression as a general data-analytic system. Psychological Bulletin, 1968, LXX, 426-443.

Cohen, J., Earnaley, E.J., & Hansel, C. The risk taken in driving under the influence of alcohol. British Medical Journal, 1958, 1, 1438-1442.

Conger, J. Perception, learning and emotion: the role of alcohol. Annals of the American Academy of Political and Social Science, 1958, 315, 12-21.

Conner, R.G. The self concepts of alcoholics. Unpublished doctoral dissertation. University of Washington, 1960.

Connor, R. The self-concepts of alcoholics. In Pittman, D., & Snyder, C. (Eds.), Society, culture and drinking patterns. New York: John Wiley & Sons, Inc., 1962, 455-467.

Cooperstock, R. Sex differences in the use of mood-modifying drugs: an explanatory model. Journal of Health and Social Behavior, 1971, 12, 238-264.

Cramer, M., & Blacker, E. "Early" and "late" problem drinkers among female prisoners. Journal of Health and Human Behavior, 1963, 4, 282-290.

Curlee, J. Alcoholic women: some considerations for further research. Bulletin of the Menninger Clinic, 1967, 31, 155-163.

_____. Women alcoholics. Federal Probation, 1968, 32, 16-20.

_____. A comparison of male and female patients at an alcoholism treatment center. Journal of Psychology, 74, 1970, 239-247.

_____. Combined use of Alcoholics Anonymous and outpatient psychotherapy. Bulletin of the Menninger Clinic, 1971, 35, 368-371.

Curran, F.J. Personality studies in alcoholic women. Journal of Nervous and Mental Disease, 1973, 88, 645-667.

Davis, R., & Olsen, V. The career outlook of professionally educated women. Psychiatry, 1965, 28, 334-335.

DeLint, J.E. Alcoholism, birth order, and socializing agents. Journal of Abnormal and Social Psychology, 1964, 69, 457-458.

Dohrenwend, B.P., & Dohrenwend, B.S. Social status and psychological disorder. New York: Wiley, 1969.

Dohrenwend, B.S., & Dohrenwend, B.P. Class and race as status related sources of stress. In S. Levine and N.A. Scotch (Eds.), Social stress. Chicago: Aldine, 1970.

Dohrenwend, B.S. Social status and stressful life events. Journal of Personality and Social Psychology, 1973, 28, 225-235.

Dohrenwend, B.S., & Dohrenwend, B.P. Stressful life events, their nature and effects. New York: John Wiley, 1974.

Dohrenwend, B.P. Problems in defining and sampling the relevant population of stressful life events. In Dohrenwend, B.S., & Dohrenwend, B.P., Stressful life events, their nature and effects. New York: John Wiley, 1974.

Domino, E.B. Antianxiety drugs. In Drill's pharmacology in medicine. J.R. Dipalma (Ed.). New York: McGraw-Hill, 1971, 489-498.

Douvan, E., & Adelson, J. The adolescent experience. New York: Wiley, 1966.

Efron, V., & Keller, M. Selected statistics on consumption of alcohol (1850-1968) and on alcoholism (1930-1968). New Brunswick, N.J.: Publications Division, Rutgers Center of Alcohol Studies, 1970.

Forney, R.B., & Hughes, F.W. Combined effects of alcohol and other drugs. Springfield, Ill.: Charles C. Thomas, 1968.

Fox, R., & Lyon, P. Alcoholism: its scope and treatment. New York: Randdm House, 1955.

Fox, R. Neurotic interaction in marriage. Basic Books, 1956.

Fox, R., & Leach, B. Office treatment of the alcoholic by the private physician. World dialogue on alcohol and drug dependence. Whitney, E. (Ed.). Boston: Beacon Press, 1970, 173-198.

Friedan, Betty. The feminine mystique. New York: Norton, 1963.

Gitlow, S.E., Bertani, L.M., Dziedzic, S.W., & Wong, B.I. Metabolism of norepinephrine in the alcoholic during alcohol (ethanol) ingestion, the withdrawal syndrome, and sobriety. Clinical Research, 1971, 19, 349-358.

Glasscote, R., Plaut, T., Hammersley, D., O'Neill, F., Chafetz, M., & Cumming, E. The treatment of alcoholism. A study of programs and problems. Washington, D.C.: The Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, 1967.

Goldfarb, A., & Bierman, S. Alcoholism as a psychosomatic disorder: endocrine patholicy of animals and men excessively exposed to alcohol: its possible relation to behaviour pathology. Quarterly Journal of Studies on Alcohol, 1949, 10 (3, 4), 415-429.

Gomberg, E. Women and alcoholism. In Franks, U., & Burtle, V. (Eds.), Women in therapy. New York: Brunner Mazel, 1974.

Harris, L., and Associates, Inc. American attitudes toward alcohol and alcoholics. Study No. 2138, 1971.

Hawkins, N.G., Davies, R., & Holmes, T.E. Evidence of psychosocial factors in the development of pulmonary tuberculosis. American Review of Tuberculosis and Pulmonary Disease, 1957, 75, 5.

Holmes, T.H., & Rahe, R.H. The social readjustment rating scale. Journal of Psychosomatic Research, 1967, 11 213-218.

Holmes, T.H., & Masuda, M. Life change and illness susceptibility. In Dohrenwend, B.S., & Dohrenwend, B.P. (Eds.), Stressful life events, their nature and effects. New York: Wiley, 1974.

Hirsch, J. Women and alcoholism. In W.C. Bier (Ed.), Problems in addiction. New York: Fordham University, 1962, 108-115.

Jellinek, A., & Haggard, H. Alcohol explored. New York: Doubleday, Doran Co., 1942.

Jellinek, E. Phases of alcohol addiction. Quarterly Journal of Studies on Alcoholism, 1952, 13 (4), 673, 684.

_____. The disease concept in alcoholism. New Haven, Conn.: Yale University Press, 1960.

Jenkins, J.S., & Connolly, J. Adrenocortical response to ethanol in man. British Medical Journal, 1968, 2, 804-805.

Journal of the American Medical Association (Ed.). Medical school education on abuse of alcohol and other psychoactive drugs, 1972, 219 (13), 1746-1749.

Karpman, B. The Alcoholic woman. New York: Lancer, 1972.

Keaton, W. Understanding alcoholism. Lansing, Mich: Michigan Department of Health, n.d., 21 pp., 1966.

Keller, M., & Efron, V. The prevalence of alcoholism. Quarterly Journal of Studies on Alcohol, 1955, 16 619-644.

Kerlinger, F., & Pedhazur, E. Multiple regression in behavioral research. New York: Holt, Rinehart & Winston, 1973.

Kinsey, B.A. The female alcoholic: a social psychological study. Springfield, Ill.: C.C. Thomas, 1966.

_____. Psychological factors in alcoholic women from a state hospital sample. American Journal of Psychiatry, 1968, 124, 1463-1466.

Kissen, B., Begleiter, H. (Eds.). The biology of alcoholism. Neurophysiology and Behavior, 2. New York: Plenum Press, 1972.

Komaroff, A., Masuda, M., & Holmes, T. The social readjustment rating scale: a comparative study of Negro, Mexican, and White Americans. Journal of Psychosomatic Research, 12, 1968, 112-117.

Krebs, G.E. Toward a theory of psychological stress. Unpublished doctoral dissertation. Cornell University, 1969.

Lemert, E. Human deviance, social problems and social control. Englewood Cliffs, N.J.: Prentice-Hall, 1967.

_____. Sociocultural research on drinking. In Keller, M., & Coffey, T.C. (Eds.), 28th International Congress on Alcohol and Alcoholism. Highland Park, N.J.: Hillhouse Press, 1969, 56-64.

Libb, J.Q., & Taulbee, E.S. Psychotic appearing MMPI profiles among alcoholics. Journal of Clinical Psychology, 1971, 27 (1), 101-102.

Lindbeck, V.L. The alcoholic woman: a review of the literature. International Journal of Addiction, 1972, 7, 567-580.

Lippencott, J.B., & Co. Aspects of alcoholism, I, II. London: Pittman Medical Publishing Co., 1966.

Lisansky, E.S. Alcoholism in women: social and psychological concomitants. Quarterly Journal of Studies on Alcohol, 1957, 18, 588-623.

_____. The woman alcoholic. Annals of the American Academy of Political and Social Science, 1958, 315 73-81.

_____. The etiology of alcoholism: the role of psychological predisposition. Quarterly Journal of Studies on Alcoholism, 1960, 21 (2), 314-343.

Lolli, G. Alcoholism in women. Connecticut Review on Alcoholism, 1953, 5, 9-11.

Mann, M. America's 1000year war: alcohol vs. alcoholism. Alcohol Health and Research World, 1, 1973 (Spring), 5-7.

Manson, M.P. The Alcadd Test. Los Angeles, Calif.: Western Psychological Services, 1963.

Margraf, H., Moyer, C., Ashford, L., Lavalle, L. Adrenocortical function in alcoholics. Journal of Surgical Research, 7, 1967, 55-62.

Masuda, M., & Holmes, T.H. Magnitude estimations of social readjustments. Journal of Psychosomatic Research, 1967, 11, 219-225.

McClelland, D.C., Davis, W.N., Kalin, R., & Wanner, E. The drinking man: alcohol and human motivation. New York: The Free Press, 1972.

McCord, W., & McCord, J. Origins of Alcoholism. Stanford: Stanford University Press, 1960.

McNemar, Q. Psychological statistics. New York: John Wiley & Sons, Inc., 1969 (3rd ed.).

McQuade, W. What stress can do to you. Fortune, January 1972.

Menninger, W.C. Unpublished address presented at the annual meeting of the National Council of Alcoholism, Chicago, March 29, 1957.

Merry, J., & Marks, V. Plasma-hydrocortisone response to ethanol in chronic alcoholics. Lancet, 1969, 1 921-923, Washington, D.C., 1960.

Merton, R.K. Social theory and social structure. Glencoe, Ill.: Free Press, 1957.

Miller, F., Bentz, J., Aponte, G., & Brogan, D. Perception of life crises events: a comparative study of resistance resources and stressful life events. In Dohrenwend, B.S.,&& Dohrenwend, B.P. (Eds.), Stressful life events, their nature and effects. New York: John Wiley & Sons, 1974.

Misra, P., Lefevre, A., Ishii, H., Rubin, E., & Lieber, C. Increase of ethanol, meprobamate, and pentobarbitol metabolism after chronic ethanol administration in man and in rats. American Journal of Medicine, 1971, 51, 346-351.

Mooney, H.W. Methodology in two California health surveys (Report No. 70). Public Health Monograph. Washington, D.C.: U.S. Government Printing Office, 1962.

Mundy, J. Women in rage. In Kessler, R., & Denmark, F. (Eds.), Woman: dependent or independent variable. New York; Psychological Dimensions, Inc., 1975.

Mutter, A.Z., & Schleifer, M.J. The role of psychological and social factors in the onset of somatic disease in children. Psychosomatic Medicine, 1966, 28 333-337.

Myers, J.K., Lindenthal, J.J., & Bepper, M.P. Life events and mental status. Journal of Nervous and Mental Disease, 1971, 152, 149-157.

New York Narcotic Addiction Control Commission. Differential drug use within New York State Labor Force. In An assessment of drug use within the general population, 41 pp., 1971.

Noble, E. In Fox, R., & Bourne, P. (Eds.). Alcoholism: progress in research and treatment. New York: Academic Press, 1972.

Nunnally, J.C. Psychometric theory. New York: McGraw Hill, 1967.

Pittman, D.J., & Gordon, C.W. Revolving door; a study of the chronic police case inebriate. Monograph No. 2. New Brunswick, N.J.: Rutgers Center of Alcohol Studies, 1958.

Pittman, D., & Snyder, C. (Eds.). Society, culture and drinking patterns. New York: John Wiley & Sons, 1962.

Plunkett, R., and Hayden, S. (Eds.). Standard nomenclature of diseases and operations (published for the AMA) New York: McGraw Hill Book Co., 1961.

Pollmer, E. Alcoholic personalities. New York: Exposition Press, Inc., 1955.

Rahe, R.H., & Holmes, T.H. Social, psychologic and psychophysiologic aspects of inguinal hernia. Journal of Psychosomatic Research, 8, 1965, 487.

Rahe, R.H. Life change measurement as a prediction of illness. Proceedings of the Royal Society of Medicine, 1968, 61, 4-46.

Rahe, R.H., & Arthur, R.J. Life change patterns surrounding illness experience. Journal of Psychosomatic Research, 1968, 11, 341-345.

Rahe, R.H. Multi-cultural correlations of life change scaling: America, Japan, Denmark, & Sweden. Journal of Psychosomatic Research, 1969, 13, 191-196.

Rahe, R.H., Gunderson, E.K., & Arthur, R.J. Demographic and psychosocial factors in acute illness reporting. Journal of Chronic Disease, 1970, 23, 245-249.

Rahe, R.H., Mahan, J., & Arthur, R.J. Prediction of near-future health change from subjects' preceding life-changes. Journal of Psychosomatic Research, 1970, 14, 401-406.

Rahe, R.H., Lundberg, U., Bennett, L., & Theorell. T. The social readjustment of rating scale: a comparative study of Swedes and Americans. Journal of Psychosomatic Research, 1971, 15, 241-246.

Rahe, R.H. Subjects' recent life changes and their near-future illness reports. Annals of Clinical Research, 1972, 4, 250-263.

_____. In Dohrenwend, B.S., & Dohrenwend, B.P. (Eds.), Stressful life events. New York: John Wiley, 1974.

Rathad, N.H., & Thomson, I.G. Women alcoholics. Quarterly Journal of Studies on Alcohol, 1971, 32, 45-52.

Richardson, S.A., Dohrenwend, B.S., & Klein, D. Interviewing: its forms and functions. New York: Basic Books, 1965.

Roebuck, J., & Spray, L. The cocktail lounge: a study of heterosexual relations in a public organization. In Evans, R., & Rozelle, R. (Eds.), Social psychology in life. Boston: Allyn & Bacon, Inc., 1973.

Rosenman, R.H., & Friedman, M. Behavior patterns, blood lipids, and coronary heart disease. Journal of the American Medical Association, 1963, 185, 934.

Rubin, E., Gang, H., Misra, P., & Lieber, C. Inhibition of drug metabolism by acute ethanol intoxication. American Journal of Medicine, 1970, 49, 801-806.

Rubin, E., & Lieber, C. Alcoholism, alcohol, and drugs. Science, 1971, 172, 1097-1102.

Sandmaier, M. Alcohol programs for women. Rockville, Md.: National Clearing House for Alcohol Information, National Institute on Alcohol Abuse and Alcoholism, 1976.

Sanford, N. The American college. New York: Wiley, 1962.

Schacter, S. The psychology of affiliation. Stanford, Mass.: Stanford University Press, 1959.

Scheffe, H. The analysis of variance. New York: Wiley, 1959.

Schuckit, M.A. The alcoholic woman: a literature review. Psychiatry in Medicine, 1972, 3, 37-43.

Schuster, C., & Thompson, R. Self administration of and behavioral dependence on drugs. Annual Review of Pharmacology, 1969, 9, 483-502.

Schuster, C. Psychological approaches to opiate dependence and self-administration by laboratory animals. Federation Proceedings, 1970, 29, 2-5.

Seeley, J. The W.H.O. definition of alcoholism. Quarterly Journal of Studies on Alcohol, 1951, 12 231-260.

Seevers, H., & Deneau, H.A. Physiological aspects of tolerance and physical dependence. In Root, W., & Hofman, F. (Eds.), Physiological pharmacology. New York: Academic Press, 1963, I, 565-640.

Seixas, F., Cadoret, R., & Eggleston, B. (Eds.). The person with alcoholism. Annals of the N.Y. Academy of Sciences, 1974, 233, 1-177.

Selye, H. The general adaptation syndrome and the diseases of adaptation. Journal of Clinical Endocrinology, 1946, 6, 117-230.

_____. The stress of life. New York: McGraw-Hill, 1966.

Sherfey, H. Psychopathology and character structure in chronic alcoholism. In C. Diethelm (Ed.), Etiology of chronic alcoholism. Springfield, Ill.: C.C. Thomas, 1955.

Snedecor, G., & Cochran, W. Statistical methods. 6th ed. Ames, Iowa: Iowa State University Press, 1967.

Star, S.A. Psychoneurotic symptoms in the army. In S.A. Stouffer, L. Guttman, E.A. Suchman, P.F. Lazarsfeld, S.A. Start, & J.A. Clausen (Eds.), Studies in social psychology in World War II. The American soldier: combat and its aftermath. Princeton, N.J.: Princeton University Press, 1949.

Stevans, J., Hernstein, R., & Reynolds, G. Laboratory Experiments in Psychology. New York: Holt, Rinehart & Winston, 1965.

Stevans, S.S. On the psychophysical law. Psychological Review, 1957, 64, 153-181.

Stewart, W.F. Drink, drugs, and the family. Hoddesdon, Herts, Eng.: Thomas Knight, 1971, 32 pp.

Sundby, P. Alcoholism and mortality. Publication No. 6. National Institute for Alcohol Research, Oslo, Norway, Universitetsforlaget, 1967.

Sutherland, E.H., Shroeder, H.G., & Tordella, C.L. Personality traits and the alcoholic: a critique of existing studies. Quarterly Journal of Studies on Alcohol, 1950, 11, 547-561.

Theodorson, G.A., & Theodorson, A.G. A modern dictionary of sociology. New York: T.Y. Crowell Co., 1969.

Theorell, T., & Rahe, R.H. Psychosocial factors and myocardial infarction: an inpatient study in Sweden. Journal of Psychosomatic Research, 1971, 15, 25-31.

Thompson, G.N. (Ed.). Alcoholism. Springfield, Ill.: C.C. Thomas, 1956.

Tinklenberg, J.R. Alcohol and violence. In R. Fox & P. Bourne (Eds.), Alcoholism: progress in research and treatment. New York: Academic Press, 1973.

Trice, H. Alcoholism in America. New York: McGraw-Hill, 1966.

Ullman, A. The psychological mechanism of alcohol addiction. Quarterly Journal of Studies on Alcohol, 1952, 13, 600-609.

Ullman, A. To know the difference. New York: St. Martins, 1960.

United Nations Expert Committee on Drugs Liable to Produce Addiction. Reports 6-7, World Health Organization, Technical Report Series (No. 21), 1950.

Von Kerekjarto, M. The influence of experimenter's sex on drug effects in normal subjects. In K. Rickels (Ed.), Non-specific factors in drug therapy. Illinois: C.C. Thomas, 1968.

Wall, J.H. A study of alcoholism in women. American Journal of Psychiatry, 1937, 93, 943-955.

Weeks, M. 13 steps to alcoholism; which step are you on? Raleigh, N.C.: N.C. Department of Mental Health.

Weiss, D., Davis, G., England, W., & Lotquist, L. Validity of work histories obtained by interview. Minnesota Studies of Vocational Rehabilitation, 1961, 12 (41).

Wexberg, L. A critique of physiopathological theories of the etiology of alcoholism. Quarterly Journal of Studies on Alcohol, 1950, 11, 113-118.

Wilsnack, S.C. The needs of the female drinker: dependency, power, or what? In M.E. Chafetz (Ed.), Proceedings of the second annual alcoholism conference of the National Institute of Alcohol Abuse and Alcoholism. Washington, D.C.: Government Printing Office, 1972, 65-83.

_____. Sex role identity in female alcoholism. Journal of Abnormal Psychology, 1973, 82, 253-261.

_____. Meeting women's needs. In M. Sandmair, Alcohol programs for women. Rockville, Md.: National Clearing House for Alcohol Information. National Institute on Alcohol Abuse and Alcoholism, 1976.

Winer, B.J. Statistical principles in experimental design. New York: McGraw-Hill, 1962, 2nd ed., 1971.

Winokur, G., & Clayton, P. Family history studies: IV. Comparison of male and female alcoholics. Quarterly Journal of Studies on Alcohol, 1968, 29, 885-891.

Winokur, G., Reich, T., Rimmer, J., & Pitts, F.N. Jr. Alcoholism: diagnosis and familial psychiatric illness in 259 alcoholic probands. Archives of General Psychiatry, 1970, 23, 104-111.

Witkin, H.A. Sex differences in perception. Transcripts of the N.Y. Academy of Sciences, 1949, 12, 22-26.

Wolff, H., Wolf, S., & Hare, C. (Eds.). Life stress and bodily disease. Baltimore, Md.: The Williams & Wilkins Co., 1950.

Wood, J.P., & Duffy, E.L. Psychological factors in alcoholic women. American Journal of Psychiatry, 1966, 123, 341-345.

World Health Organization. Alcoholism subcommittee second report. (Tech. Rep. Ser. No. 46), Geneva, August 1952.

_____. Alcoholism Expert Committee on alcoholism. First Report (Tech. Rep. Ser. No. 48), March 1954.

_____. Alcoholism: Report of an Expert Committee. (Tech. Rep. Ser. No. 94), Geneva, 1955.

_____. International Classification of Diseases. 1955 revision, Geneva, 1957.

_____. Expert Committee on Addiction-Producing Drugs. 13th Report (W.H.O. Tech. Rep. No. 273), 1964.

Zelen, S.L., Fox, J., Gould, E., & Olson, R.W. Sex-contingent differences between male and female alcoholics. Journal of Clinical Psychology, 1966, 22, 160-165.

Zweeling, I. Psychiatric findings in an interdisciplinary study of 46 alcoholic patients. Quarterly Journal of "Studies" on Alcoholism, 1959, 20, 543-554.