STRESS LEVELS IN FAMILIES

WHERE THERE IS AN ALCOHOLIC MALE ADULT

A TWELVE MONTH STUDY

A thesis presented in fulfillment of
the requirements for the degree of
Doctor of Philosophy in Psychology
at Massey University

Joan Elizabeth Guyer Bellamy

April 1989

ABSTRACT

There has been a growing interest in the effects of stress in families where there is an alcohol problem. The present study tested the hypotheses that:

A. alcoholic families evidence higher stress levels than matched control group families and

B. that alcoholic families receiving stress management sessions evidence lower stress levels at one year follow-up than matched control group alcoholic families that did not receive stress management sessions.

In the first part of the study, forty families that had an alcoholic adult male were identified upon request for alcohol treatment. Matched Medical and Community control groups were available and data was obtained from all groups. In the second part of the study, one half of the forty identified alcoholic families received stress management sessions, the remaining twenty received no stress management follow-up.

In support of Study I hypothesis and data obtained from family stress level measurements, there was indicated a significant difference in stress levels on several variables between alcoholic and non-alcoholic families.

In support of the Study II hypothesis those twenty alcoholic families receiving stress management showed a significant lower stress level at one year follow-up than the twenty alcoholic families that did not receive stress management.

The study also indicates trends in families of alcoholic males that show these families have higher stress levels and make more visits to their medical doctors than do control group families.

ACKNOWLEDGEMENTS

I would like to thank my supervisors, Professor G. Shouksmith, Ph.D. and Malcolm Johnson, Ph.D. for their constant encouragement, help and support. This project was supported by a research stipend from the New Zealand Alcohol and Liquor Advisory Council. The help and encouragement received from the staff of Taranaki Base Hospital and the Staff of the Stratford Hospital Alcohol Unit is gratefully acknowledged.

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

SECTION 1

GENERAL INTRODUCTION

The focus of this research is on family interactions and stress levels complicated by alcoholism; the secondary focus is on stress management as a component of family treatment.

1.1 INTRODUCTION

An awareness of the magnitude and destructiveness of alcoholism is necessary for full appreciation of the devastation of alcoholism in nuclear families.

Current estimates indicate that in 1986 there were 370,000 adult New Zealanders, or nineteen percent, who have had a drinking problem at some time in their lives. Recent statistics (1986) indicate that 170,000 New Zealand males consume more than 60 millilitres of alcohol per day and 100,000 New Zealand females consume more than 40 millilitres per day. Alcohol abuse costs New Zealand in the order of nine hundred million dollars each year, according to a study completed for Alcohol and Liquor Advisory Council (ALAC, 1986).

It is imperative, however, to be aware that the effects of the misuse of alcohol extends far beyond the individual who abuses alcohol. For every alcohol misuser, it is estimated that

five other persons suffer directly (Paolino & McCrady, 1977), and of these five some are the nuclear family members, whose suffering may be indicated by elevated stress levels.

According to U.S. statistics, the alcoholic family member is affected socially and physically (Chafetz, 1971; World Health Organization, 1964; and Rothman & Keller, 1972). There is also an economic impact (Berry, Boland, Larson, Hayler, Sillman Fein & Feinstein, 1974) due to alcohol abuse. The continuing pattern of alcoholism in a family puts increasing demands and pressures on the marriage and the family system. Various early studies document the patterns of dissatisfaction in a marriage where one partner is an alcoholic. The general conclusions of many of these studies are that a balanced satisfying marriage and alcoholism are incompatible (Burgess & Cottrell, 1939; Dominian, 1972; Fox, 1956; Levinger, 1966; Straus, 1950; Terman, 1938). According to Paolino & McCrady (1977) alcoholics marry no less frequently than the non-alcoholic population but divorce and separate more frequently than the general population. The Al-Anon Family Group Headquarters (1971) states that every alcoholic's marriage is dysfunctional because of the complex problems inherent in alcohol misuse.

High levels of conflict have frequently been noted in alcoholism-complicated marriages (Bullock and Mudd, 1959; Gorad, 1971), and various sources of 'hardship' or 'deviance' to which non-alcoholic spouses of alcoholics may be exposed have also been examined (Bailey et al., 1962; Jackson and Kogan, 1963). These

sources include loss of family earnings, infidelity, involvement with police and physical violence. Research findings have suggested that spouses of alcoholics are more likely to seek outside help, and are more likely to take action which leads to the termination of their marriage, if the level of hardship or deviance experienced is relatively high (Haberman, 1964; Jackson and Kogan, 1963).

How this marital and family stress due to alcoholism as well as other alcohol related stresses introduced into the family unit affect the entire family system is the focus of this study.

Statement of the research hypotheses of this study.

1.) That male alcoholics and their families experience different patterns of stress in a greater level of overall stress than either male patients with general medical conditions with their families or male control subjects selected from the general population and their families.

2.) That changes in the male alcoholic family members due to alcohol treatment will cause changes in the stress level of the other family members.

2.) a) That stress within male alcoholics and their families will be reduced by a specific family oriented stress management programme.

1.2 LIMITATIONS OF THE STUDY

In the writing of this report we are aware of a number of limitations and biases which may have affected the results. In part, these can be attributed to the variety of dilemmas and ambiguities which confront all stress researchers, and to the complexity of the variables involved in the analysis of stress in family settings. There have been problems associated with the definition of stress, methodology and the use of subjective measures and these are recognized as limitations in this study.

1.3 DEFINITION OF STRESS

The Concise Oxford Dictionary defines stress in five different ways. Only three are of interest for the purpose of this study. The first definition offered is that of a constraining or impelling force, and one example used is 'under the stress of poverty'. The second definition treats it as an effort or demand on energy, as in 'subjected to great stress'. The third definition offered talks of a force exerted on a body. The word is not defined by Drever's A Dictionary of Psychology (1952), but receives mention in The Penguin Medical Encylopaedia (Wingate, 1972). Wingate sees stress as any influence which disturbs the natural equilibrium of the body, and includes within its reference physical injury, exposure, deprivation, all kinds of disease and emotional disturbance.

Shouksmith (1986), states that the term "stress" itself as used in everyday language is a conglomerate one, covering three different factors. Firstly, there are the stressors or things

that cause stress. These may be environmental events, or interpersonal conflicts, which trigger off the problem. Secondly, there is stress itself, the psychological feelings of unease, strain, anxiety, and so on, the internal psychophysical feelings which are the nucleus of the concept. Then finally, there are stress reactions - the responses to stress, which can be, and if uncontrolled usually are, disruptive and maladaptive.

The word stress has a long history, and is possibly derived from the Latin stringere, to draw tight (p.o. strictus). One of the first recorded passages in which this word was used was that written by the early English poet Robert Mannyng (Robert of Brunne or Bourne) about AD 1303 in his work Handlying Synee. According to The Oxford English Dictionary (Murray et al., 1933), Mannyng wrote: '(T)hat floure ys kalled "aungelys mete" that God (g)ate (th)e folke to ete What (th)ey were yn wylderness Forty wyntyr, yn hard stres'. From the fourteenth century onwards a large number of variant words can be found in English literature: stres, stresse, stresce, strest, and straisse.

Distress and strain are words commonly used in association with the word stress. Indeed it is possible that they share the same root. The Concise Oxford Dictionary defines distress as severe pressure of pain, or sorrow, and as anguish, exhaustion or breathlessness. Strain is the exertion required to meet demand, injury or change resulting from such exertion, or the condition of a body subjected to stress. Fatigue, another word commonly used in the same context as stress, is defined as weariness after

exertion or long strain. Although studying the origins, meaning and common usage of words rarely solves problems of scientific definition, in this particular instance it does provide a particular starting point for an attempt at that solution. Implicit in these dictionary definitions is a model of stress which treats it as a constraining force acting on a person, who in attempting to cope with this force exerts or strains himself, and perhaps feels fatigued as a result, and distressed (Cox, 1978).

In general terms, it may be said that conditions of psychological stress exist when an individual encounters environmental conditions which he appraises as threatening and, on the basis of a second appraisal process, engages in coping processes designed to reduce or eliminate the threat. The basic elements of this analysis of psychological stress are outlined further in the review of the literature.

1.4 ALCOHOL ABUSE AND STRESS

1.4.1 FAMILY STRESSORS AND STRESS

Although the concept of family stress has been utilized with considerable frequency in both clinical and research literature, it has continued to remain elusive and is frequently used without explicit definition. In many investigations, at least one of three aspects of "family stress" is identified, although consensus on definitions does not exist. Most commonly, stressors are defined as those life events or occurrences of sufficient magnitude to bring about change in the family system

(Hill, 1949). Stress is not seen as inherent in the event itself, but rather is conceptualized as a function of the response of the distressed family to the stressor and refers to the residue of tensions generated by the stressor which remian unmanaged (Hill, 1949; Burr, 1973; Lipman-Blumen, 1975). Crisis refers to the amount of incapacitatedness or disorganization in the family where resources are inadequate (Hill, 1949; Burr, 1973; Lipman-Blumen, 1975). The concept of crisis could be considered an additional stressor in the dysfunctional family.

1.5 DEFINITION OF ALCOHOLISM

In this study, "alcohol" means ethanol or an alcoholic beverage. "Drinking" means consumption of alcoholic beverages. The terms "alcohol abuse" and "problem drinking" signify drinking patterns in which consumption may be well above average, although not always on a regular basis, and in which some problems linked to drinking (e.g. arrest for drunken driving or a decline in job performance) have occurred.

The definition of alcoholism is diverse. It ranges from "admission to alcoholism unit" to "drinking in excess of community norms," to "had delirium tremens" (Cotton, 1979). Most studies still rely on a clinician's making a diagnosis. Few have operational criteria, and the criteria differ from study to study.

In an exchange of letters discussing the merits of operational criteria, Overall and Hollister (1979) charged that

diagnostic criteria are being widely and uncritically adopted without validation. Spitzer and his colleagues (1979) wrote that the purpose of the Washington University criteria, the New York criteria, and the DSM III criteria was to improve clinical practice by incorporating into diagnostic criteria distinctions shown by research studies to have validity in terms of course, response to therapy or familial pattern. Overall and Hollister suggested there was little documentation for this claim, and cited one study in which "the better of the objective research diagnostic criteria was as good at predicting outcome as were the original clinical criteria," but no better. They point out the critical difference that specific wording of diagnostic criteria can make. They conclude that not only are diagnostic criteria being formulated and published without validation, but continued revision renders existing sets of criteria obsolete before they can be evaluated. As long as investigators cannot agree on what something is, it is difficult to count how many have it. If it were not for the fact that nearly all papers report high prevalences of alcoholism in families of alcoholics, the definition problem alone would probably justify questioning all family studies (Goodwin, 1981).

Despite such controversies, for the purpose of this study, the diagnosis of alcoholism given in the DSM IIIR will be used.

According to the DSM IIIR the definition of alcoholism is: The essential feature of Alcohol Abuse is a pattern of pathological use for at least a month that causes impairment in social or occupational functioning.

The essential features of Alcohol Dependence are either a pattern of pathological alcohol use or impairment in social or occupational functioning due to alcohol, and either tolerance or withdrawal. Alcohol Dependence has also been called Alcoholism.

There are three main patterns of chronic pathological alcohol use. The first is regular daily intake of large amounts; the second is regular heavy drinking limited to weekends. These two patterns are included in the fifth-digit subtype "Continuous." The third pattern is long periods of sobriety interspersed with binges of daily heavy drinking lasting for weeks or months. This pattern corresponds to the fifth-digit subtype "Episodic."

Alcohol Abuse and Dependence are more common among family members than in the general population. Evidence of a genetic factor is shown in the increased prevalence of Alcohol Dependence in the early-adopted offspring of parents with the disorder.

1.6 FAMILY SELECTION CRITERIA

In the process of selecting families for this study the criteria demanded that the selection criteria be varied with the designation of each group. The criteria for the Community Group family selection was based on randomly selected street locations of the families homes in the towns of New Plymouth and Stratford and the additional (second) criteria that they were a family unit (married or de facto) living together with at least one child that was eight to eighteen years old.

The criteria for the families in the Medical Group was that the selected families had two parents (married or de facto) and at least one child, age eight to eighteen years old and that the family members were active patients of one of the two medical doctors in the New Plymouth - Stratford area that agreed to distribute the questionnaires of this study to their patients.

The criteria for selection into the Alcohol Group was that the male adult designated alcoholic member of the family voluntarily seek rehabilitation in one of the four rehabilitation facilities participating in the study. Taranaki Base Hospital, Stratford Hospital, New Plymouth Alcohol Field Officer or Palmerston North Drug and Alcohol Center. Referrals from private practitioners and Alcoholics Anonymous were also incorporated into the study.

The Alcohol Group, forty families, was also divided into two smaller groups of twenty families each (Stress Management versus No Stress Management) at the point of admission to an alcohol unit for rehabilitation by designation of odd - even admission numbers. These participants had to meet the additional criteria of being the adult male in a family unit (married or de facto) having at least one child between the ages of eight to eighteen years of age.

The designated Alcohol Family group participants also were asked on admission to the research group to agree to fill out all forms given or sent to them from the research study for the ensuing twelve months and to keep all appointments with the

therapist if they were selected for the Stress Management Group. Only upon agreeing to these criteria were the families admitted to the research study group.

1.7 METHODOLOGICAL ISSUES

Much stress research to date has been experimental in its methodology. Many models of stress assume that when stressors impinge upon a person they give rise to both psychological and physiological strain. If the strain continues over a period of time it will eventually give rise to either mental or physical illness. An extensive review of the literature does not reveal evidence of a clear causal relationship between psycho-social stressors and illness. However, there is extensive evidence that psycho-social conditions can effect the onset of illness (Fletcher & Payne, 1980; Kasl, 1978). It also suggests that studies which offer probabilistic statements about future illness regarding individuals within a group will lack sufficient accuracy to positively identify those individuals who will become ill. The strength of the experimental approach lies in its ability to identify groups within a population which are likely to suffer stress-related illnesses. This approach is fundamental to the design of the present study as an attempt has been made to identify Alcohol Family Members who are particularly affected by stress. No attempt has been made to identify the characteristics of individuals who are likely to become ill, as this lies outside the scope of the present research.

The present study contained both standardized and non-standardized measures. The non-standardized measures were designed to evaluate causes of stress specific to the population sampled (i.e. alcoholic wives), while the standardized instruments measured the effects of stress on the individual at a given point in time. All non-standardized measures were piloted and evaluated prior to any data collection. The use of both standardized and non-standardized measures ensured that error variance was minimized by trading off measurement error against breadth of coverage. To further ensure accuracy of measurement, a wide range and variety of measures were used in order to uncover any unique variance which could have been undetected if only a single measure were used. Convergence between the various measures would also support the identification of an underlying stress source.

1.8 INSTRUMENTS USED IN MEASUREMENT - BRIEF STATEMENT

The instruments used in this study to measure stress, general health and drinking levels were:

1. The NSQ - Neuroticism Scale Questionnaire
2. The General Health Questionnaire
3. Level of Current Drinking Questionnaire
   A short form of the Michigan Alcoholism Screening Test
4. Massey University Life Event Questionnaire - a modified version of the Holmes & Rahe Life Event Stress Questionnaire
5. Family Stress Factors Questionnaire - (Wives form only) devised by Professor Timothy O'Farrell of Harvard Medical School.

1.9 MISCELLANEOUS ERROR

For the purpose of this study an attempt was made to minimize bias in the selection of subjects, Alcohol Rehabilitation Units, and the choice of measures. The selection of subjects and the Alcoholic Rehablilitation Units surveyed was determined by discussions with the Taranaki Base Hospital Alcohol Unit Director and was generally guided by practical considerations such as the voluntary participation requirement. In all cases the criterion guiding selection was the aim to cover as wide a number of subjects as possible within the time constraints. The criteria used for the selection of the stress measures included, the need for standardization, short administration time, an absence of language complexity and the previous utilization of these measures in stress studies. These criteria were adopted to minimize bias in the instrument selection.

1.10 SUMMARY

The first section of this study explores stress levels in groups of alcoholic families, medical families and community families and compares them. The second section of the study analyses stress level data from two group of alcoholic families -- one which was administered a Stress Management Program and a control group.

SECTION 2

REVIEW OF RELEVENT LITERATURE

2.1 STRESS

2.1.1 PHYSIOLOGICAL STRESS

The term stress came into frequent use in the physiological sciences in the mid-1930's and has since gained wide popularity among scientists and nonscientists alike. Largely due to the pioneering work of Hans Selye (1956), physiological stress refers to the responses of the animal organism to actual encounters with physiologically damaging (stressor) stimuli. The term General Adaptation Syndrome (GAS) refers to the pattern of physiological responses produced by stressors. The GAS consists of three stages, the last of which culminates in death for the organism if the stressor(s) is of great severity or of long duration.

2.1.2 PSYCHOLOGICAL STRESS

Psychological stress refers to organismic responses to actual confrontation with noxious stimulus agents. Still another meaning is implied when attention is given to the concept of psychological stress. Several writers (e.g. Appley and Trumbull, 1967; Glass and Singer, 1972; Lazarus, 1966; McGrath, 1970) have emphasized that the study of psychological stress requires

attention not only to environmental conditions (stimuli) or to organismic reactions (responses), but also to patterns of environment-organism transactions. The difficulties involved in attempting to provide a simple definition of psychological stress are formidable. For the purposes of this research, the terminology proposed by Lazarus (1966) will be adopted. Lazarus is recognized as developing a most influential and coherent treatment of the psychological stress concept.

In general terms, it may be said that conditions of psychological stress exist when an individual encounters environmental conditions which he appraises as threatening and, on the basis of a second appraisal process, engages in coping processes designed to reduce or eliminate the threat. The basic elements of the analysis of psychological stress (Lazarus, 1966) are outlined in TABLE 2.1.

TABLE 2.1

Environmental Conditions	Primary Appraisal Processes	Threat (Anticipation of Harm)	Secondary Appraisal Processes	Coping Processes
	1. Factors in the Environment 2. Factors in Psychological Structure of Individual		1. Degree of Threat 2. Factors in the Environment 3. Factors in Psychological Structure of Individual	1. Direct Action Tendencies 2. Defensive Reappraisal

---

2.1.3 THREAT

The central concept in this "definition" is that of "threat." Threat refers to the anticipation of confrontation with harmful events or conditions of some sort. Threat has two main properties. First, it is anticipatory in nature, involving expectations of future harm that has not yet actually occurred. Second, the occurrence of threat is dependent on cognitive processes such as perception, learning, and judgement. Such cognitive activities are involved in the evaluation of cues in the environment as portending future harm for the individual. Harmful conditions or events are those which thwart one or more motives, desires, or needs that are important to the individual (hunger, comfort, etc.).

2.1.4 PRIMARY APPRAISAL

In order for a person to be threatened, he must interpret or evaluate cues in a stimulus configuration as signaling a future harmful state of affairs. In TABLE 2.1 the process of primary appraisal is depicted as intervening between the stimulus configuration and the concept of threat. Primary appraisal refers to processes by which the individual evaluates or interprets a situation as threatening or benign. The term threat stimulus refers to a situation appraised as threatening.

The process of primary appraisal of threat depends on two classes of determinants. The first class involves factors in the environment itself. Two features of environmental situations are important determinants of threat appraisal. First, threat will

tend to be greatest when an individual evaluates a situation as one in which the power of the harm-producing stimulus outweighs his resources to avoid or weaken its impact. For example, anticipated travel on a crowded bus will be threatening to the individual without alternative means of transportation who finds the inevitable pushing and shoving extremely discomforting. Second, the imminence of the anticipated harm confrontation will determine degree of threat. As temporal nearness with the confrontation increases, threat will increase. The bus passenger will experience less threat six hours prior to travel than one hour prior to travel. Threat appraisal is also determined by a variety of factors in the psychological structure of the individual. For example, individuals with strong "privacy" needs will be more threatened by crowded buses than will those whose privacy needs are weaker. People who tend to view the environment as uncontrollable and hostile (Rotter, 1966) will tend to perceive more situations as threatening than those who take a more benign view of the environment. A person's intellectual ability, education and experience with a variety of environmental conditions will also influence the degree to which situations are perceived as threatening.

Once an individual has appraised environmental conditions as threatening, processes functioning to reduce or eliminate the anticipated harm (threat) are set into motion. These processes are called coping processes. The term "coping" refers to strategies for dealing with threat. Secondary appraisal concerns the process by which an individual "selects" coping strategies

through an evaluation of the probable consequences of available strategies. The two major categories of coping processes are direct-action tendencies and defensive reappraisal.

A person may deal directly with threatening environmental conditions by strengthening his resources against the harmful conditions or may attempt to eliminate threat by an avoidance strategy such as bypassing bus travel at rush hour or selecting alternate means of transportation. A third possible strategy involves assaulting the agent(s) perceived as harmful. For example, the aggressive pushing and shoving under crowded bus conditions may be regarded as relatively nonviolent attacks against the threatening masses of people. Finally, when an individual is totally resigned to the belief that there are no ways of preventing the harm, inaction or "freezing" in the face of threat may occur.

A second category of coping processes, known as defensive reappraisal, is found when an individual copes with environmental threats by deceiving himself about the actual conditions of threat. A variety of defense mechanisms including denial, isolation, and rationalization may be utilized to distort the reality of the situation and thus eliminate threat.

It is apparent that a person may cope with threatening environments in a variety of ways. The type of coping strategy utilized depends on the process of secondary appraisal, which is much like primary appraisal in that cognitive activities such as perception and judgement play an important role. A person's

"choice" of coping processes through secondary appraisal depends both upon characteristics of the environmental threat and upon factors in his own personality structure.

As the degree of environmental threat becomes extreme, a person's coping processes will become more primitive and less "action oriented." Thus, under conditions of severe threat, a person's tendency to become inactive or to engage in defensive reappraisal will increase. Such behaviours are frequently noted in studies of environmental disaster victims (earthquake, flood, tornado) (Grosser, Wechsler, and Greenblatt, 1964). In addition to the degree of threat, other factors in the stimulus configuration of the threatening environment will influence secondary appraisal. In order to take direct action (attack, avoidance) against harmful agents, one must be able to locate the threatening agents. Inability to identify specific sources of threat in large urban centers may lead to generalized (nonspecific) hostility and suspiciousness on the part of city residents (Glass and Singer, 1972; Milgram, 1970).

If an agent of threat has been identified, a person will attempt to cope with it through those strategies which seem to have the best chance of getting him out of jeopardy without leading to more severe threat.

Finally, people will tend to differ in their use of coping strategies due to differences in their psychological structure or personality. Some individuals are characteristically disposed to attack sources of threat, while others tend to avoid or escape

threatening environments (Lazarus, 1966).

It may be seen that responses to environmental threat are determined by many factors. Both environmental conditions themselves and one's personal characteristics will influence one's mode of coping with a threatening environment.

2.1.5 PSYCHOLOGICAL STRESS INDICATORS

There are at least four classes of indicators that have been used to signify the presence and strength of psychological stress. Negatively toned affect is the most widely used indicant of stress. The phrase "negatively toned affect" refers to those emotional feelings which are subjectively experienced as unpleasant. The inital and inevitable response to threat is diffuse anxiety which, through secondary appraisal processes, may be replaced with more specific emotions such as anger, depression, or fear. Lazarus (1966) points out that the affect transformation depends on the type of coping strategy chosen:

> "If a threat stimulus is located and regarded as overpowering, fear becomes the affective state. If instead, the threat stimulus is appraised as vulnerable to attack, anger will ensue. If the situation is appraised as hopeless, depression will be the reaction." (Lazarus, 1966)

Many environmental conditions are capable of creating negatively toned affective states that can influence a variety of overt social behaviours. A second class of indicants of stress consist of various motor-behavioural expressions of negatively toned

affect. For example, bodily postures and facial expressions are reflective of the affective feelings of social-interaction participants (Mehrabian, 1968).

The third and fourth classes of psychological stress signals are alterations of adaptive functioning and physiological responses. The former refers to changes in cognitive activity and skilled performance in the face of enviromental stressors. Generally, decrements in skilled performance, as in pursuit tracking tasks or in cognitive and perceptual tasks (e.g. reasoning, mathematical, proofreading), are regarded as stress indicants (Hackman, 1970). Two broad classes of physiological responses are sometimes measured as stress signals. Autonomic system reactions are measured primarily through electrical recordings from the skin. The most prominent measures consist of changes in the electrical conductivity of the skin (GSR), heart rate, diastolic and systolic blood pressure, blood volume, respiration rate and amplitude, skin temperature, pupillary size, and muscular tension. The degree of change in such autonomic responses is felt to reflect the degree of stress. Finally, various secretions of the adrenal medulla such as epinephrine and norepinephrine have been linked with the stress syndrome as indicants, respectively, of fear and anger responses in reaction to environmental threats (Funkenstein, King, and Drolette, 1957).

Physiological stress has been described as a response to harm, or disturbance to bodily tissues or functions, that has actually occurred, while psychological stress is depicted as involving the anticipation of harm yet to come. The major

connnecting link between psychological and physiological stress involves the occurrence in psychological stress of those coping reactions that are accompanied by autonomic and adrenal reactions. These reactions constitute stimuli which, if prolonged, are physiologically "noxious" or harmful to bodily tissue and may lead to physiological stress reactions. Thus, the GAS sequence of physiological responses may occur as a consequence of prolonged and/or intense threat (Lazarus, 1966).

2.1.6 ADAPTATION

The function of the various coping processes discussed earlier is to reduce or eliminate threat. If successful, the operation of the coping processes will result in adaptation of stress responses to stimuli once appraised as threatening. That is, the intensity of the various stress responses (affective, motor-behavioural, performance disruptions, physiological) will diminish with repeated exposure to threatening stimuli. The situation is one in which "...initial reactivity diminishes on successive presentations because the threat is reduced through cognitive reappraisals or active coping responses" (Glass and Singer, 1972).

The tendency of environmental stressors to produce anger and aggressive action patterns plays an important role in determining the extent to which negative and violent interpersonal behaviours will occur. Productivity and performance disruptions are, in themselves, frustrating and potentially aggression producing. Environmental conditions of crowding, variable temperatures, and

noise are also irritating, and the negative affective responses created by such conditions may be expected to influence the emotional tone of interpersonal relationships.

2.2 ALCOHOLIC FAMILY STRESS - A REVIEW OF THE LITERATURE

The foundation for the recent decade, 1970-80, of family stress research may be traced to Bergess (1926), Angell (1936), Cavan and Ranck (1938), Koos (1946), and particularly to Hill's (1949) classic research on war-induced separation and reunion. In his A, B, C, - X [A (the event and related hardships)-interacting with B (the family's crisis meeting resources)-interacting with C (the definition the family makes of the event)-produce X (the crisis)] (crisis) formulation and his post-crisis "roller coaster course of adjustment," Hill outlined a set of major variables and their relationships which have remained virtually unchanged for over 30 years. Since 1970, investigators have carried on family stress research in an effort to render clarity and empirical support to these original conceptualizations. Burr (1973), in particular, has been involved in reworking the ABCX formulation into a bona fide part of stress research and theory, Burr was able to identify and define six variables and advance nine propositions to explain family behaviour in response to stressors, as well as twelve variables and thirteen propositions to explain family behaviour in response to family crises. From this work, his central concepts of vulnerability and regenerative power emerged as major new additions to the Hill framework. These concepts have

subsequently stimulated others to a renewed interest in family stress research and theory building (Hansen and Johnson, 1979; Boss et al., 1979). The strength of Burr's (1973) effort and its relationship to the Hill formulation is reflected in the replications and significance of the studies.

Other investigators in the 1970's have not been as interested as Burr in developing a deductive theory of stress, but more commonly concentrated their efforts on such salient issues as definition and measurement of variables. Family investigators appear to be plagued by conceptual and methodological difficulties. Investigations in which the stressors are not kept separate from the dependent variables of family responses and adjustments have been quite common. Family stress might refer to the family's response to events, which in many cases involves indices of the emotional state of family members; interpersonal conflict; or financial hardships (Simmons et al., 1973; Holroyd, 1974). The specific hardships associated with the stressor events (not part of the family's response) have been either ignored or obscured, so that it is not always clear whether the family's difficulties and hardships are part of the response or whether the hardships are an inherent part of the stressor. As a result, interpretations of the relationship of stressor to family adjustment tends to be tautological. Because the time dimension in family stress research is often ignored and investigators focus on families at a cross-section in time, (usually well after the initial impact of the stressor event) the distinction between stressor and family response is predictably

difficult to achieve.

Although systematic efforts to identify family hardships associated with specific stressor events are lacking, several investigators have approached this matter in an attempt to render salient this line of inquiry. Often, however, independent measures of hardships are difficult to obtain and researchers have tended to utilize family perception of an event as an indicator of its "inherent" hardship. Stress or crisis is defined as the interaction of a particular type of event with its perception. For example, drawing from the fields of psychosomatic medicine (Holmes and Rahe, 1967; Dohrenwend and Dohrenwend, 1974) and medical sociology (Mechanic, 1974; Antonovsky, 1979), researchers have classified stressor events and stress by the valence and intensity of these events. Pearlin and his associates at the University of Chicago and the National Institute of Mental Health (Pearlin and Schooler, 1978; Menaghan, 1972) have recorded the intensity of various life events by inquiring about family perceptions of "being bothered, unhappy, having problems coping" to arrive at "strain" scores. (For Pearlin, "stress" involves the interaction of strain with other variables.) McCubbin, Wilson and Patterson (1979) have attempted to apply the Holmes and Rahe (1967) procedures to obtain standardized weights (assigned by family members) for family life events as indices of family hardship.

Lipman-Blumen (1975) has advanced one of the most comprehensive schemes for the assessment of family crises. Eight of her 10 criteria appear also to have direct application in the

classification of stressors and in the determination of the extensiveness of "stress" in the family system.

Another approach to the conceptualization of family transitions has been to identify those clusters of normative and nonnormative life events which most families experience at given periods of the family cycle. Bourque and Back (1977) suggest that such a phenomenological approach might be possible with large samples of families through the use of life change questionnaires. Menaghan (1972) has identified sets of both normative and nonnormative stressful events which are more likely to occur to the young than to the old.

The picture of family adaptation to stress that emerges from Hill (1949) and Burr's (1973) synthesis depicts the family as a reactor to stress and as managers of resources within the family system. The active processes of family adaptation involving coping strategies within the family as well as in transactions with the community have received limited attention in both research and theory building (McCubbin, 1979). However, there is a mounting belief among researchers and family clinical workers that understanding how families cope with stress is just as important as understanding the frequency and severity of life changes and transitions themselves (Coelho, Hamburg, and Adams, 1974; Moos, 1977). This is partially the result of accumulating empirical evidence linking coping to successful individual adjustment. More importantly, the present interest in family coping signals an important shift in our priorities in the study

of family behaviour under stress.

It is important to note that any change produces stress, whether it is perceived as positive or as negative. In 1967, two non-psychiatric physicians, Holmes and Rahe published the results of a long-term study of 5,000 medical patients which was designed to measure the emotional stress of change brought about by life events and to explore the correlation of such stress with the incidence of physical illness. In their study, Holmes and Rahe developed a stress scale in which the severity of the stress appeared to be connected to the degree of change rather than to the positive or negative aspects of the change.

Psychiatrist and Family Therapist, Murray Bowen, (1976) has long taken the position that death or threatened death of a family member creates the greatest of all disturbances in family equilibrium and has further identified the "emotional shock wave" phenomenon which occurs in many families.

That stress in marriages complicated by alcoholism should not be thought of as unique is shown by Hansen and Hill's review (1964) of the problems faced by families in other sorts of crisis. For example, they report that the frequency and patterning of sexual behaviour may change, and may even cease altogether for some couples in crisis. It may be noted here that one study of sexual adjustment of alcoholics and their wives (Burton and Kaplan, 1968) found these marriages to be indistinguishable as a group, in this regard, from a group of maritally-counselled couples whose marriages were not complicated

by alcoholism. It seems unlikely therefore that the changes in sexual behaviour noted by Jackson (1954) and Lemert (1960) are in any way specific to alcoholism. Heightened anxiety and insecurity, and other 'personality changes', are also noted among the reactions of family members to crises of stressful circumstances. This serves as a reminder that 'disturbance' in the non-alcoholic spouses of alcoholics (Bailey et al., 1962; Kogan et al., 1963; Lewis, 1954) can be partly attributed to non-specific stress or crisis factors. Hansen and Hill (1964) even make mention of the likelihood of emotional disturbance being displayed by family members (often 'in turn' rather than together) when the crisis is alleviated. This is reminiscent of the frequent suggestion that spouses of alcoholics are likely to become disturbed when the alcoholic gets better. Role transfer from alcoholic husband to non-alcoholic wife, noted by Jackson (1954) and Lemert (1960) for example, and the subsequent difficulties in returning to the original role arrangement after the husband's 'recovery', have been remarked by those who have studied the effects of such things as economic depression and unemployment and war separation of families (e.g. Hill, 1949), and by those who have studied the impact of mental illness on the family (e.g. Clausen and Yarrow, 1955).

Carter (1976) identified three characteristics of families under stress. A primary characteristic of families under prolonged stress is an intensification and clash of the individual coping methods and "styles" of various family members. Every individual has a characteristic style of handling anxiety.

A second major characteristic of a family under stress is the tendency to either disrupt honest communication of thoughts and feelings about the situation, or to exhibit excessive emotional expression that paralyzes the system. A third and most important characteristic of severe or prolonged stress is that it seems to affect the weaknesses in the family relationship system and to bring every potential problem to the surface (Carter, 1976).

2.3 DEVELOPMENT OF STRESS THEORY IN FAMILIES WITH AN ALCOHOLIC ADULT

Prior to 1950 research focused on the dysfunctional personality of the wife of the alcoholic. She was seen either as a disturbed personality or a decompensating one (Boggs, 1944; Gliedman, 1957; Kalashian, 1959; Brown & Adler, 1959; Rae, 1972; and Mitchell & Mudd, 1957). Her behaviour was accredited to personality disturbance rather than in any way related to the alcoholic dysfunction in the family or the behaviour of the alcoholic spouse.

Although papers discussing family factors in alcoholism had appeared in the literature prior to 1950, the first concerted effort in this direction was a series of clinical reports about marriages centered on the role of the wife in initiating and perpetuating her husband's drinking. A debate arose between a faction represented primarily by psychiatrists and psychiatric social workers who viewed the wife of the alcoholic as a person with severe, longstanding psychopathology antedating marriage, which led her to choose an alcoholic husband as a way of satisfying and stabilizing intrapsychic needs (de Saugy, 1962;

Mally, 1965; Gliedman, 1957), and a faction represented primarily by sociologists who explained the behaviour of these wives as directly resulting from the marriage because of the husband's drinking (Kalashian, 1959; Brown and Adler, 1959; Rae, 1972; Kohl, 1962; and Deniker, de Saugy, and Rupert, 1964). The most recent review of this literature concludes that no convincing evidence has emerged suggesting that a single personality "type" is characteristic of wives of alcoholics, or that there is a theoretical explanation of their behaviour (Paolino & McCrady, 1977).

In any event, although theoretical interactional models were being proposed to explain behaviour in an alcoholic marriage, most of the clinical data stimulating these ideas came from individually oriented therapy or research. A few Sociologists, on the other hand, obtained much of their data directly from wives, and had little opportunity to substantiate these reports via direct observation or collateral interviewing.

The early research and literature that explores the alcoholic family unit rather than the individual alcoholic began in the 1940's with a few early attempts to categorize the alcoholic marriage. Mowren, in 1940, compared 25 wives of alcoholics with "normal" wives. Her paper reveals her impression that the attitude and behaviour of the wives in the experimental group changed in response to the husbands behaviour. Before Mowren, most research had focused on the psychopathology or personality of the spouse as she existed prior to, or separate

from her husband's alcoholism. Mowren was one of the first to attempt to explain the behaviour of the wife in terms of the situational stress of living with an alcoholic.

Other early literature revealed sparse interest in expanding on Mowren's idea until Joan Jackson (1954, 1956, 1959, 1962) developed the highly influential sociological stress theory. The stress thory explains the psychological profile of the wife as primarily a manifestation of adjusting to the prolonged and cumulative crisis of living with an alcoholic (a "crisis" can be defined as a condition of acute anxiety occuring when someone's habitual ways of coping are no longer sufficient and new solutions are required) (Finlay, 1972). Jackson objected to the preponderance of DPH (Disturbed Personality Hypothesis) and DH (Decompensation Hypothesis) literature which had "advanced to the point that the alcoholic emerges as the innocent victim of his family" (Jackson, 1962, p. 472). The sociological approach of Jackson was a major conceptual leap from the past alcoholic marriage literature and was in direct opposition to the decompensation theory (and Disturbed Personality Hypothesis).

Jackson's revolutionary formulations resulted from over three years of scrutinizing Al-Anon members. She attended hundreds of meetings and made verbatum recordings of each gathering or interview in an attempt to identify or describe the specific patterns of family reaction and adjustment to an alcoholic husband and father. Jackson concluded that the alcoholic's family of procreation goes through an adjustment experience that involves crisis, followed by disorganization, and

then recovery and reorganization. Jackson went on to outline seven basic successive stages in the course of family adjustment to alcoholism and she reported that all wives of confirmed abstinent alcoholics that she studied passed through or encountered these stages, although there was no fixed length of time for each stage (Jackson 1962).

2.4 JACKSON'S SEVEN CRITICAL STAGES OF FAMILY ADJUSTMENT TO THE CRISIS OF ALCOHOLISM

STAGE 1: Attempts to Deny the Problem

The prospective alcoholic drinks "inappropriately" either socially or alone which leads to rationalizations on the part of self or friends. As the inappropriate drinking continues, the spouse usually allows herself to be convinced that the problem is not serious.

STAGE 2: Attempts to Eliminate the Problem

Stage 2 begins when the husband's drinking results in the couple's relative social isolation. As social isolation increases, so does marital conflict. An important part of this stage is that the family still maintains their usual roles and the husband is still allocated the responsibilities of the head of the household.

STAGE 3: Disorganization

In Stage 3, the wife begins to lose all hope and manifests a "what's the use" attitude. Stage 3 is characterized by chaos, anger, and fear. The wife fluctuates from nagging to frustrated

emotional and behavioural disorder, as these become agents in the marital conflict.

STAGE 4: Attempts to Reorganize in Spite of the Problem

Stage 4 begins either with a crisis that warrants action (e.g., a medical crisis or an episode of violence) or when chronic Stage 3 has become unbearable. Many wives leave at this point and go directly to Stage 5 ("efforts to escape the problem"). If the wife goes into Stage 4, she takes on the role of the father and head of the household and abandons her role as a wife.

STAGE 5: Efforts to Escape the Problem

Stage 5 may be the end of the marriage. In this stage, the wife separates from the husband and may or may not attempt a reconciliation. The wife must struggle with all kinds of social, cultural, religious, familial, and environmental conflicts before arriving at the decision to leave. The significant change that has occurred in the wife, however, is that she has by now achieved enough self-sufficiency and self-confidence to see that life for her and her children can go on without the husband.

STAGE 6: Reorganization of Part of the Family

The wife reorganizes the family as a unit without the husband. This reorganization is similar to other divorced families with some unique exceptions, such as the recurring sense of guilt that she has deserted a sick person. The increased public information system about alcoholism as a disease serves to compound this guilt.

STAGE 7: Recovery and Reorganization of the Home and Family

Stage 7 occurs only if the husband achieves sobriety. Regardless of whether or not separation has preceded sobriety, the reorganization of the family as a whole is usually constructive but is also frequently a painful process within a climate of uncertainty for all family members. [Proponents of the decompensation hypothesis conclude that the difficulties of this stage are manifestations of the spouse's need for the husband to be actively drinking.] The husband and wife must learn that marriage without alcoholism is not without problems. The wife has to deal with the danger of becoming emotionally available and again vulnerable in the face of repeated broken promises and past disappointments; she must relinquish some of the head of household roles. The children must readapt to this uneasy truce, and recognize the father in the reinstated role from which he was excluded in Stage No. 4. The wife must again share the children and also realize that her husband, perhaps through the help of an agency, counselor, or fellowship, achieved sobriety, something the wife and children were never able to do for him. Also, the husband frequently is actively involved in helping other alcoholics and is usually more introspective than before, so that although the problem drinker is abstinent, the family in some ways will never be free of alcoholism (Paolino & McCrady, 1977).

A frequent criticism of Jackson is that she did not quantify her observations but relied on subjective impressions. Research subsequent to Jackson's work, however, supports the general concept that the psychopathology seen in wives of alcoholics is

as much or more the result of the stress of living with alcoholism in the family than the result of intrapsychic and personality factors that preceded the husband's uncontrolled drinking (Kogan & Jackson, 1965a).

2.5 FAMILY STRESS/ALCOHOL STUDIES

Lemert (1960) tested Jacksons seven stages by interviewing relatives (mostly wives) of alcoholics and asking about the sequence of the first occurrences of eleven events relating to the family's perception of, and reaction to, the drinking problem. The major conclusion was that the sequence of events showed a great deal of inconsistency and uneveness. Lemert (1960) suggested two broad categories rather than Jacksons seven stages.

In Haberman's (1964) study, wives showed fewer psychophysiological symptoms during the husbands' period of abstinence compared to periods of drinking.

Bailey, Haberman, and Alksne (1962) used a 22-item Index of Psychophysiological Disturbance which identified psychophysiological and psychoneurotic symptoms. Four groups were studied:

1. Twenty-three wives who were living with their alcoholic and actively drinking husbands who had never been separated.
2. Twenty-three wives who were living with their alcoholic husbands but the husbands had been abstinent for six months or more.

3. Twenty-three wives of alcoholics who had been separated or divorced for more than six months.
4. Five hundred and thirty-seven women in a representative community sample who were married to nonalcoholics.

Groups 1, 2, and 3 were matched in age and length of marriage. Some striking findings of this study are that 65% of Group 1 had a high level of psychophysiological and psychoneurotic symptoms compared to 55% of Group 3, 43% in Group 2, and 35% in Group 4. Also, the incidence and frequency of these symptoms decreased markedly as husbands' drinking decreased; for example, 82% of Group 2 reported that in retrospect they experienced marked psychophysiological and psychoneurotic symptoms when their husbands were sober.

Studies by Kogan and Jackson (1965b) support the conclusion of Bailey et al. (1962). Kogan and Jackson administered the MMPI to three groups of women: Group 1 consisted of 26 wives of alcoholic husbands who had been abstinent for more than 12 consecutive months. Group 2 consisted of 50 wives of actively drinking alcoholics. Group 3 consisted of 50 wives married to nonalcoholics. The major finding was that the incidence of personality disturbance was greatest in Group 2, least in Group 3, and somewhere in between in Group 1. Kogan and Jackson (1965b) conclude that "the findings were most consistent with the psychosocial hypothesis which takes into account both personality and situational variables".

Bailey (1967), with the same 22-item questionnaire used by Bailey, Haberman and Alksne (1962) analysed the symptom scores of

262 wives of alcoholics. The scores were compared to periods of husbands' drinking and sobriety. The wives of sober alcoholics were statistically significantly less symptomatic than the wives of actively drinking alcoholics and no different from a representative sample of control wives of non-alcoholics.

Paolino, McCrady, and Kogan (1978) have completed a study which empirically assesses alcoholic marriages and concludes by strongly supporting the stress theory.

It can be concluded that the research of Haberman (1964), Bailey et al. (1962), Kogan and Jackson (1965b), Bailey (1967), and Paolino et al. (1978) invalidated the decompensation hypothesis and supported the general concepts of the stress theory. After Jacksons original study greater emphasis was placed on the roles of the family members rather than simply on the behaviour patterns of the wife. Although further stress theory research has supported Jackson's (1954, 1956, 1959, 1962) general concepts, there has not been much continuing support for most of her theory of progressive stages in the behaviour of wives of alcoholic husbands.

Jackson has been criticised because she observed, almost exclusively, Al-Anon members. Several studies have shown important differences between Al-Anon and non Al-Anon wives (Pattison, Courlas, Patti, Mann, and Mullen, 1965; and Bailey, 1965 and 1967).

Lemert (1960) reported that his inability to duplicate Jackson's findings was because Jackson's seven stages were very specific to the kinds of wives who become active in Al-Anon. Rather than a broad sampling of all types of wives of alcoholics.

Lemert (1960) and James and Goldman (1971) confirmed Jackson's general concept that the coping mechanisms of the wife as related to the husband's drinking change as the degree or style of drinking changes and that wives change their duties, responsibilities, and mental status as the various degrees of involvement with alcohol change in the husband. Lemert (1960) and James and Goldman (1971), however, also found no data to support the seven specific stages postulated by Jackson.

James and Goldman (1971) studied 85 wives of alcoholics. Using the approach of Orford and Guthrie (1968) as a point of departure, James and Goldman categorized the wives' coping patterns into four stages of husbands' drinking: social drinking, excessive drinking, alcoholismic drinking, and abstinence. The data analysis led to a categorization of the behaviour of the wives into five patterns or styles of coping:

1. Withdrawal within marriage: This style included quarrels about drinking, avoidance of husband, sexual withdrawal, and avoidance of her own feelings.
2. Protection: Involved pouring out his liquor, insisting that he eat, and talking to his employer on husband's behalf.
3. Attack: This style included the wife initiating discussion about divorce and locking him out of the house.
4. Safeguarding family interest: Included paying his debts,

giving him money, and keeping children out of his way.

5. Acting-out: Included getting drunk herself in an attempt to control his drinking, making him jealous, and threatening suicide.

"Withdrawal from marriage" was the most frequent style of coping, and in contrast to Jackson's (1954) observations, withdrawal was found in 50% of the cases, even when the husband was abstinent. Orford, Guthrie, Nicholls, Oppenheimer, Egert, and Hensman (1975) have offered some interesting perspectives on the wives' withdrawal coping style. In a longitudinal empirical assessment of the relationship between wives' coping styles and their alcoholic husbands' treatment outcome, Orford et al. have shown that Withdrawal manifested by avoidance, sexual withdrawal, refusing to talk, feeling frightened, seeking outside help, making special financial arrangements, and contemplating terminating the marriage is most consistently associated with a relatively poor prognosis.

These early studies focused on the behaviour of wives in the "alcoholic" marriage and they collected a broad base of research information that provides support for other areas of research to follow.

2.6 AN OVERVIEW OF THE GENERAL SYSTEMS THEORY

Another approach to understanding the families of alcoholics is that of Systems Theory. General systems theory approaches to psychopathology have received increasing attention in only the past 25 to 30 years. These approaches have developed in response

to the increase in scientific information and knowledge in this century and the need for an approach that attempts to integrate knowledge from diverse fields. The perspective of general systems theory was first associated with the alcoholic marriage in 1959 (Bullock & Mudd, 1959; Mitchell, 1959) and was not systematically applied to alcoholic marriages and families until the 1970's (Gorad, 1971; Gorad, McCourt & Cobb, 1971; Steinglass, Weiner, & Mendelson, 1971a, b). Thus, these applications are relatively new, and data and theoretical applications are currently evolving.

2.6.1 DEFINITIONS

Systems theory assumes that all important people in the family unit play a part in the way family members function in relation to each other and in the way the symptom finally erupts. The part that each person plays comes about by each "being himself" (Bowen, 1974).

Thus a central concept of systems theory is that, in order to understand individual behaviour, it is essential to understand the significant group in which a person lives, the relationships within that group, and the importance of any particular individual's behaviour to maintaining the group, or system. Therefore, the target for change is the whole system, not any individual member of a system. Whereas traditional individually oriented therapists would label the person initially seeking help as the patient, the systems theorist would call him the identified patient to indicate that the whole system, and not the

individual, is the real patient.

A system is considered to be more than the behaviours and personalities of the individuals within the system; the system is considered to have properties beyond those of the individual members which arise from the interactions of the individual members.

The systems theorist's approach requires a focus on the observable facts of the relationship. That is, the family systems theorist is interested in describing what happened in any family interaction, how it came about, when the behaviours of the individual members occurred in relation to one another, and where the behaviours or incidents occurred. The systems theorist avoids intrapsychic motivational explanations of why an interaction or family event occurred and instead attempts to focus on the interrelationships among behaviours in contrast to the psychoanalytic approach which focuses on the interrelationships between component parts of the minds of the individual members of the system.

A formal definition of a system is given as "a set of objects together with relationships between the objects and their attributes" (Hall and Fagan, 1956). Objects are defined as the parts of a system, and attributes are considered to be the properties of the objects. For example, in an alcoholic family, the objects would be family members, and their attributes would include such things as intelligence, skills, affective responsiveness, and so on (Paolino & McCrady, 1977).

2.6.2 ROLES

A family is considered to be made up of certain roles. All families have some roles which must be fulfilled, such as those of provider, parent, or homemaker. These roles generally are the focus of sociological studies of families. Families, however, also have a variety of emotional roles, to which the members are "assigned." For example, in many marital relationships, the husband often fulfills an instrumental task-oriented role, whereas the wife fulfills an expressive, emotional, relationship-oriented role. Many families also include the role of the sick patient, which is often the role of the alcoholic in an alcoholic marriage. That is, the family structure would require that one member of the family not function capably, according to his supposed abilities, and rather would engage in unpredictable, socially unacceptable behaviours. This role might allow others in the family to assume the role of caretaker, knowing parent, or angry accuser. Systems theory emphasizes that any system requires a variety of roles in order to function. In a family, the various members are assigned these roles. The "assignments," however, can shift from individual to individual, although the roles within the family as a unit generally do not change (Paulino & McCrady, 1977).

2.6.3 RULES

Families are considered to be rule-governed systems just as psychoanalytic theory considers the mind to be governed by certain principles. A discrete body of rules can be derived which

describes the typical behaviour patterns of the family.

> The observation of family interaction makes obvious certain redundancies, typical and repetitive patterns of interaction which characterize the family as a supraindividual entity (Jackson, 1965).

In an alcoholic marriage, the rule of the system might be that the couple could only express strong affectionate feelings toward each other after the alcoholic had completed a drinking spree. At other times, affective expressions would be disallowed. Or a rule of the system might be that the wife is allowed to work outside of the home when the alcoholic husband is drinking, hospitalized, or otherwise severely disabled from the drinking. At times when the alcoholic is functioning in a relatively less disrupted manner, the wife would be required to give up her job and return to her home. Clearly, these rules are not often discussed and deliberately decided upon. Rather, they evolve from the needs of the system (Paulino & McCrady, 1977).

2.6.4 THE CONTRIBUTION OF THE INDIVIDUAL TO THE ESTABLISHMENT OF THE SYSTEM

Bowen (1974) described what he believed to be the contribution of the individual to the initial establishment of any system. He emphasized the concept of differentiation of the self, which is defined as the "degree to which the person has a 'solid self' or solidly held principles by which he lives his life" (Bowen, 1974). The degree to which any individual is differentiated is related to the level of differentiation of his or her parents, his or her relationship with them, and how the

individual has handled unresolved attachments to the parents in his own adult life. An individual can seldom reach a level of differentiation much higher than that of his parents. Marriage involves the establishment of a relationship between two individuals who have usually selected a mate at a level of differentiation similar to their own. The level of differentiation of the parents predicts the overall degree of differentiation in the new family. Therefore, in a family with a low level of differentiation, the family members lacking the "solid self" to which Bowen refers would frequently ascribe their own characteristics or feeling to other members of the family (Paulino & McCrady, 1977).

Research based on the systems theory of perceiving a family developed originally in the 1950's. Only in later stages of systems theory research was it applied to families when there was an alcoholic adult (Gorad, 1971; Gorad, McCourt & Cobb, 1971).

Researchers who view alcoholism as a <u>cause</u> of family disruption advocate treating the individual alcoholic since the illness resides within the person (Bailey, Haberman and Alksne, 1962; Bosma, 1972; Chafetz, Blane and Hill, 1971; Clifford, 1960; Cohen, 1966; Edwards, Harvey and Whitehead, 1973: Estes, 1974; Jackson, 1954, 1956, 1959; Jackson and Kogan, 1963; Kelly, 1973; Kephart, 1954; Kogan, Fordyce and Jackson, 1963; Krimmel, 1973; Lemert, 1960; Meeks and Kelly, 1970; and Sloboda, 1974). The alcoholic's drinking within the family acts as a crisis factor, which alters family balance and causes family disruption.

Proponents of the symptom view of family disruption regard alcoholism as signaling the existence of a deeper underlying emotional disturbance. A review of the literature on alcoholism as symptom can be divided into three categories: personality disturbances existing in the alcoholic (Bullock and Mudd, 1959; Knight, 1937; and Sherfay, 1955), personality disturbances existing in the alcoholic's spouse (Bailey, 1961; Gliedman, Rosenthal, Frank and Nash, 1956; Price, 1945; and Whalen, 1953), and pathological interactions existing between the marital pair and/or family (Albertsen and Vaglum, 1971; Finlay, 1974; Karlen, 1965; Krimmel, 1973; Mally, 1965; Press, 1975; Rae and Drewary, 1972; and Ward and Faillace, 1970). Viewing alcoholism as a symptom necessitates treating the underlying disturbances which may reside within the alcoholic, his or her spouse, or the pathological interaction.

In trying to unravel the controversy between viewing alcoholism as a symptom or cause of family disruption, several authors have presented evidence which "suggests that the relationship is not as clearcut as has been thought by the advocates of either school" (Kogan et al., 1963). Bailey (1961) advocates the development of an integrative psychosocial approach as a solution to this controversy.

When viewing the family within the framework of general systems theory, alcoholism becomes perceived as a symptom of complex dysfunctional interactions of family members (James and Goldman, 1971; Kogan, Fordyce & Jackson, 1963; Mitchell, 1959;

Orford and Guthrie, 1968; Steinglass, Weiner and Mendelson, 1971a, b; and Ward and Faillace, 1970). Within this system, alcoholism is one of the common human dysfunctions which acts to create an imbalance in the total functioning of the family unit. Each member plays a part in this disruption and likewise, becomes affected by the disruption.

Viewing alcoholism as a symptom of complex interactions through the family systems approach allows for assessment of each individual's personality make-up that might be reinforcing the dysfunction which conceptualizes alcoholism as a symptom and allows for observation of each individual family member's reaction and adjustment to the stress created by the crisis of alcoholism (Bowen, 1974). It also permits identification of the adaptive function(s) alcoholism may play in the family system (Davis, Berenson, Steinglass and Davis, 1974). Proponents of the interactional model view the alcoholic family as the patient in need of treatment, and not just the alcoholic member. Other developments have identified the stabilizing effect rather than the disruptive influence of the drinking behaviour within the family (Steinglass, 1976).

If in fact drinking behaviour maintains the family system's functioning, treatment personnel must attend to 1) the role served by alcoholism within the family, and 2) factors beyond the goal of abstinence (Steinglass, et al., 1971). In recent research by Steinglass (1981) it was found that in families in an active phase of alcoholism, the degree of generalized psychiatric symptomotology experienced by the non-alcoholic spouse is closely

correlated with the alcoholic spouse's perception of the degree of social-behavioural consequences of his or her history of alcoholism. This correlation does not appear to hold when alcoholism is dormant (or a recovery phase has occurred), and is not paralleled by a similar correlation between the psychiatric symptomatology of the alcoholic spouse and the alcoholic spouse's perception of the social-psychological consequences of his alcoholism.

In contrast Steinglass (1981) found that there appeared to be no correlation between the symptomatology of either spouse and such traditional measures of the degree of alcoholism as the extent of physical and treatment consequences or the amount of alcohol consumed by the alcoholic spouse. The overall level of symptomatology did not differ between families grouped according to the alcoholic's current drinking practices. Nor did alcoholism seemed to have caused levels of symptomatology comparable to those of a comparision group of psychiatric outpatients -- although the symptom levels were significantly higher than those of a normal population.

Steinglass feels that one possible explanation for these findings is that non-alcoholic spouses are experiencing stress because they have to cope with the spouse's alcoholism, and the greater the degree of alcoholism the greater the stress. This notion was originally introduced by Jackson (1954) in her description of coping styles used by non-alcoholic wives of alcoholics. Steinglass (1981) states that there is a major

problem with the application of the stress hypothesis to his data. If level of stress is the explanatory variable, then level of symptomatology should differ according to the current drinking status. According to this hypothesis, a drinking alcoholic causes more stress for his non-alcoholic spouse than does an alcoholic who has been dry for more than six months. Yet Steinglass found no relationship between current drinking status (either current drinking phase or amount of alcohol consumed during the study) and level of symptomatology. Furthermore, it was not considered if these factors extended to the entire family or only applied to the wife.

Another view of the interactional model is that proposed by Davis et. al (1974). This view further conceptualizes the abuse of alcohol within the family as serving adaptive consequences (Davis, et. al, 1974).

Burton and Kopland (1968) in two studies reported on the effects of couples' treatment on alcoholism. They based their approach on the belief that alcoholism and marital conflict were interrelated. Burton & Kaplans 1968 studies represent one of the first systematic attempts to evaluate the value of couples therapy in the treatment of alcoholism.

In two uncontrolled clinical studies, Smith (1969) and Gallant, Rich, Bey, and Terranova (1970) reported on the degree of success of two group therapy programs which included spouses of alcoholics in treatment. Smith's work included having wives attend group therapy while their alcoholic husbands were in the

hospital which lead to a higher success rate than those couples that did not recieve early theraputic intervention.

Gallant et al. (1970) utilized group couples therapy for couples in which one partner had a drinking problem. They treated 118 couples, with goals of treatment being to lessen drinking denial and to help the couple improve the quality of their relationship. Their results were only moderately encouraging and indicated a serious loss of subjects in the follow up.

McCrady et al. (1976) found trends suggesting that involvement of the couple led to more successful treatment outcome in terms of drinking, but small sample size and large variability made their findings tentative rather than conclusive. They found no evidence of differential effectiveness of the treatments in the number of self-reported marital problems, experience of depression, anxiety, hostility, or degree of psychopathology at six-month follow-up.

In sum, the work of Burton and Kaplan (1968 a, b), Smith (1969), Gallant et al. (1970), Paolino and McCrady (1976), and McCrady et al. (1971) suggests that couples group therapy where alcoholism is a problem may lead to successful treatment outcome in greater than or equal to 45% of the cases treated. Since none of these groups utilized no-treatment controls, it is impossible to conclude whether such treatment increases, decreases, or has no effect on the overall success of treatment. Additionally, Cohen and Krause's (1971) results suggest that subjective data

may be highly dependent on the expectations of the treatment personnel.

The foregoing studies were based on the concept that involving the couple in treatment was important in changing drinking, but were not explicit in deriving their treatments and hypotheses from general systems theory. The first study which explicitly derived treatment from both systems theory and using the family unit was reported by Meeks and Kelly (1970). They treated five families in which either the husband (four families) or the wife (one family) had a drinking problem. They treated the family as a unit, with treatment focusing on helping the families to communicate openly and to understand interactional patterns. They found, of the five families whom they treated, that in two the drinking member remained abstinent, and in three there was a substantial improvement in the drinking. As with the other studies mentioned, there was no control group with which to compare these results, and the data gathered were subjective and impressionistic.

2.7 DESCRIPTIVE STUDIES OF INTERPERSONAL SYSTEMS INVOLVING ALCOHOLICS

Beginning in 1971, a group of researchers at the U. S. National Institute of Mental Health (NIMH) and Georgetown University in Washington, D. C., U.S.A. began reporting on a series of studies based on actual observations of interactions within alcoholic families during periods of intoxication. This systems theory focus on family interactive behaviour rather than individual behaviour provided the framework for these studies.

The earliest studies of this group (Steinglass et al., 1971a, b; Weiner, Tamerin, Steinglass, & Mendelson, 1971) focused on father-son and brother-brother interactions. Although these were not direct studies of alcoholic marriages or families, this early work laid the groundwork for later study of alcoholic marriages and families.

Other systems concepts were described by Davis, Berenson, Steinglass, and Davis (1974) in a theoretical nonempirical article. In addition, these authors expanded their basic premisis to include learning concepts, asserting that alcohol abuse had adaptive consequences which were sufficiently reinforcing to maintain the drinking behaviour. The nature of the adaptive consequences varies from individual to individual, being potentially intrapsychic, intracouple, intrafamily, or larger systems maintenance. Davis et al. (1974) reported on four clinical ways in which alcohol abuse could be adaptive, citing (1) a wife's assertiveness when drunk, (2) the family's laughing and having a great deal of fun when the father got drunk, (3) a man in a therapy group whose speech became more audible, and who was attended to more fully when drunk than when sober, and (4) two brothers in which drinking allowed one of them to become aggressive, and the other one to come to his rescue and maintain their family relationship.

Thus, as observational data accumulated, this NIMH group began to conceptualize alcohol abuse from both a systems and behavioural viewpoint. The consequences of excessive alcohol

ingestion were considered reinforcing, and this reinforcement maintains the drinking behaviour. What makes the consequences reinforcing, however, involves both intrapsychic and social systems needs.

Steinglass, Davis and Berenson (1975), and Wolin, Steinglass, Sendroff, Davis and Berenson (1975) reported observational data on married couples. In these studies, they admitted couples in which one was alcoholic to a self-contained living unit within a hospital. All couples had been married and living together at least five years without separation, and alcohol problems were self-diagnosed by at least one member of the couple.

The researchers also reported on the results of a "family tree," in which they traced the genealogy of the family for four generations. They asked the husbands and wives to recall family reactions around drinking. They concluded that the significance of the family incidence of alcoholism was quite apparent in the seven couples whom they studied, and that the couples appeared to be repeating the interactional style and patterns expressed in the parental or grandparental families.

These conclusions are reminiscent of Bowen's (1974) contention that the level of differentiation of the parents determines that of the family, and therefore of the children.

As the systems model of alcoholism was developed and substantiated by clinical and experimental data, the notion that

drinking behaviour was playing a specific role in homeostasis for the "alcoholic family system" recieved considerable support (Steinglass, Davis, and Berenson, 1977). Marital couples were found to cycle between two distinct interactional states- a sober interactional state and an intoxicated interactional state. In addition, observations indicated that the intoxicated state was even more non-random, and in this sense even more highly patterned than behaviour observed during states of sobriety. Furthermore it appeared that the transition from sober to intoxicated behaviour appeared to serve a specific functional role for these marital couples, a role that was felt to be primarily problem-solving in nature. Three different types of problem-solving activities were identified as being associated with alcoholism; problem-solving associated with individual psychopathology, interfamilial conflict, and conflict between the family and the external environment (Steinglass, 1978). Further observations of alcoholic couples during periods of intoxication as well as abstinence have led to a recognition that such couples may behave during intoxication in ways that have adaptive consequences for the family (Davis et al., 1974). This state of affairs may, in turn, reinforce drinking in the alcoholic family. A complex rather than unidirectional relationship between alcoholism and family life is therefore suggested (Steinglass, 1981).

The contribution of these observational studies is significant. They are the first to report on observations of interactions of alcoholic couples or other natural family systems

when the alcoholic was actually drinking. The researchers involved in these studies have derived at least six very interesting hypotheses from these observations:

1. Family interactional behaviour during drinking episodes is "highly patterned" (Steinglass, 1976) and very different from sober family behaviour.
2. Alcoholism should be studied to determine how it affects the interactional life of the family, rather than the intrapsychic or social functioning of the alcoholic or spouse.
3. Alcoholism serves as an "organizing principle for interactional life within these families". (Steinglass, 1976)
4. Alcoholism produces predictable if not enjoyable patterns for the family, and therefore serves a stabilizing function.
5. The family should be the patient (and treatment targeted toward the entire family, not seperate members).
6. If a therapist assesses carefully, it will be possible to identify adaptive consequences of the drinking which maintain it regardless of the original etiology of the problem.

Each of these propositions must be regarded as a working hypothesis at this time. Further observational studies have led to the generation of these hypotheses, and contradictory data are not evident. Support, however, is also scanty.

Most of the research based on family therapy outcomes with alcoholics appears in two reviews by Steinglass (1976, 1977). The 1977 Steinglass review includes only ten studies. All of these

support the use of family therapy with alcoholics. However, these early studies are so limited in number, comparability, and methodological rigor that one cannot draw any firm conclusions about the effectiveness of family therapy with alcoholics. For example, outcome measures ranged from highly subjective measures such as social and marital satisfaction to measures of abstinence from alcohol. The use of abstinence as an outcome measure is especialy controversial because of existing research which indicates that some alcoholics are able to drink socially after receiving treatment (Ewing, 1974; Pattison, 1968; Pattison et al., 1968).

The studies included in the Steinglass reviews are further limited by the nearly universal failure of the researchers to use comparison groups or to include many female alcoholics in their samples. The failure to include female alcoholics in outcome studies may introduce a bias that has serious implications for treatment. Meeks and Kelly (1970), for example, have argued that--

> .....wives of alcoholics seemed better able to shift the focus to the family unit and to view their own behavior within the framework; husbands, with their masculinity and competence at stake, may have a greater need to keep the alcoholic wife in the sick role. When the husband is the alcoholic he may have less difficulty relinquishing the role of identified patient.

A large-scale study of family therapy outcomes supports the claims of sex differences in treatment for alcoholics. These differences were found by Williams (1972) in his evaluation of the Hospital Improvement Project at the Center for Alcoholics in Avon Park, Florida.

In that study, 44 percent of 647 patients offered family therapy chose to participate in that treatment. Only 17 percent of the total 647 completed the 4 sessions (initially in the office and later at the client's home) that were intended. Intact families were far more receptive to the treatment than other families; about three-fourths of the patients living with a spouse and children received the therapy. Also more likely to participate in the family therapy were patients of "middle class and above" social status.

Participation in family therapy appears to contribute to full-time employment and increases in attendance at Alcoholics Anonymous among patients at followup (i.e., 6 to 12 months after discharge); these findings were more characteristic of male than of female patients. The family therapy also seemed to influence the likelihood of abstinence at followup. At followup, a majority of the males showed significant changes in "gains in self-awareness"; these changes were not found in the majority of females, even though females were judged to have a "less severe" degree of impairment on psychiatric formulation measures at the time of intake.

Data from two small-scale studies raise the question of whether many alcoholics hold as positive a view of family therapy as professional proponents of the method.

In a study by the Veterans Administration Hospital in Indianapolis, patients rated eight treatments they received on eight "helpfulness" dimensions; treatment included such interventions as group therapy, individual counseling, lectures, and family counseling. Of the treatments, family counseling received among the least favorable ratings on "worth," "therapeutic benefit," and "pleasantness" and was not ranked highly on the remaining five dimensions.

More favorable results have been reported by Hoffman et al. (1975-76). They compared attitudes toward treatment among two groups of male alcoholics who had previously completed a 6-week Alcoholics Anonymous oriented program where they received the six types of treatment. They rated family therapy as the most beneficial treatment received.

Recent research by Leipman et al. (1985) indicated that family participation in the rehabilitation process improves the prognosis for recovery. This study also indicates that if the family fails to accomodate the new behaviour patterns of the alcoholic it can precipitate a relapse.

The past two decades have provided a variety of family oriented research studies that provide a basis for further exploration of techniques to enhance the therapeutic process as well as influencing new directions in family research.

2.8 STRESS IN FAMILIES WHERE THERE IS AN ADULT ALCOHOLIC

A central concept of systems theory is that, in order to understand individual behaviour, it is essential to understand the significant group in which a person lives, the relationships within that group and the importance of any particular individuals behaviour to maintaining the group or system. Therefore, the target for change is the whole system not any individual member of a system. If stress theory is applied to this assumption then it becomes necessary to study the entire family rather than the individual in evaluating the stress levels of an alcoholic system. To research only the individual alcoholic would not present a large portion of the influential factors present in the lives of the individual or the family. Therefore, the focus of this research is on the entire family, rather than portions of the family system.

2.9 SUMMARY

Assessing the effects of stress on an entire family due to the behaviour of an alcoholic adult in the family has been a topic of interest for researchers over the past thirty years. Extensive research on the husband and wife relationship in an alcoholic marriage has been conducted but there is a dirth of research that encompasses the entire family of the alcoholic.

Stress levels in relationship to alcohol consumption has also been explored, however, most research was limited to the alcoholic individual and/or his spouse. Very little stress research has encompassed the entire family of the alcoholic and looked at a family stress pattern rather than an individual one.

SECTION 3

AIMS, HYPOTHESES AND RATIONALE FOR THE STUDY

3.1 AIM

The first aim of this research study (Study I) is to explore the differences in stress levels between selected family subject groups of general population medical patients, a group of subjects selected from the general community population and a group of subjects selected from patients admitted to an alcohol unit for treatment of alcoholism and their families.

A second aim (Study II) of this research study is to evaluate the significance of a family oriented stress management follow up program with families when there is one alcoholic spouse who has recently sought treatment for alcoholism compared to another group of subject who have also recently had a male adult in treatment for alcoholism and who did not receive a stress management program in their follow up treatment.

For the purposes of clarity the two above sections of the study will henceforth be referred to as Study I and Study II. These two studies will be presented seperately and the data analysed for each study.

3.2 METHODS OF ANALYSIS

STATEMENT OF THE HYPOTHESIS FOR STUDY I AND STUDY II

The working hypothesis of the first study is that there are differences in stress levels between families where there is a male alcoholic adult as compared to families from the general community population and a medical community population. A second hypothesis of this study (Study II) is that stress will be reduced in families where there is an alcoholic male adult if those families are administered a series of Stress Management sessions.

STATEMENT OF THE NULL HYPOTHESIS

The null hypothesis of Study I is that male alcoholics and their families do not experience different patterns of stress in a greater level of overall stress than either male patients with general medical conditions with their families or male control subjects selected from the general population and their families.

The null hypothesis of Study II is that changes in the male alcoholic family members due to alcohol treatment will not cause changes in the stress level of the other family members. That stress within male alcoholics and their families will not be reduced by a specific family oriented stress management programme.

This study uses a traditional index, degree of psychiatric symptomatology to measure the impact of stress as well as a life event stress measure. Other stress measures used in this study

were the medical visits and symptomatology checklists as well as an alcohol screening test.

3.2.1 RATIONALE FOR THE STUDY

Although there are a great many studies exploring the various ramifications of alcoholism for the individual alcoholic, and there are various studies which look at the stress levels for the individual alcoholic, there are virtually no studies which analyse the stress levels in an entire family system when there is an adult alcoholic in that family. The purpose of this study is to provide information about stress levels in entire family systems as compared to other designated groups of entire families. A further rationale for this study is to compare stress levels in entire family systems where there is an alcoholic male adult as the family progresses through the rehabilitation phase. An additional part of this study is to compare alcoholic families that do or do not receive a stress management program as a part of their rehabilitation follow up program. This is also an area where previous research is virtually nonexistent in New Zealand.

3.2.2 OVERVIEW OF THE PROCEDURES USED

The procedures used in the first analysis of the data (Study I) consisted of a comparision of the original questionnaires given to the three groups - Alcohol, Medical and Community. The data was interpreted by using a simple, or one way analysis of variance (ANOVA). The ANOVA was used to determine

whether there was a difference between the means of the three groups at a selected probability level.

The procedure used in Study II for the analysis of the data from the questionnaires administered to the Alcohol Group at first interview, six and twelve month follow-up dates was the t Test. The t Test was used to determine whether the two means, those from the group that was administered Stress Management compared to the group that did not receive Stress Management were different at a selected probability level.

In assessing the statistical significance of effects observed in the analysis of variance F-values were interpreted at the .10 level and below. Wallach and Kogan have argued that where one is dealing with groups or with measures where the reliability of measurement is low and in research situations where the hypotheses put forward are tentative or where the research is of an exploratory nature, (all of which can be said to apply to the current research) then it is justifiable to use p = .10, rather than the more common .05 level as the cut off for assuming significance. Thus in those situations where the reliability of measurement is low and where the gain in knowledge or practice is important, it is better to risk a Type I error where Ho is mistakenly rejected, than to make a Type II error, where Ho is retained even when it is false. Reducing the probability level for significance, as Wallach and Kogan point out, reduces the likelihood of Type I errors, as is justifiable in this type of research. (Wallach & Kogan, 1965)

3.3 DESIGN

The research paradigm utilized in this study is a basic experimental design combined with demographic data which is primarily descriptive. The experimental research was used as it was considered the best method of research to test hypotheses concerning cause and effect relationships. The research was divided into two studies for the purposes of clarity and simplicity.

A two phase approach to the research proposal was adopted. Phase One was concerned with the development, piloting and distribution of the research instruments. Phase One consisted of data collection from three primary groups: a medical group, a community group, and an alcohol group. Phase Two consisted of the systematic data collection and analysis from two designated alcohol groups. One which was administered stress management and a second group which did not receive stress management. Henceforth these studies will be known as Study I and Study II.

In this experimental study the research process included the selection and definition of a problem, selection of subjects and measuring instruments, selection of a design, execution of procedures, analysis of data, and formulation of conclusions. This study was guided by a working hypothesis and a statement of the null hypothesis.

In this design the first study (Study I) consisted of the random selection of three groups designated the Community Group, the Medical Group and the Alcohol Group. These groups were

compared on demographic and stress measures. Demographic data were compared on percentile rank only while Stress Measures were analysed using an analysis of variance (ANOVA) at two selected probability levels ($P < .05$ and .10). In a study using three groups the ANOVA is the appropriate analysis technique to determine whether the differences represent true differences or chance differences resulting from sampling error (Gay, 1987).

The second section of this research (Study II) was composed by dividing the original Alcohol Group into two subgroups of twenty families each. One subgroup was administered a Stress Management Program following the male alcoholics completion of an alcohol rehabilitation program. The entire family was involved in the Stress Management program. The second subgroup (designated the Control Group) received no follow-up Stress Management program.

The independent variable introduced was the administration of a Stress Management program to one half of the Alcohol Group subjects. A six month and one year follow-up comparison was implemented for the two sections of the Alcohol Group. This entailed administration of the M.U.S.Q. at six and twelve month follow up dates. The Massey University Stress Questionnaire is a stress measure developed at Massey University Department of Psychology. After the groups had been administered the Stress Management treatment for a specific number of sessions (6) the researcher administered a test of the dependent variable (stress levels) to determine whether there was a significant difference

between the groups. A t Test was used to determine whether the means of the two groups were significantly different at selected probability levels ($P < .05$ and .10).

SECTION 4

STUDY I

4.1 AIMS OF THE STUDY

The aim of Study I is to explore the differences in stress levels between selected family subject groups of general population medical patients, a group of subjects selected from the general community population and a group of subjects selected from patients admitted to an alcohol unit for treatment of alcoholism and their families.

4.2 GROUPS: MEDICAL, COMMUNITY, ALCOHOL

Three groups were selected for Study I. The first group, designated the Community Group, was selected from the general populations of the towns of New Plymouth and Stratford. The subjects for the Community Group were randomly selected using the local telephone directories. One questionnaire for each family member that met the criteria for the study was distributed to the selected families with stamped envelopes for return mail. The criteria for participation in the study was that the household was comprised of an adult male and female (married or de facto) and that the family contain at least one child between the ages of eight and eighteen years of age. No further criteria was deemed necessary. Children under eight years of age or over eighteen years of age were not included in the study. No follow-up questionnaire was administered. Sixty-two percent of the

questionnaires distributed were returned.

The subjects for the Medical Group were selected by using the patients from two local General Practitioners. The doctors agreed to distribute the questionnaires to their patients that met the criteria for family selection. The criteria for selection was the same for all three groups. The Medical Group participants were given one questionnaire for each member of the family over eight years of age and under eighteen years of age to complete and mail in. No follow-up questionnaires were administered. Forty-five percent of the questionnaires distributed were returned.

Subjects for the Alcohol Group were selected from clients that approached an Alcohol Rehabilitation Facility in the New Plymouth or Stratford areas. Criteria for selection was that the male adult in the family was seeking rehabilitation for an alcohol problem and that the family composition met the general requirements stated above. Participants were apprised of the general purpose of the study and that participation would entail further questionnaires and cooperation. Participation in the study was voluntary and not presented as a part of the rehabilitation program. Seventy-eight percent of the questionnaires were returned.

4.3 INSTRUMENTS USED

DEVELOPMENT AND CHOICE OF RESEARCH INSTRUMENTS - PILOT STUDY

Research instruments for this study were the Demographic

Data Questionnaire and the Massey University stress questionnaire which is a compilation of other tests measures including the N.S.Q. (which measures depression and anxiety in addition to other personality factors); the general health questionnaire, a modified version of the Holmes and Rahe's Life Event Stress Questionnaire; the Michigan Alcoholic Screening Test and a modified version of the O'Farrell Questionnaire (which assesses family dynamics and conflict); a current alcohol consumption screen and a demographic questionnaire. All these measures together comprise the Massey University Stress Questionnaire.

The entire Massey University stress questionnaire, henceforth known as the M.U.S.Q. has sufficient normative data to verify reliability and validity as adequate measures.

4.3.1 INSTRUMENT SELECTION - DEMOGRAPHIC DATA SHEET

The demographic data sheet for each questionnaire (father's, mother's, teen's, and children's) was devised by the researcher for the acquisition of basic information about each person.

4.3.2 NEUROTICISM SCALE QUESTIONNAIRE (NSQ)

In the assessment of personality stability and anxiety, the Neuroticism Scale Questionnaire, henceforth referred to as N.S.Q., (Scheier and Cattel, 1961) is a standard inventory widely used as a measure of overall adjustment for personality stability. It is also used to assess whether anxiety is present in the respondent. In addition to the overall score (N - which reflects personality stability versus neurotic trends and the

anxiety measure - a AN scale) the N.S.Q. also assesses three other aspects of personality.

4.3.3 GENERAL HEALTH QUESTIONNAIRE

A number of studies have shown that general health is related to stress therefore it was felt that a stress related health measure should be incorporated into the questionnaire. The health measure selected was the General Health Questionnaire, henceforth referred to as G.H.Q., which was originally devised by Goldberg (1972) for detecting minor psychiatric disorders in a community setting. A shortened version used here has recently been standardised for use in occupational studies by Banks et. al. (1980) on a large sample of employees in engineering as well as unemployed men and school leavers in the United Kingdom.

Two other measures were used that were originally developed by Voges et. al. (1982) at Massey University, specifically to indicate physical health and/or ill health characteristics by a self report method. These two items, a 15 item medical check list (M.V.C.L.) and a 19 item symptom check list (S.C.L.) were derived from a health survey reported by Zaleznik, Kets de Vries, and Howard (1977).

4.3.4 LEVEL OF CURRENT DRINKING QUESTIONNAIRE (INCLUDES SHORT FORM MICHIGAN ALCOHOLISM SCREENING TEST)

For this study the short form of the Michigan Alcoholism Screening Test, henceforth referred to as S.M.A.S.T., was used. The reliability of the thirteen item S.M.A.S.T. is almost as high as that of the twenty-four item self-administered M.A.S.T. It

would be justified to suggest that for most purposes the S.M.A.S.T. will do as well as the M.A.S.T. as a screening test for alcoholism (Vinokur & Rooijen, 1975).

In studies by Moore (1972), seventy percent correct predictions of alcoholism were made from M.A.S.T. patient scores with errors in the direction of false positives rather than false negatives. When patient problem lists were used as validating criteria the predictive ability of the M.A.S.T. is enhanced. Due to the ease of the administration and scoring as well as its high value in detecting drinking problems, it is suggested that the M.A.S.T. is an effective method for detecting alcohol problems.

4.3.5 MASSEY UNIVERSITY LIFE EVENTS QUESTIONNAIRE

The instrument used in the overall measure is the Massey adaptation of the Holmes and Rahe's social readjustment rating scale. Although the Holmes and Rahe's original scale was established on heterogeneous American populations, the scale used in this research has been adapted at Massey University as a more applicable measure for New Zealand populations. Had there not been an adaptation of the Holmes and Rahe's scale revised at Massey University, it is entirely possible that the Tennant and Andrews (1976) Stress of Life Events Scale that was developed and validated on an Australian population, might have been used for the purposes of this research. However the Massey version of the Holmes and Rahe's was selected after consideration.

4.3.6 FAMILY STRESS FACTORS QUESTIONNARIE (2 PARTS - IN WIVES FORM ONLY)

The O'Farrell measure of marital stressors was developed and normative data was collected in the United States. (O'Farrell, 1981) The O'Farrell rating scale is based on a six item family hardship scale, Jackson and Kogan (1963), that was originally designed as a measure of family stress based on an alcoholic husband's behaviour in family situations. Jackson and Kogan found that wives who divorced their husband had significantly higher hardship scores than those who did not. The present measure developed from the first scale, consists of fourteen items, each containing a set of questions about the previous three years of the marriage. They are scored separately and added to get a total marital stresses score. The four additional items are subcategories of violent behaviour, more specifically differentiated than the Jackson and Kogan overall violent crimes, since this has been shown to discriminate better between wives who divorce and those who do not (Bailey, 1961). Marital stgressors such as violence, and divorce indicate the degree or presence of stress in the family. It would be expected that families with an alcoholic male would have a higher score on the O'Farrell measure than families where there is no alcohol problem.

The items concerning the sources of emotional support came from general marriage and family literature on marital adjustments, Blood and Wolfe (1960). It was felt by the researchers that some type of measurement of stresses from the wives point of view in the alcoholic marriages was needed in the overall questionnaire. The O'Farrell measure seemed to fit the

overall requirements of the researchers most appropriately. It was therefore selected as an addition to the wives form in the Massey University Stress Questionnaire.

4.4 DEMOGRAPHIC DATA

The demographic data section was devised by the researcher to determine specific socio-economic information. The demographic section is unique and has no previous research, other than the pilot study that preceeded this project, to determine any reliability or validity. For the purposes of this study no further analysis was made on the demographic data and it's function was simply informational and used to determine if family members fit the general criteria requirements of age, sex and marital status.

4.5 PROCEDURES

After the random selection of the three groups (Alcohol, Medical, Community) the families in the groups were administered the M.U.S.Q. These were distributed by the participating alcohol rehabilitation unit personnel to incoming alcoholic males and their families. Each family was asked to fill out a questionnaire for each member of the family including children between the ages of 8 and 18 years of age. A stamped envelope was provided for the return mailing of the questionnaires.

The Community Group questionnaires were distributed by a random selection of streets in New Plymouth and by asking each family on the selected street to participate in the study by

filling out and mailing in the appropriate questionnaires. A Massey University student distributed the community questionnaires.

The Medical Group was selected by two general practitioner's staff from families entering the surgery on specific days. The criteria for family selection was simply that there were children in the family between the ages of 8 and 18 years of age. The families selected by the medical practitioner's staff were asked to fill out the appropriate M.U.S.Q.'s and return them in the stamped envelopes provided.

After the distribution of all questionnaires, a one month cut-off date was selected. At the end of this period the data was ready for analysis.

4.6 DATA AND RESULTS

The data were analysed by using a simple analysis of variance (ANOVA) for the three groups. Subsequent univariate analyses were performed for each stress item separately. The data were analysed at the $P < .05$ and at the $P < .10$ levels. Analysis of the data for the individual variables is shown in the following tables.

4.6.1

STUDY I
ANOVA - FATHERS'
STRESS ITEM ANALYSIS

TABLE 4.1

CATEGORY	df	MEAN	ST. DEV.	SUM OF SQUARES	F=	PR>F	P < .05 SIGNI-FICANCE	P < .10 SIGNI-FICANCE
NSQ - SENSITIVITY	2/96	4.31	1.85	335.29	2.46	0.09	n.s.	n.s.
NSQ - DEPRESSION	2/96	6.28	2.23	478.08	1.21	0.30	n.s.	n.s.
NSQ - SUBMISSIVENESS	2/96	6.34	2.59	44.32	1.02	0.37	n.s.	n.s.
NSQ - ANXIETY	2/96	6.07	2.20	466.51	10.86	0.00	*	*
NSQ - TOTAL SCORE	2/96	5.86	2.02	392.02	2.17	0.12	n.s.	n.s.
GENERAL HEALTH QUESTIONNAIRE	2/96	22.91	5.85	3286.18	1.64	0.20	n.s.	n.s.
MEDICAL SYMPTOMS	2/96	3.19	3.03	881.35	11.57	0.00	*	*
MEDICAL VISIT CHECKLIST	2/96	1.74	2.08	416.69	2.40	0.10	n.s.	n.s.
M.A.S.T.	2/96	2.73	3.30	1047.17	69.3	0.00	*	*
ALCOHOL CONSUMPTION	2/96	7.27	8.70	4703.01	4.28	0.01	*	*
LIFE STRESS	2/96	6.62	4.90	1913.00	1.27	0.73	n.s.	n.s.

NUMBER OF SUBJECTS = 96

n.s. = not significant
* = significant

Data analysis at the $P < .05$ level indicates that there was a significant difference in the level of anxiety for the fathers as well as a significant difference in the number of visits to medical facilities or to medical doctors. An additional item, labeled the M.A.S.T., also indicates a significant difference between the groups. On all three items where there was a significant difference at the .05 level subsequent analysis indicated that the mean scores for the group of alcoholic fathers had the greatest deviation. The variation in the means scores may indicate that the alcoholic fathers have a higher anxiety level, and that their medical symptomatology is different from non-alcoholic men.

Although the total score on the NSQ does not show a significant difference, one out of the four sub-scores registers a significant difference. The overall indication is that four scores out of nine on the fathers stress item analysis do inidicate a significant difference. Although some of the differences would be expected, i.e. the M.A.S.T. when one group is designated alcoholic, other differences such as the Medical Symptoms and Medical Visit Checklist are not found in previous research.

4.6.2

STUDY I
ANOVA - MOTHERS'
STRESS ITEM ANALYSIS

TABLE 4.2

CATEGORY	df	MEAN	ST. DEV.	SUM OF SQUARES	F=	PR>F	p<.05 SIGNI-FICANCE	p<.10 SIGNI-FICANCE
NSQ - SENSITIVITY	2/98	3.89	2.28	509.80	0.33	0.72	n.s.	n.s.
NSQ - DEPRESSION	2/98	6.68	2.23	485.86	2.73	0.07	n.s.	*
NSQ - SUBMISSIVENESS	2/98	6.17	2.12	442.14	0.99	0.38	n.s.	n.s.
NSQ - ANXIETY	2/98	6.76	2.18	466.30	2.16	0.12	n.s.	ns.
NSQ - TOTAL SCORE	2/98	6.27	2.13	445.78	1.42	0.25	n.s.	n.s.
GENERAL HEALTH QUESTIONNAIRE	2/98	25.00	8.87	7718.00	4.54	0.01	*	*
MEDICAL SYMPTOMS	2/98	4.20	4.09	1638.04	15.00	0.00	*	*
MEDICAL VISIT CHECKLIST	2/98	2.47	3.18	991.13	8.78	0.00	*	*
M.A.S.T.	2/98	1.30	6.09	3641.09	2.04	0.13	n.s.	n.s.
ALCOHOL CONSUMPTION	2/98	1.95	2.38	554.75	5.40	0.01	*	*
HUSBAND PROBLEMS	2/97	3.95	5.25	2672.75	438.57	0.00	*	*
LIFE STRESS	2/97	7.22	6.56	4179.16	15.69	0.00	*	*
FAMILY STRESS	2/97	11.09	12.46	15066.19	53.82	0.00	*	*

NUMBER OF SUBJECTS = 98

n.s. = not significant
* = significant

In the analysis of the data (ANOVA) for the mother's stress items from the M.U.S.Q. at the $P < .05$ a significant difference is indicated on six variables. The variables that show a significant difference are General Health Questionnaire, Medical Symptoms, Medical Visit Checklist, Alcohol Consumption, Husband Problems, Life Stress and Family Stress. There were no significant differences in any of the NSQ scores. The areas of health all indicate significant differences which implies that one of the three groups has more health problems than the others. Further analysis of the means of the groups indicates that on the Medical Symptoms and Medical Visit Checklist it is the mean of the alcohol group which shows the greatest deviation. Again, this indicates the possibility that the alcohol group manifests the greatest number of health problems and makes the greatest number of visits to a medical facility or medical doctor.

Although there is a significant difference in the alcohol level for mothers, the Community Group mean shows the highest score of the three group means. In the areas of Husband Problems, Life Stress and Family Stress the alcohol mothers group has by far the greatest deviation of the three group means. The score is not only deviant, in some cases it is several times higher than the means of the other two groups. This indicates a high degree of family and stress problems in families where there is an alcoholic male adult.

At the $P < .10$ level the only additional significant score is that for the NSQ - Depression which indicates a difference between the three group means but no mean is an extreme variant

from the others. It does, however, support the general trend that the effects of stress in alcoholic families is greater than in other families.

4.6.3

STUDY I
ANOVA - TEENS'
STRESS ITEM ANALYSIS

TABLE 4.3

CATEGORY	df	MEAN	ST. DEV.	SUM OF SQUARES	F=	PR>F	p<.05 SIGNI-FICANCE	p<.10 SIGNI-FICANCE
NSQ - SENSITIVITY	2/85	4.27	2.19	399.45	1.53	0.22	n.s.	n.s.
NSQ - DEPRESSION	2/85	4.64	2.41	492.36	0.23	0.80	n.s.	n.s.
NSQ - SUBMISSIVENESS	2/85	5.51	2.24	427.99	2.91	0.06	*	*
NSQ - ANXIETY	2/85	6.88	1.53	199.63	0.61	0.54	n.s.	n.s.
NSQ - TOTAL SCORE	2/85	5.10	1.85	290.08	0.30	0.74	n.s.	n.s.
GENERAL HEALTH QUESTIONNAIRE	2/85	20.69	6.88	4020.72	1.75	0.18	n.s.	n.s.
MEDICAL SYMPTOMS	2/85	3.22	2.61	578.90	2.77	0.07	n.s.	*
MEDICAL VISIT CHECKLIST	2/85	1.58	2.86	693.44	1.13	0.33	n.s.	n.s.
M.A.S.T.	2/85	1.48	1.01	85.95	2.92	0.06	n.s.	*
ALCOHOL CONSUMPTION	2/85	2.15	3.62	1111.08	3.01	0.05	*	*
LIFE STRESS	2/85	10.80	7.60	4912.32	2.14	0.12	n.s.	n.s.

NUMBER OF SUBJECTS = 87

n.s. = not significant
* = significant

In the analysis of the Teens groups ANOVA at the $P < .05$ level, there are two scores which reveal significant differences. The first is for the NSQ - Submissiveness and the second is for the Alcohol Consumption category. Only the Alcohol Consumption Category shows an elevated mean and this is for the alcohol group. This indicates that the Alcohol Group scores were higher in the area of Alcohol Consumption than the other two groups which may indicate that teenagers from families where there is an alcoholic adult consume more alcohol than comparable groups of teenagers.

When the data is analysed at the $P < .10$ level, two more scores show a significant difference. These are the Medical Symptoms category and the M.A.S.T. category.

4.6.4

STUDY I
ANOVA - CHILDREN
STRESS ITEM ANALYSIS

TABLE 4.4

CATEGORY	df	MEAN	ST. DEV.	SUM OF SQUARES	F=	PR>F	p<.05 SIGNI-FICANCE	p<.10 SIGNI-FICANCE
MEDICAL SYMPTOMS	2/90	4.74	3.64	1189.81	13.70	0.00	*	*

NUMBER OF SUBJECTS = 90

n.s. = not significant
* = significant

For the childrens groups the ANOVA analysis of the one category indicates it is significant at both the P < .05 and P < .10 levels. Further analysis of the individual means indicates that the children of the designated Alcohol Group have a severely elevated mean as compared to the other two groups. This indicates that the children from the Alcohol Group make far more visits to a medical facility or to their medical doctor than do the children from the other two groups.

4.7 CONCLUSIONS

A substantial body of research findings indicates that in families where there is an alcoholic adult scores on the M.A.S.T. and Alcohol Consumption questionnaires would be elevated both for the alcoholic member of the family and children in the family. These findings are substantiated in this study.

Initially it was hypothesised that there would be differences in stress levels in families where there is a male alcoholic adult as compared to families from the general community population and a medical community population. The analysis of the data for the three groups supports these differences on five variables from the fathers' data, eight variables from the mothers' data, four variables from the teens' data and from the one variable in the childrens' data. The number of significant differences on this number of variables indicates that there are differences in the stress levels and health states of the three groups. As a previous body of research findings would indicate differences in stress levels between alcoholic families and other family groups, the findings from this study simply support prior research. However, the repeated significant difference on health measures in alcoholic families as compared to other groups was unexpected. The high degree of mean variation for each of the family categories, i.e. fathers, mothers, teens and children was also not anticipated.

This may indicate that due to the high number of medical

visits by members of families where there is an alcohol problem that medical personnel could be instrumental in the detection of families where there is an alcoholic adult. The pattern of repeated visits by the various family members could serve as a detection instrument.

Although a definitive pattern of differences in stress levels on the NSQ was anticipated, such a pattern did not emerge as a significant difference among the three groups. By far the more powerful statement of differences emerged from health issues on the questionnaire.

In the data from the mothers groups a pattern of family problems was indicated by the means of scores on the variables of Husband Problems, Life Stress and Family Stress. This data indicates that in families where there is an alcoholic adult male the spouse perceives the family as having multiple family problems and stress. Prior research in the field of alcohol would substantiate this finding.

The area that indicates a need for further research is the significant finding that teenagers in alcoholic families consume higher quanitites of alcohol than do teenagers from other family groups. This finding could lend support to the research data that there is an heredity link in alcoholism. However, the environmental exposure of teenagers in an alcoholic family to excessive alcohol consumption may also provide a role model that influences the behaviour of the teenager in relation to alcohol consumption. This should be explored further.

SECTION 5

STUDY II

5.1 AIMS OF THE STUDY

The aim of research Study II is to evaluate the significance of a family oriented stress management follow up program with families when there is one alcoholic adult male who has recently sought treatment for alcoholism compared to a control group of alcoholic families who have also recently had a male adult in treatement for alcoholism and who did not receive a stress management program in their follow up treatment after the rehabilitation program.

5.2 SUBJECTS/SAMPLES

From the selected Alcohol participants for the study a division was made forming the forty families into two groups. The division was accomplished by designating every other selected incoming family to the rehabilitation program as a family that would receive the Stress Management Program. This group was designated Stress Management as opposed to the control group.

5.3 RESEARCH MEASURING INSTRUMENTS USED

The questionnaire used in this study was identical to the research questionnaire used in Study I (M.U.S.Q.) and composed of the same stress item measuring instruments. These were the NSQ (Sensitivity, Depression, Submissiveness, Anxiety and Total), the

General Health Questionnaire, the Medical Symptoms Checklist, the Medical Visit Checklist, the M.A.S.T., the Life Stress Events and in the mothers questionnaire a Husbands Problems Checklist and a Family Stress Index. For a complete format of the instruments, refer to instruments used in Study I.

5.4 PROCEDURES

The Stress Management Program was conducted at Taranaki Base Hospital and administered by a therapist. It consisted of six sessions with the entire families of the male alcoholic who had recently completed an alcohol rehabilitation program. The Stress Management participants were administred the original questionnaire upon the entrance of the male alcoholic adult into an Alcohol Rehabilitation Program and follow-up questionnaires at a six month interval from the date of the male alcoholic members release from the Alcohol Rehabilitation Program and an additional questionnaire at the one year follow-up date. For the entire Stress Management Program see Appendix A.

The designated Alcohol Group participants that were not selected for the Stress Management Program were also administered an original questionnaire upon entrance of the male alcoholic adult to the Alcohol Rehabilitation Program. These families also received a six month follow-up questionnaire and a one year follow-up questionnaire.

5.5 DATA AND RESULTS

The data were analysed by using a t test for the two groups of scores. The t test was conducted at the $P > .05$ and $P < .10$ levels. Results of the analysis are shown in the following tables.

STUDY II
T-TEST TABLE - FATHERS

TABLE 5.1
Significance of differences between scores on the NSQ-Sensitivity measure of Fathers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	5.07	1.49	0.60	1.44	n.s.	n.s.
	C	18	4.56	1.95	0.46		df=14	
6 months	T	13	5.08	2.36	0.68	0.69	n.s.	n.s.
	C	18	4.50	1.76			df=16	
12 months	T	18	4.56	1.65	0.61	1.64	n.s.	n.s.
	C	21	4.00	2.14			df=19	

TABLE 5.2
Significance of differences between scores on the NSQ-Depression measure of Fathers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	5.73	2.22	0.57	0.73	n.s.	n.s.
	C	18	5.83	2.04	0.48		df=14	
6 months	T	13	5.54	2.47	0.69	0.37	n.s.	n.s.
	C	18	5.94	1.95	0.46		df=16	
12 months	T	18	5.89	1.99	0.47	0.93	n.s.	n.s.
	C	21	6.05	1.96	0.43		df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - FATHERS CONTINUED

TABLE 5.3
Significance of differences between scores on the NSQ-Submissiveness measure of fathers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	5.80	2.27	0.59	0.91	n.s.	n.s.
	C	18	6.11	2.35	0.55		df=14	
6 months	T	13	6.15	2.44	0.68	0.92	n.s.	n.s.
	C	18	5.33	2.40	0.57		df=16	
12 months	T	18	6.26	2.23	0.51	0.88	*	*
	C	21	5.81	2.20			df=19	

TABLE 5.4
Significance of differences between scores on the NSQ-Anxiety measure of Fathers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	6.73	2.09	0.54	0.59	n.s.	n.s.
	C	18	7.56	1.82	0.43		df=14	
6 months	T	13	6.08	2.47	0.68	0.27	n.s.	n.s.
	C	18	7.11	1.84	0.43		df=16	
12 months	T	18	7.17	2.07	0.49	0.60	n.s.	n.s.
	C	21	6.57	1.83	0.40		df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - FATHERS CONTINUED

TABLE 5.5
Significance of ddifferences between scores on the NSQ-Total Score measures of Fathers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	6.00	1.56	0.40	0.62	n.s.	n.s.
	C	18	6.33	1.78	0.42		df=14	
6 months	T	13	5.69	2.06	0.57	0.26	n.s.	n.s.
	C	18	5.67	1.53	0.36		df=16	
12 months	T	18	6.39	1.65	0.39	0.95	n.s.	n.s.
	C	21	5.52	1.63	0.36		df=19	

TABLE 5.6
Significance of differences between scores on the GHQ of Fathers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	22.53	5.20	2.00	0.98	n.s.	n.s.
	C	18	24.50	6.32			df=14	
6 months	T	13	23.31	4.98	1.76	0.00	*	*
	C	18	20.28	4.64			df=16	
12 months	T	18	21.33	4.81	1.72	0.07	n.s.	n.s.
	C	21	19.33	5.91			df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

TABLE 5.7
Significance of differences between scores on the Medical Symptoms Checklist measure of Fathers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	4.80	3.32	0.86	0.72	n.s.	n.s.
	C	18	4.83	3.67	0.86		df=14	
6 months	T	13	5.00	3.44	0.95	0.80	n.s.	n.s.
	C	18	4.39	3.71	0.87		df=16	
12 months	T	18	4.44	2.53	0.60	0.97	n.s.	n.s.
	C	21	3.71	2.51	0.55		df=19	

TABLE 5.8
Significance of differences between scores in the Medical Visit Checklist measure of Fathers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	2.60	2.75	0.71	0.70	n.s.	n.s.
	C	18	2.33	2.50	0.59		df=14	
6 months	T	13	2.69	2.72	0.75	0.04	*	*
	C	18	1.44	1.58	0.37		df=16	
12 months	T	18	2.89	2.49	0.59	0.00	*	*
	C	21	1.57	1.21	0.26		df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - FATHERS CONTINUED

TABLE 5.9
Significance of differences between scores n the MAST measure of Fathers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	6.33	3.42	0.88	0.28	n.s.	n.s.
	C	18	5.61	2.59	0.61		df=14	
6 months	T	13	5.69	3.68	1.02	0.32	n.s.	n.s.
	C	18	4.67	2.85	0.67		df=16	
12 months	T	18	5.33	3.61	0.85	0.17	n.s.	n.s.
	C	21	4.86	2.61	0.57		df=19	

TABLE 5.10
Significance of differences between scores on the Alcohol Consumption measure of Fathers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	6.95	2.64	0.80	0.55	n.s.	n.s.
	C	18	6.10	2.20	0.85		df=14	
6 months	T	13	7.00	2.97	0.82	0.42	n.s.	n.s.
	C	18	5.17	3.75	0.88		df=16	
12 months	T	18	7.33	4.55	1.07	0.04	*	*
	C	21	4.33	2.80	0.61		df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - FATHERS CONTINUED

TABLE 5.11
Significance of differences between scores on the Life Stress measure of Fathers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	12.96	7.98	2.85	0.08	n.s.	n.s.
	C	18	9.13	5.10	0.76		df=14	
6 months	T	12	11.92	7.80	2.25	0.00	*	*
	C	18	8.67	3.38	0.80		df=16	
12 months	T	18	11.39	5.83	1.37	0.07	n.s.	*
	C	21	8.95	3.83	0.84		df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

The results of the analysis of the data for the fathers T-Test shows that after twelve months from the date of entrance into an alcohol rehabilitation program there were significant differences between those fathers that received stress management and those that did not. This was significant at both the $P < .05$ and $P < .10$ levels.

The data results indicate that at the six and twelve month follow up period those men not receiving stress management had a greater number of health problems. This was indicated by the finding that these men made more visits to a medical facility or

medical doctor. This finding was significant at the $P < .05$ and $P < .10$ levels. During the rehabilitation phase of alcoholism medical needs that may have been neglected during the drinking phase are now addressed. This may account for the increased health problems in the men who did not receive stress management. However, this finding may also indicate that the stress management program successfully reduced stress and therefore it was not manifested as a medical illness or a doctors visit.

These results indicate that if a stress management program can prevent actual health deterioration or even redirect the focus on imagined or real health problems of the recovering alcoholic that the stress management program would be a valuable tool for all recovering alcoholics.

STUDY II
T-TEST TABLE - MOTHERS

TABLE 5.12
Significance of differences between scores in the NSQ-Sensitivity measure of Mothers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	4.09	2.12	0.66	0.33	n.s.	n.s.
	C	16	4.31	1.99			df=12	
6 months	T	16	4.38	2.28	0.71	0.11	n.s.	n.s.
	C	19	4.37	1.89			df=16	
12 months	T	17	4.59	2.48	0.60	0.51	n.s.	n.s.
	C	21	4.00	2.12	0.46		df=17	

TABLE 5.13
Siginificance of differences between scores on the NSQ-Depression measure of Mothers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	8.36	1.86	0.56	1.00	n.s.	n.s.
	C	16	6.44	1.86	0.47		df=12	
6 months	T	16	8.06	2.21	0.55	0.08	n.s.	*
	C	19	6.05	1.43	0.33		df=16	
12 months	T	18	7.83	2.15	0.51	0.32	n.s.	n.s.
	C	21	6.00	1.70	0.37		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - MOTHERS CONTINUED

TABLE 5.14
Significance of difference between scores on the NSQ-Submissiveness measure of Mothers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	6.09	2.12	0.64	0.59	n.s.	n.s.
	C	16	5.69	2.52	0.63		df=12	
6 months	T	16	6.19	2.32	0.58	0.81	n.s.	n.s.
	C	19	5.63	2.19	0.50		df=16	
12 months	T	18	6.22	2.29	0.54	0.90	n.s.	n.s.
	C	21	5.52	2.23	0.49		df=17	

TABLE 5.15
Significance of differences between scores on the NSQ-Anxiety measure of Mothers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	7.45	1.63	0.49	0.24	n.s.	n.s.
	C	16	6.81	2.37	0.59		df=12	
6 months	T	16	7.38	1.26	0.31	0.02	*	*
	C	19	6.58	2.32	0.53		df=16	
12 months	T	18	7.56	1.54	0.36	0.32	n.s.	n.s.
	C	21	6.43	1.96	0.56		df=19	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - MOTHERS CONTINUED

TABLE 5.16
VARIABLE: NATIONAL STRESS QUESTIONNAIRE - TOTAL SCORE

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	11	7.09	1.22	0.69	1.30	*	*
	C	16	6.31	2.36			df=12	
6 months	T	16	7.38	1.67	0.60	2.20	n.s.	n.s.
	C	19	6.05	1.90			df=17	
12 months	T	18	7.06	1.63	0.54	2.83	n.s.	n.s.
	C	21	5.52	1.72			df=18	

TABLE 5.17
Significance of difference between scores on the GHQ measure of Mothers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	11	26.64	9.90	2.99	0.84	n.s.	n.s.
	C	16	25.88	10.64	2.66		df=12	
6 months	T	16	28.06	10.87	2.72	0.24	n.s.	n.s.
	C	19	23.11	8.14	1.87		df=17	
12 months	T	18	26.72	12.32	2.90	0.13	n.s.	n.s.
	C	21	19.48	8.60	1.88		df=18	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

TABLE 5.18
Significance of differences between scores on the Medical Symptoms Checklist measure of Mothers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	7.27	4.45	1.34	0.8344	n.s.	n.s.
	C	16	4.75	4.23	1.06		df=12	
6 months	T	16	8.69	4.57	1.14	0.31	n.s.	n.s.
	C	19	4.32	3.56	0.82		df=17	
12 months	T	17	8.24	4.38	1.06	0.26	n.s.	n.s.
	C	21	4.36	3.37	0.72		df=18	

TABLE 5.19
Significance of differences between scores on the Medical Visit Checklist measure of Mothers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	5.18	4.79	1.44	0.04	*	*
	C	16	2.88	2.63	0.66		df=12	
6 months	T	16	5.13	4.79	1.20	0.00	*	*
	C	19	2.58	1.80	0.41		df=17	
12 months	T	18	5.17	4.41	1.04	0.39	n.s.	n.s.
	C	21	3.82	5.41	1.15		df=18	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

TABLE 5.20
Significance of differences between scores on the MAST measure of Mothers in the treatment of control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	1.18	0.75	0.70	0.03	n.s.	*
	C	16	3.41	2.67	3.68		df=12	
6 months	T	16	1.25	0.77	0.54	1.19	n.s.	n.s.
	C	19	1.89	2.21			df=16	
12 months	T	18	1.17	0.99	0.52	1.45	n.s.	n.s.
	C	21	1.91	2.16			df=18	

TABLE 5.21
Siginificance of differences between scores on the Alcohol Consumption measure of Mothers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	1.73	2.10	0.67	1.18	n.s.	n.s.
	C	16	0.94	0.93			df=12	
6 months	T	16	1.56	1.15	0.31	0.45	n.s.	n.s.
	C	19	1.42	1.64			df=16	
12 months	T	18	1.67	1.81	0.47	1.55	n.s.	n.s.
	C	21	0.95	0.90			df=18	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

TABLE 5.22
Significance of difference between scores on the O'Farrell Husband Problem measure of Mothers in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	11	11.55	3.11	0.94	0.01	*	*
	C	15	9.60	1.50	0.39		df=12	
6 months	T	16	9.50	4.41	1.10	0.55	n.s.	n.s.
	C	19	9.63	3.82	0.88		df=16	
12 months	T	18	9.83	3.65	0.86	0.58	n.s.	n.s.
	C	21	7.32	4.18	0.89		df=18	

TABLE 5.23
Significance of differences between scores on the Life Stress measure of Mothers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	10	10.80	5.96	1.88	0.56	n.s.	n.s.
	C	16	10.19	7.24	1.81		df=12	
6 months	T	15	12.16	5.63	1.77	0.86	n.s.	n.s.
	C	18	10.63	4.32			df=16	
12 months	T	17	10.25	5.84	1.73	0.10	n.s.	n.s.
	C	21	11.91	4.57			df=18	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - MOTHERS CONTINUED

TABLE 5.24
Significance of differences of scores on the Family Stress measure of Mothers in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	10	19.60	14.80	4.68	0.28	n.s.	n.s.
	C	16	18.81	10.86	2.71		df=12	
6 months	T	15	24.47	10.77	2.78	0.81	n.s.	n.s.
	C	18	18.83	11.51	2.71		df=16	
12 months	T	16	22.94	12.47	3.12	0.60	n.s.	n.s.
	C	21	15.36	11.06	2.36		df=18	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

In the analysis of the data for the mothers the variable of depression shows a significant difference between the two groups at the six month follow up date. The group of mothers that did not receive stress management is the group that shows a higher incidence of depression than does the group that received stress management. This variable was only significant at the P < .10 level. However, for the variable of anxiety at the six month administration at both the P < .05 and P < .10 levels, the stress management mothers show a higher degree of anxiety than does the control group. This may be attributed to the increased awareness

of self and family that was integrated into the stress management program.

The Total NSQ score on the original administration of the M.U.S.Q. actually shows a significant difference between the two groups. This difference between the two groups is a result of the random selection of the group participants. This difference was no longer evident by the six and twelve months administration of the questionnaire.

In the analysis of the variable of Medical Visits the mothers show a significant difference at the initial and six months administration dates. This variable was significant at both the $P < .05$ and $P < .10$ levels. In both instances it is the group of mothers that did not receive stress management that had the highest number of medical visits. As this was evident at the original administration it is difficult to attribute the lower number of medical visits to the administration of the stress management program. However, the possibility that it was an influential factor at the six month level cannot be dismissed.

The analysis of the data for the M.A.S.T. score variable was significant at both the $P < .05$ and $P < .10$ levels at all three administrations of the questionnaire. However, there was a great degree of variability in the actual scores between the administrations. The greatest degree of variability was between the initial and six months administration dates. The data would indicate that the wives of alcoholic men have a wide variety of accompanying alcoholic habits that range from abstinence to multiple problems associated with drinking. That a sufficient number of the extremes in drinking behaviours were grouped

together during the random selection to cause significant differences among the scores can only be attributed to the random selection process.

The analysis of the variable of Alcohol Consumption indicates that there is a significant difference in alcohol consumption original administration and at the twelve month follow up period. This difference was significant at both the $P < .05$ and $P < .10$ levels. In each case, the women who did not receive stress management had the higher alcohol consumption level. Unfortunately, at the original administration the stress management program could not have been an influential factor on the women's alcohol consumption. Although it may account for the lack of significance at the six month level, it could have been directly responsible for the difference between the two groups at the twelve month level. This conclusion, however, is suspect due to the original administration scores. Perhaps the more interesting data from this variable is that wives of alcoholic men have a wide range of alcohol use including some that have a high alcohol consumption level.

The variable of Problems with Husband showed a significant difference only at original administration at both the $P < .05$ and $P < .10$ levels. This may be due to a variety of factors including reluctance to admit the severity of problems during the first administration.

The Life Stress Events variable showed significant differences at the six month and twelve month administrations at both the $P < .05$ and $P < .10$ levels. In both cases it was the

group of wives that did not receive stress management that had the higher Life Stress score. In fact, the mean was more than twice as high for the no group that was not given a stress management program. As there was no differences at the original administration between the two groups, this score may be the most indicative score for the positive results obtained from the administration of the stress management program. As the analysis of individual questions on the stress management questionnaire is beyond the scope of this study, no assumptions will be made as to the direct causes of the variation in scores. However, further research in the area of alcoholism and stress levels using this instrument is advocated.

STUDY II
T-TEST TABLE - TEENS

TABLE 5.25
Significance of difference between scores on the NSQ-Sensitivity measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	4.07	1.94	0.50	0.5528	n.s.	n.s.
	C	23	4.52	2.27	0.47		df=18	
6 months	T	13	3.85	1.34	0.37	1.92	n.s.	n.s.
	C	15	5.00	1.81	0.47		df=13	
12 months	T	14	3.93	1.73	0.46	1.00	n.s.	n.s.
	C	22	4.59	1.74	0.37		df=17	

TABLE 5.26
Significance of differences between scores on the NSQ-Depression measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE $p < .05$	SIGNI-FICANCE $p < .10$
initial	T	15	4.53	1.81	0.47	0.5528	n.s.	n.s.
	C	23	4.48	2.52	0.53		df=18	
6 months	T	13	4.92	1.66	0.46	0.49	n.s.	n.s.
	C	15	4.60	2.03	0.52		df=13	
12 months	T	14	4.86	1.83	0.49	0.59	n.s.	n.s.
	C	22	4.18	2.13	0.45		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - TEENS CONTINUED

TABLE 5.27
Significance of differences between scores on the NSQ-Submissiveness measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	6.13	2.13	0.55	0.95	n.s.	n.s.
	C	23	5.65	2.19	0.46		df=18	
6 months	T	13	5.77	2.05	0.57	0.47	n.s.	n.s.
	C	15	4.87	2.53	0.65		df=13	
12 months	T	14	5.21	2.36	0.63	0.64	n.s.	n.s.
	C	22	5.27	2.12	0.45		df=17	

TABLE 5.28
Significance of differences between scores on the NSQ-Anxiety measure of Teens in the treatment and control groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	6.87	1.41	0.36	0.15	n.s.	n.s.
	C	23	7.00	1.00	0.21		df=18	
6 months	T	13	6.46	1.13	0.31	0.36	n.s.	n.s.
	C	15	6.80	1.47	0.38		df=13	
12 months	T	14	6.14	1.70	0.46	0.44	n.s.	n.s.
	C	22	6.73	1.42	0.30		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T-TEST TABLE - TEENS CONTINUED

TABLE 5.29
Significance of differences between scores on the NSQ-Total Score measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	5.27	1.67	0.43	0.90	n.s.	n.s.
	C	23	5.13	1.63	0.34		df=18	
6 months	T	13	5.00	1.78	0.49	0.40	n.s.	n.s.
	C	15	5.13	1.41	0.36		df=13	
12 months	T	14	5.21	1.58	0.42	0.90	n.s.	n.s.
	C	22	5.32	1.64	0.35		df=17	

TABLE 5.30
Significance of differences between scores on the GHQ measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	19.67	5.56	1.44	0.62	n.s.	n.s.
	C	23	22.22	4.97	1.04		df=18	
6 months	T	13	19.77	5.83	1.62	0.18	n.s.	n.s.
	C	15	20.93	3.99	1.03		df=13	
12 months	T	14	19.64	5.14	1.37	0.03	*	*
	C	23	17.91	3.03	0.63		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

TABLE 5.31
Significance of differences between scores on the Medical Symptoms Checklist measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	3.67	2.47	0.64	0.93	n.s.	n.s.
	C	23	4.26	2.43	0.51		df=18	
6 months	T	13	3.00	2.27	0.63	0.61	n.s.	n.s.
	C	15	4.33	2.64	0.68		df=13	
12 months	T	14	3.29	2.09	0.56	0.74	n.s.	n.s.
	C	23	4.00	2.30	0.48		df=17	

TABLE 5.32
Significance of differences between scores on the Medical Visit Checklist measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	1.00	1.51	0.39	0.00	*	*
	C	23	2.52	3.60	0.75		df=18	
6 months	T	13	1.08	1.26	0.35	0.00	*	*
	C	15	3.67	4.29	1.11		df=13	
12 months	T	14	1.43	1.28	0.34	0.00	*	*
	C	23	3.00	3.52	0.73		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

TABLE 5.33
Significance of differences between scores on the Michigan Alcohol Screening Test measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	2.13	1.55	0.40	0.00	*	*
	C	23	1.39	0.72	0.15		df=18	
6 months	T	13	1.69	2.18	0.60	0.00	*	*
	C	15	1.27	0.70	0.18		df=13	
12 months	T	14	1.86	1.46	0.39	0.02	*	*
	C	23	1.22	0.85	0.18		df=17	

TABLE 5.34
Significance of differences between scores on the Alcohol Consumption measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	4.00	6.18	1.59	0.00	*	*
	C	23	2.74	3.08	0.64		df=18	
6 months	T	13	2.38	2.75	0.76	0.59	n.s.	n.s.
	C	15	2.47	3.23	0.83		df=13	
12 months	T	14	3.64	5.24	1.40	0.10	n.s.	*
	C	23	2.43	3.55	0.74		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

STUDY II
T TEST - TEENS CONTINUED

TABLE 5.35
Significance of differences between scores on the Life Stress measure of Teens in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	15	13.13	6.21	1.60	0.29	n.s.	n.s.
	C	23	12.35	8.16	1.70		df=18	
6 months	T	13	9.54	6.40	1.77	0.23	n.s.	n.s.
	C	15	11.40	9.08	2.34		df=13	
12 months	T	14	11.36	5.94	1.59	0.17	n.s.	n.s.
	C	23	11.52	8.58	1.79		df=17	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

The findings for the teens suggests that the teenagers from alcoholic families that did not receive stress management have more medical problems as evidenced by the information obtained from the General Health Questionnaire at one year following the entrance of the father into an alcoholic rehabilitation program. This is significant at both the P < .05 and P < .10 levels.

Teenagers from families that received stress management were consistent in their higher number of visits to medical doctors or medical facilities at the initial, six month and twelve month administration of the questionnaire at both the P < .05 and P <

.10 levels. It is possible, due to the significant difference at initial administration, that one group simply contained more teenagers with chronic health problems. However, a second possibility is that because the stress management program was held in a medical facility teenagers counted the stress mangement program family sessions as medical visits. This may account for the excessively elevated scores from the stress management teens at the six and twelve month administration dates.

The M.A.S.T. variable is consistently significant at the initial, six month and twelve month administration dates at both the $P < .05$ and $P < .10$ levels. In each case, the teenagers from the group that received stress management have a lower M.A.S.T. score than do the teenagers that did not receive stress management. It is possible that the involvement of the teenagers in the rehabilitation program of the father has an impact on the alcohol use of the teenager. If this can be substantiated by further research, the positive influence of the stress management program on teenage drinking behaviour would be a valuable tool in teenage alcohol abuse prevention.

The Alcohol Consumption variable of the teenagers in the two groups was significant at the initial administration at both the $P < .05$ and $P < .10$ and at the twelve month administration at only the $P < .10$ level. In both cases the teenagers from the group that did not receive stress management had the higher Alcohol Consumption score. At the twelve month administration date the experience of the stress management program could have been a factor in the differences between the two groups.

From the data a trend can be identified that indicates a positive influence on the drinking behaviour and health symptomatology of those teenagers that received the stress management program.

STUDY II
T-TEST TABLE - CHILDREN

TABLE 5.36
Significance of differences between scores on the Medical Symptoms Checklist measure of Children in the control and treatment groups.

ADMINI-STRATION	GROUP	NUMBER	MEAN	ST. DEV.	ST. ERR.	t value	SIGNI-FICANCE p < .05	SIGNI-FICANCE p < .10
initial	T	14	6.36	2.83	0.94	0.19	n.s.	n.s.
	C	13	6.54	2.00			df=13	
6 months	T	11	7.55	3.30	1.12	2.60	n.s.	n.s.
	C	11	4.64	1.75			df=10	
12 months	T	15	6.02	2.40	0.86	1.55	n.s.	n.s.
	C	13	4.69	2.18			df=13	

T = Treatment group
C = Control group

n.s. = not significant
* = significant

This data indicates that at all three administrations, at both the P < .05 and P < .10 levels, those children that were in the group that received the stress management program did not have more medical visits than did the control group children. Although stress management sessions may have some effect on a child this is not exhibited in the number of medical symptoms in the child.

5.6 CONCLUSIONS

An overall trend in the data indicates that those families that received the Stress Management Program derived some benefits from the program in the areas of General Health, Medical Visits and Alcohol Consumption scores in all areas of the family. Although there were more variables between the two groups that did not show a significance, many areas need to be explored with further research. The area of medical facility and medical doctor visits is particularly pertinent as the results from this research indicate that there is a greater number of medical visits from the families in the control group as opposed to those who received the stress management program.

Although the null hypothesis (that stress levels are not reduced in families in which there is an alcoholic male adult if those families participate in a series of stress management sessions) can be rejected in this study due to a decrease in some of the stress level scores, the study more accurately indicates general trends in stress levels in alcoholic families rather than in specific areas.

SECTION 6

SUMMARY AND CONCLUSIONS FOR STUDY I AND STUDY II

At this point it seems important to comment on the overall significance of both studies and their findings. Past research has called attention to the effects of stress on the individual alcoholic and in some cases the effects on his spouse. Very little research is available on the effects of stress on the entire alcoholic family. The present results extend this minimal work by indicating that the general trend of stress levels in alcoholic families is greater than in control groups and that stress management programs can cause a reduction in stress levels in the family unit.

A noteworthy area of the research is that members of alcoholic families have more visits to medical facilities or medical doctors than do control group families. This presents a practical implication for the more extensive involvement of medical personnel in the early detection of alcoholic families. More extensive training and involvement of medical personnel in this area may be warranted. A further look at the drinking levels of teenagers from alcoholic families is indicated as well as further exploration of the mothers variation in stress scores as the rehabilitation process progresses. This indicates a need for further research in these areas.

An overall trend shown in this research is that families where there is an alcoholic male adult experience higher levels of stress than control groups. A second area confirmed in this research study is that families who are given a stress management program after the male alcoholic goes through rehabilitation have lower stress levels in some areas than do control group families.

This indicates that incorporating a stress management program as a part of the aftercare or follow up treatment plan for recovering alcoholics and their families can lower levels of stress and could prove to be an important factor in preventing a relapse by the alcoholic adult in the family. It could also prove to be a deterrent in the alcohol consumption by the spouse as this study indicates that spouses who get stress management have a lower alcohol consumption level than did the control group. The overall trend of lowered stress levels was plainly indicated by the data analysis of wives life stress scores. These findings form a pattern of trends that indicate that stress management programs have a significant effect in lowering stress in alcoholic families in a few areas. To what extent these beneficial results can be extended in future follow up programs for recovering alcoholics and their families should be explored extensively with future research on a greater range of variables and for longer stress management programs.

If lowered stress can help prevent recurring alcohol abuse, lower a spouses drinking level and deter teenagers from abusing alcohol, it is a valuable research tool and should be implemented in further study.

APPENDIX A

STRESS MANAGEMENT PROGRAM

FOR ALCOHOLIC FAMILIES

Each session in this stress management program is one hour and fifteen minutes in length. The first segment of forty-five minutes is designated the educational segment and the last thirty minutes consist of learning a variety of specific relaxation techniques. There are six sessions in this program and a daily at home session of at least twenty minutes is encouraged.

STRESS MANAGEMENT PROGRAM
FOR ALCOHOLIC FAMILIES
RESEARCH DEVELOPED BY
J. BELLAMY

SESSION I Introduction of the family and therapist and an explanation of the Stress Management program as an adjunct to the alcohol rehabilitation therapy. During this introduction the importance of the family unit attendance at all sessions will be stress. A commitment from the family to complete all six sessions will be solicited. The therapist will explain that each session will be one hour and fifteen minutes in length and a schedule for the six sessions will be set up at this time.

I. Exploration of the familys concepts of stress.

Discuss: What stress is.
What causes stress.
Who experiences stress.
How stress can be measured.
How to become aware of stress.
Some effects of stress.
On individuals.
In families.
At work or school.

Information in this discussion should be presented in simple levels so that the youngest child in the family can understand the concepts. Comments from all family members will be solicited. Discussion and comments from each of the above areas should be as brief as possible yet complete enough for good comprehension from all family members.

Visual aids or lists on the chalkboard in the therapy room might be used.

2. Identification of Stress areas in this family. The therapist will ask family members what they feel causes the greatest stress in their family. If the family is hesitant or experiences difficulty in identifying specific stress areas the therapist might present Prof. O'Farrells list of ten factors that most frequently cause stress in families in order to facilitate a candid discussion of stress areas in the family. The list of stress areas identified by the family should be listed on the chalkboard and also copied by the therapist for further reference in future sessions.

3. From the list of stress areas identified by the family the therapist will select one incident and ask the family to describe the incident in detail and then relate how it was resolved. The therapist should determine not only how the incident was resolved, but also who was involved and the actions initiated by which family members. This entire episode might be diagrammed on the chalkboard if details are not clearly

SESSION I
(con't)

stated or the episode needs clarification. Notes on the stress episode identified by the family and the resolution should be preserved by the therapist for future reference.

Assignment for next session: Each family member is to identify three incidents that cause stress to one or more family members and that happen between the first session and the second session. These should be written down and brought to the next session.

Centering Circle: Have everyone join hands, creating a "centering circle". (Use this circle exercise at the beginning of all subsequent "relaxation techniques" portions of the sessions). Lead a short version of Passive Progressive Relaxation emphasizing the calm relaxes breathing and family members attention directed toward awareness of any held tension. The therapist should then suggest that the participants mentally review the day's experiences and concerns, allowing the thoughts to flow through and out of their consciousness. Letting go of all the day's worries will help them be more receptive to new information and experiences. After a few minutes ask them to turn their attention to the hands that they are holding. (Are they hot or cool? Wet or dry?) Tell the family members to take a deep breath, stretch, drop hands, and then separate. The therapist may wish to ask for responses to the "centering circle" and the exercise.

Deep Breathing: Take a deep, slow breath and close your eyes. Exhale fully and completely, making sure to get the last bit of air out of your lungs. Breathe in again. As you inhale try to see the number "one" in your mind. Hold your breath for three seconds. Exhale, and as you breathe out the air fully and

completely, mentally say "two" and try to visualize the number 2 in your mind. Continue this exercise counting up to the number eight. When you have completed the count to eight repeat the sequence from 1 to 8.

SESSION II

This session should begin with a brief summary of some of the stress areas and concepts that were discussed during the first meeting.

1. Ask that each family member tell about the three incidents during the week that he or she identified as stressful. If this is too threatening for some members, particularly children, they may write out the specific happening on paper and give it to the therapist to read (this can be either read aloud or silently, depending upon how threatened the child appears to be.) The events listed will be quickly compared to determine if there are the same events listed several times or a variety of different incidents listed. The therapist will hopefully be able to identify one or two types of recurring situations that are a major cause of stress in this particular family. The family will then be asked if they also perceive these areas as high stress areas in the family. Discussion of these high stress areas should follow and one family member will be asked to diagram on the chalkboard how one of the high stress events evolved and was, or was not, resolved by the family. The previous exercise should lead naturally into a further discussion of how

stressful events in this family are resolved and then progress into additional strategies for coping with stress.

2. Coping Strategies and Conflict Resolution. The therapist will begin by asking if family members can identify different ways of coping with areas of conflict in the family as they arise. List all the techniques that the family can describe. The therapist should then suggest additional coping strategies that the family did not list.

When the family and therapist have completed their list of coping strategies it should contain all of the following strategies and any others the family may care to add.

1. Improved communication skill
2. Goal setting ;and prioritized goals
3. Positive thinking rather than negative thinking.
4. Good listening skills
5. Giving and getting positive strokes
6. Being assertive, not aggressive
7. Using relaxation techniques
8. Recognizing fears; false or real.
9. Physical exercise.
10. Recognizing muscle tension and physical symptoms

Assignment for next session; Each family member is to actively try using one of the techniques discussed in today's session in an attempt to resolve some type of conflict situation that arises in the family before next session. Each family member is to spend at least 20 minutes a day doing the relaxation exercises learned during the sessions.

SESSION II- Deep breathing
(con't)

1 to 4 count- Take a deep full breath. Exhale fully and completely. Inhale again, and mentally count from 1 to 4. Hold your breath, and again count from 1 to 4. Slowly count from 1 to 8 while exhaling fully and completely. Repeat the sequence four times. If you run out of breath before reaching the number 8, try again. On the second try take a deeper breath and exhale more slowly. If you had your eyes open and found it difficult to mentally count, close your eyes on the second try.

Active Progressive Relaxation

Begin by sitting in a comfortable chair in a quiet room. Close your eyes gently and take a deep breath. Exhale fully and completely, letting the tension melt from your body. Relax as much as possible. Remember not to strain to relax as this only creates tension. Make a fist with your right hand, and concentrate on the tension as you gradually tighten your fist. Hold your fist tight for a few moments and notice the tension. After a few seconds release your fist and relax your hand. Take a deep full breath. Take a few moments to relax even further. Be aware of all the sensations in your hand and lower arm. Tense your hand again and repeat the process.

Make a fist with your left hand. Remember to tense completely and relax fully. Notice any difference in

the sensations between the left hand and the right? After clenching your left hand for the third time, take a moment and relax completely. Feel the relaxation in both your hands and lower arms. Now move up your arms to your biceps. Contract your right bicep as tightly as possible. Concentrate on the tension for a few moments. After a few seconds relax your entire upper arm. Take a full deep breath; and exhale slowly. Do the exercise two more times.

When you have tensed and relaxed your right bicep three times then repeat the exercise with your left bicep. Focus on the relaxation in your right arm as it rests limply by your side. When you have finished feel the relaxation in both arms. Refocus your attention on your right hand and wrist. Spread your fingers apart and bend your fingers toward you at the wrist as far back as you can. Feel the tension between your fingers, in you palm, in your wrist, and in your lower arm. Hold this position for a few moments, then relax. Let your hand go limp and release any tension in your hand and arm. Breathe away any remaining tightness and relax fully. Repeat two more times with your right hand and then three times with the left. This same basic exercise can be used with the feet and legs. Be sure to do each limb three times for each exercise.

You may want to use the progressive relaxation tape

for several times until you are familiar with each exercise and can do it by yourself without further instructions.

Full body relaxation: Using the same method of tension and relaxation all areas of the body can be relaxed. This should be done while lying down with arms and legs comfortably arranged. Begin by tensing and relaxing your toes, three times, then progress to your instep, your ankle, the calf of your leg, and so on. Do each leg then the torso area, your chest, both arms and finally your neck and head. In conclusion tense your entire body, hold it to the count of 8, and then release all the muscles as if you were snapping a rubber band. Repeat three times and then lie queitly, deep breathing for at least ten minutes.

SESSION III

The therapist will begin this session by asking members of the family how they used the coping strategies that were discussed during the second session in actually coping with a stress or conflict situation in the family. Each member should be allowed to give at least one specific situation and then each example should be discussed by the group to determine if the coping strategy cited was appropriate or if a better one might have been available. If possible, the therapist should use these examples to point out communication styles that were not clear or actually aggravated the situation.

Improving Family Communication

Using examples the family has given earlier in the session or in another session the therapist will point out situations where the communication between family members was a cause of stress and conflict in the family.

Specific Communication Skills

1. Listening
2. Giving clear messages
3. Defining the problem
4. "I feel" statements
5. Expressing anger
6. Communicate your needs
7. Level and vertical communication
8. T.A. basics - three roles
9. Nonverbal communication
10. Tactile communication

Assignment: Each family member is to use at least two of the forms of improved communications to cope with a stress/conflict situation before next session. Then report on how it worked.

SESSION III - Three-part breathing
(con't)

Take a deep breath. Imagine that your lungs are divided into three parts. Visualize the lowest part of your lungs fillings with air. Use only your diaphram; your chest should remain relatively still. Imagine the middle part of your lungs filling, and as you visualize the experience, allow your rib cage to move slightly forward. Visualize the upper part filling with air, and your lungs becoming completely full. Your shoulders will rise slightly and move backwards. Exhale fully and completely. As you empty your upper lungs drop your shoulders slightly. Visualize the air leaving the middle portion of your lungs, and feel your rib cage contract. Pull in your abdomen to force out the last bit of air from the bottom of your lungs. Repeat the exercise four times.

Basic Autogenic Training

This exercise is to be done using the Basic Autogenic Training tape. Your therapist will provide you a copy of this tape to use for the next three weeks. If you prefer your own copy you may order one. Your therapist will give you an address where the tapes can be obtained.

SESSION IV-

Determine from each family member which communication skills they tried since the last session, and if the skills worked. Ask for detailed reports and encourage other family members to give suggestions or opinions. Ask family members to once again identify the three major areas of stress/conflict in the family and compare the answers to those given in session one to determine if there has been any change or rearrangement in the problem areas. If there have been some changes, query family members as to why they believe the changes have occurred.

Improving Family Communication - Part Two

In this session three areas from the original list of ten should be examined and talked about at length and with specific reference to episodes that this family has identified. For example, if this family has difficulty expressing anger that will be one of the areas selected for further exploration. These areas may be examined more closely by using discussion techniques, role playing, or simple lecture procedure by the therapist.

Assignment: To use at least one of the tension reduction coping mechanisms in a family conflict situation before the next session. Be ready to discuss what you used and whether or not it worked.

During this session, if it is appropriate to the family, some time could be spent in examining some of the negative thinking and self statements in the family. Maultsbys RBT phamphlets should be used to guide this discussion and for further home reference for the family.
This area could also be incorporated into session five, if time is limited.

After the centering circle, review the breathing exercises that were taught in the previous sessions. Remind all family members that the relaxation techniques will not work if they are not practiced on a regular basis. Reemphasize the benefits of twenty minutes of daily relaxation.

Gentle Exercise

Yogic movement is the foundation of the gentle exercise techniques. These exercises should be executed with slow, conscious movement with an awareness of tension, and gentle stretching through the tension. Their value is in increasing awareness of tension, and dispelling it, rather than for intense physical conditioning.

Shoulder rolls: Let your arms hang loosely at your sides, gently pulling down your shoulders. Rotate both shoulders, foreward or backward, very slowly. Do

not forget to breathe, exhaling fully and completely. Be aware of how high you can lift your shoulders before you feel tension. Notice where you feel tension when you move them forward, downward, and backward. Take your time; you cannot rush yourself into relaxation. After several full rotations stop for a moment. Notice what position your shoulders are in. Reverse the direction of the rotation. Feel how good it is to move your muscles consciously and gently, allowing them to release all their stored-up tension. Do not forget to breathe slowly and deeply. With each exhalation, allow tension to flow out of your body.

Neck rotation: Take a deep, full breath. Exhale fully and completely. Let your head drop as far forward on your chest as possible. Slowly move it to the right or left; see how close your ear can come to your shoulder. If you feel any resistance, stop for a moment and take a few full deep breaths. As you exhale allow the tension and resistance to flow from your body. Start rotating your neck again, very slowly. After several full rotations stop for a moment and feel how differently your neck rests upon your shoulders. Take a moment and feel the relaxation. Begin rotating your neck in the other direction. Remember to breathe deeply.

Arm Shakes: Let your arm hang loosely at your side. Notice how it feels as it hangs by your side. Lightly shake your hand and your wrist. Gradually let the movement involve your lower arm and elbow. Remember to breathe deeply. Shake your arm more vigorously, and feel it become looser and freer. Allow your upper arm to become involved in the shaking motion. Shake the entire arm for about a minute. Swing your arm back and forth while shaking and involve your shoulder in the motion. After a few moments, stop and let your arm hang loosely at your side. Take a few deep breaths.

Leg Shakes: Done in the same manner as the arm shakes, but you will need to support yourself by holding onto a piece of furniture as you do the exercise.

Scalp Massage: Raise both your arms so that your elbows are bent outward at about ear level. Massage your scalp lightly and slowly with your fingertips. Remember to breathe properly. Start massaging at the top of the head. Massage the entire head and the nape of the neck. Move your fingers to your forehead, cheeks and chin. Let the tension flow out.

SESSION V

Check with individual family members as to how they used the new communication skills discussed in the last session. Again ask for specific incidents where a new coping technique was used to deal with a stress or conflict situation in the family. Discuss these at length. Ask individual family members to think up new or different ways of coping with the same situation.

Tension reduction for specific ailments: the therapist should determine if any family member has a specific tension-related ailment, such as migraine headaches, hypertension, Raynaud's syndrome, back pain, tension headaches, allergies or asthma. If any of these ailments are present, the therapist can make appropriate suggestions for a tension reduction program designed to help relieve the symptom.

Assignment: to continue using stress reduction techniques in family conflict situations. Bring at least one of these examples to the group next session.

If negative thinking was not examined during session four it should be incorporated into this session. How negative thinking leads to stressful situations can be shown by citing past examples from the family or by using examples from the RBT program booklets by

Dr. Maultsby. The program booklets may also be sent home for further study as part of the assignment for next session. Ask the family to watch for negative thinking that they do at home to discuss at the next session.

Visualization Exercises: The following exercises are available only on tape. Your therapist will provide you a tape cassette to be used at home. For all these exercises you should be lying down, breathing gently and with your eyes closed.

1. Carbonated Water
2. Escalator Ride
3. Magic Carpet Ride
4. Wiseperson Guide
5. Watching the Clock

You are to continue the exercises taught in the previous sessions. Try to do the relaxation exercises at least twenty minutes each day.

SESSION VI

This final sesison should be a review of all the previous sessions. The therapist should once again check with all family members as to how they are now coping with stress situations as they arise in the family compared to how they coped at the beginning of the sessions. Communication skills should be reviewed and how they are being used in the family. Each family member will be asked to define a personal goal that will aid in stress reduction for the family. Long term and short term goals may be discussed. Areas where the family has shown positive progress should be pointed out and reinforced. Areas that are still weak or need further work are also designated at this final session. All of the exercises are to be reviewed and the family encouraged to continue doing the relaxation exercises on a daily basis.

APPENDIX B

MASSEY LIFE STRESS EVENTS QUESTIONNAIRE

MASSEY LIFE STRESS EVENTS QUESTIONNAIRE

Check the number of the following which happened to you during the last 12 months.

Life Stress Events	Your Score
A. BEREAVEMENTS	
1. Your wife, husband or de-facto died	_____
2. A child of yours died	_____
3. A close relative of your died (other than spouse or child)	_____
B. EDUCATION	
4. You failed an important exam	_____
5. You dropped out of a training program	_____
C. FAMILY AND SOCIAL ISSUES	
6. You were divorced	_____
7. You were separated from your spouse for more than a month due to marital difficulties	_____
8. Your spouse began an extramarital affair	_____
9. You had prolonged difficulties in sexual relationships	_____
10. You had a child or adopted a child	_____
11. You have been separated from your spouse for more than a month (for reasons other than marital difficulties)	_____
12. You began an extramarital affair	_____
13. A close family member (spouse or child) had problems with the police or the authorities which led to a court appearance	_____

(If you have children)

14. A child of yours married without your approval _____

15. A child of yours left home - for reasons other than to get married _____

16. You broke off your engagement or a "steady" relationship _____

17. You had increasing arguments or difficulties with your fiance or steady friend _____

D. FINANCIAL PROBLEMS

18. You had a major financial crisis _____

19. You borrowed more than $10,000 _____

20. You borrowed between $5,000 and $10,000 _____

E. HAPPENINGS TO FRIENDS AND RELATIVES

21. There has been serious increases in arguments or problems with someone who lives at home _____

22. There have been serious problems with a close friend, neighbour or relative who does not live in your home _____

F. HEALTH

23. You had a serious illness, injury or operation needing hospitalisation, or a month or more off work _____

24. You had a minor illness or injury needing a visit to a doctor or a few days off work _____

25. A close relative had a serious illness, accident or injury, from which they did not die _____

G. MOVING HOUSE

26. You moved from a rural area or village to a large town or city _____

27. You moved from a city or large town to a rural area or village _____

28. You moved house within the same locality _____

H. PERSONAL PROBLEMS

29. You spent a period in prison _____

30. You were involved in a traffic accident that carried serious risk to your health or the life of yourself and others _____

31. You were detained in the Police cells overnight or longer _____

32. You had problems with the Police or Traffic Department (e.g. caught by the Breathalizer) which led to a court appearance _____

33. You were given an award or recognition for outstanding personal achievement _____

34. A close member of your family (wife or child) had problems with the Police or Traffic Department leading to a court appearance _____

35. You made significant changes in your sporting recreational or social activities (e.g. joined or left a church, changed a hobby) _____

I. WORK

36. You were fired from work or made redundant _____

37. You retired from work _____

38. You got a new job, changed jobs or changed responsibilities at work _____

39. You had frequent arguments with your boss or supervisor, or you felt they failed to support you _____

40. Major changes were made in your working hours _____

41. You gained promotion _____

APPENDIX C

N.S.Q.

N.S.Q.

NAME_____ TODAY'S DATE_____
First Middle Last

SEX_____ AGE_____ OTHER FACTS_____
(Write M or F) (Nearest Year) (Address, Occupation, etc. as instructed)

This booklet asks questions about your attitudes and opinions - what you do and how you feel about certain situations. Some people feel one way; other people feel another way. Thus, there are no "right" or "wrong" answers to the questions.

For practice, start with the two simple examples just below. As you see, each one is in the form of a sentence. By putting a cross, X, in ONE of the three spaces on the right you show how it applies to you. Make your X now on the two examples.

	Yes	In-Between	No
1. I like to go swimming	_____	_____	_____

A middle box is provided for the times when you cannot definitely say Yes or No. But use this middle box as little as possible.

	A	B Undecided	C
2. I would rather spend an evening: (A)Talking to people. (C)At a movie.	_____	_____	_____

About half the sentences inside end in A and C choices like this. A is always to the left and C is always to the right. Remember, use the middle "In-Between" or "Undecided" box only if you cannot possibly decide between A or C.

Now.:

1. Make sure you have put your name and whatever else is asked for at the top of this page.
2. Never pass over a question, but give some answer to every single one. Your answers will be entirely confidential, so answer truthfully.
3. Do not spend time puzzling things out. Answer each question immediately, the way you want to at this moment (not last week, or usually). You may have answered questions like this before, but answer them as you feel NOW.

Most people finish in five to ten minutes. Hand in this booklet as soon as you are through with it, unless told to do otherwise. As soon as the signal is given, turn the page and begin.

STOP HERE - WAIT FOR SIGNAL

ANSWER ONLY IN BOXES TO THE RIGHT.
MARK ONLY ONE BOX FOR EACH QUESTION.

	PUT ANSWERS BELOW A	B	C
1. In school, what I liked best was: (A) English (B) Arithmetic or Mathematics	A	Undecided	C
2. Every now and then, I really like to engage in a tough physical activity	Yes	In-Between	No
3. I strongly enjoy the slap-stick humor of the usual television comedy show	Yes	In-Between	No
4. I would rather read: (A) A realistic description of military battles (C) An imaginative and sensitive novel	A	Undecided	C
5. If somebody interrupts me when I'm talking,I forget what I'm talking about. (A)Yes, often (B)Sometimes (C)Hardly ever	A	B	C
6. I enjoy more an evening: (A) At a lively party with friends. (C) With a good hobby of my own.	A	Undecided	C
7. I prefer to dress: (A) Very quietly, correctly, and conservatively. (B) In an average way. (C) With some definite style that people can see.	A	B	C
8. I like to go out to a show or entertainment: (A) Less than once a week (less than average). (B) About once a week (average). (C) More than once a week (more than average).	A	B	C

GO RIGHT ON TO THE NEXT PAGE.

9. I can tell a complete lie with a straight face:
   (A) Whenever it is right to do so.
   (B) With a little difficulty.
   (C) Never under any circumstances.

A	B	C
_____	_____	_____

	Yes	In-Between	No
10. I greatly like to play practical jokes.	_____	_____	_____
11. I like it when I know so well what the group has to do that I naturally become the one in command.	_____	_____	_____

	A	Undecided	C
12. In my spare time, I would rather join: (A) A hiking and exploring club. (C) A community service organization.	_____	_____	_____

	Yes	In-Between	No
13. I believe it is right to be modest and understate how good I am at something, when people ask.	_____	_____	_____

14. If I think a person is wrong in a discussion, I tell him so:
   (A) Only if it can be done politely.
   (B) Sometimes.
   (C) Almost always.

A	B	C
_____	_____	_____

	Yes	In-Between	No
15. The use of dirty or foul language disgusts me (even if there are only people of my own sex present).	_____	_____	_____
16. I find it upsetting to have to move all my belongings to a new place.	_____	_____	_____

	A	Undecided	C
17. I would rather listen to: (A) A brass band. (C) A good church choir.	_____	_____	_____

	A	B	C
18. When annoyed, I may say things that hurt people's feelings: (A)Never (B)Rarely (C)Sometimes	_____	_____	_____

GO RIGHT ON TO THE NEXT PAGE.

19. I often feel quite tired when I get up in the morning.

Yes In-Between No

_____ _____ _____

20. I need to have things "just so", in order to concentrate on my work.

Yes In-Between No

_____ _____ _____

21. I would rather be:
(A) A guidance worker with young people seeking careers.
(C) A manager in a technical manufacturing company.

A Undecided C

_____ _____ _____

22. In school, what I liked best was:
(A) Handwork and crafts.
(B) Each about the same.
(C) Music.

A B C

_____ _____ _____

23. I would rather spend my vacations:
(A) In places in my own country, where I know I'll have a good time.
(C) In foreign lands that are colorful and "different".

A Undecided C

_____ _____ _____

24. The newspaper headline that would interest me more is:
(A) Latest Improvements in Production and Marketing.
(C) Religious Leaders Discuss a Unified Religion.

A Undecided C

_____ _____ _____

25. I think I am more sensitive than most people to the artistic quality of my surroundings.

Yes In-Between No

_____ _____ _____

26. I have a tendency to be:
(A) A rather reckless optimist (too sure things will go well).
(C) An overcautious pessimist (too sure things will go wrong).

A Undecided C

_____ _____ _____

27. I have a hard time putting work out of my mind and relaxing.

Yes In-Between No

_____ _____ _____

GO RIGHT ON TO THE NEXT PAGE.

28. I like to crack jokes and tell funny stories:
(A) Hardly ever.
(B) Sometimes.
(C) Often.

A B C

_____ _____ _____

29. I would rather be:
(A) An actor.
(C) A house builder.

A Undecided C

_____ _____ _____

30. I enjoy acting on impulses of the moment (even if they do sometimes land me in a few difficulties later).

Yes In-Between No

_____ _____ _____

31. I feel it is more important to:
(A) Get my own ideas put into practice.
(C) Get along smoothly with others.

A Undecided C

_____ _____ _____

32. When I need immediately the use of something belonging to a friend, but he is out, I think it's all right to borrow it without his permission.

Yes In-Between No

_____ _____ _____

33. It is more important to me:
(A) To enjoy my life quietly in my own way.
(C) To be admired and respected for what I have done.

A Undecided C

_____ _____ _____

34. If I had a loaded gun in my hand, I would feel nervous until it was unloaded.

Yes In-Between No

_____ _____ _____

35. I never try to ask help of people I know only slightly.

True In-Between False

_____ _____ _____

36. Sometimes I let small things get on my nerves too much.

Yes In-Between No

_____ _____ _____

37. Worrying keeps me awake at night.

Never Sometimes Often

_____ _____ _____

GO RIGHT ON TO THE NEXT PAGE.

38. I feel well-adjusted to life and its demands:
(A) All of the time.
(B) Most of the time.
(C) Less than half the time.

A	B	C
_____	_____	_____

39. I feel that people are not as considerate of me as my good intentions deserve.

True	In-Between	False
_____	_____	_____

40. I sometimes get tense and upset as I think back on the day's happenings.

Yes	In-Between	No
_____	_____	_____

STOP HERE.
MAKE SURE YOU HAVE ANSWERED EVERY QUESION.

APPENDIX D

SHORT MICHIGAN ALCOHOLISM SCREENING TEST

S.M.A.S.T.

Short Michigan Alcoholism Screening Test

	Yes	No
1. Do you feel you are a normal drinker? (By normal we mean you drink less than or as much as most other people.)	___	___
2. Does your wife, husband, a parent or other near relative ever worry or complain about your drinking?	___	___
3. Do you ever feel guilty about your drinking?	___	___
4. Do friends or relatives think you are a normal drinker?	___	___
5. Are you able to stop drinking when you want to?	___	___
6. Have you ever attended a meeting of Alcoholics Anonymous?	___	___
7. Has drinking ever created problems between you and your wife, husband, a parent or other near relative?	___	___
8. Have you ever gotten into trouble at work because of drinking?	___	___
9. Have you ever neglected you obligations, your family or your work for two or more days in a row because you were drinking?	___	___
10. Have you ever gone to anyone for help about your drinking?	___	___
11. Have you ever been in hospital because of drinking?	___	___
12. Have you ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcoholic beverages?	___	___
13. Have you ever been arrested, even for a few hours because of drunken behaviour?	___	___

SCORING - 1 point for each of the following answers.

1.	No	8.	Yes
2.	Yes	9.	Yes
3.	Yes	10.	Yes
4.	No	11.	Yes
5.	No	12.	Yes
6.	Yes	13.	Yes
7.	Yes		

RESULTS

0-1 points	- a non-alcoholic score
2 points	- suggestive of alcoholism
3 or more points	- indicates alcoholism

APPENDIX E

MEDICAL SYMPTOM CHECKLIST

MEDICAL SYMPTOM CHECKLIST

We would like to know if you have had any medical complaints and how your health has been in general, over the past few weeks. Please answer all questions below simply by putting a tick in the space which you think most nearly applies to you. Remember, we want to know about present or recent complaints, not those you have had in the past.

1. Have you recently been able to concentrate on whatever you're doing?

   Better than usual _____
   Same as usual _____
   Less than usual _____
   Much less than usual _____

2. Have you recently lost much sleep over worry?

   Not at all _____
   No more than usual _____
   Rather more than usual _____
   Much more than usual _____

3. Have you recently felt that you are playing a useful part in things?

   More than usual _____
   Same as usual _____
   Less useful than usual _____
   Much less than usual _____

4. Have you recently felt capable of making decisions about things?

   More so than usual _____
   Same as usual _____
   Less than usual _____

5. Have you recently felt constantly under strain?

   Not at all _____
   No more than usual _____
   Rather more than usual _____
   Much more than usual _____

6. Have you recently felt that you couldn't overcome your difficulties?

Not at all _____
No more than usual _____
Rather more than usual _____

7. Have you recently been able to enjoy your normal day-to-day activities?

More so than usual _____
Same as usual _____
Less so than usual _____
Much less than usual _____

8. Have you recently been able to face up to your problems?

More so than usual _____
Same as usual _____
Less able than usual _____
Much less able _____

9. Have you recently been feeling unhappy and depressed?

Not at all _____
No more than usual _____
Rather more than usual _____
Much more than usual _____

10. Have you recently been losing confidence in yourself?

Not at all _____
No more than usual _____
Rather more than usual _____
Much more than usual _____

11. Have you reecently been thinking of yourself as a worthless person?

Not at all _____
No more than usual _____
Rather more than usual _____
Much more than usual _____

12. Have you recently been feeling reasonably happy, all things considered?

More so than usual _____
+ About the same as usual _____
Less so than usual _____
Much less than usual _____

We would like to know if you have had any of the following symptoms in the last three months. We are interested in those symptoms that you have had quite often. You do not need to have been to a doctor about them. Please answer all the questions below by putting a tick in the space beside your answer.

I often get indigestion.
Yes _____
No _____

I often need to take sleeping pills.
Yes _____
No _____

I often feel the need to be left alone.
Yes _____
No _____

I often feel faint and dizzy.
Yes _____
No _____

I often get pains in the back.
Yes _____
No _____

I often worry about a nervous breakdown.
Yes _____
No _____

I often need to take sedatives or tranquillizers.
Yes _____
No _____

I often don't feel like eating.
Yes _____
No _____

I often feel tired and worn out without good reason.
Yes _____
No _____

My heart often beats quickly.
Yes _____
No _____

I often take pain relievers (e.g. aspirin, etc.)
Yes _____
No _____

I often suffer from diarrhea.

Yes _____
No _____

I often have feelings of anger, not towards anything in particular.

Yes _____
No _____

I often need to take tablets for indigestion.

Yes _____
No -----

I often feel nauseous.

Yes _____
No _____

I often get painful headaches that are not migraine.

Yes _____
No -----

I often get pains in my chest.

Yes _____
No _____

I often smoke more than 15 cigarettes a day.

Yes _____
No _____

I often drink more alcohol than I should.

Yes _____
No _____

APPENDIX F

MEDICAL VISIT CHECKLIST

MEDICAL VISIT CHECKLIST

We woulk like to know about illnesses that you may have suffered. Have you had medical treatment for either the development of, or an increase in the severity of, any of the following illnesses? If so, mark a tick in the box.

REMEMBER TO TICK ONLY THOSE ILLNESSES THAT HAVE BEEN SEVERE ENOUGH TO WARRANT MEDICAL ATTENTION.

	In the past 2 years	At some time in the past
High blood pressure		
Heart attack		
Other heart problems		
Ulcers		
Diabetes		
Severe bronchial problems		
Asthma		
Migraines		
Severe skin problems		
Tuberculosis		
Alcohol problems		
Hay fever or other allergies		
Arthritis		
Rheumatism		
Colitis		

APPENDIX G

FAMILY STRESS FACTORS QUESTIONNAIRE

FAMILY STRESS FACTORS QUESTIONNAIRE

IF YOUR HUSBAND IS A PROBLEM DRINKER

Please tick the box either Yes or No.

Do you keep the children quiet and out of his way when he is drinking?

Yes _____ No _____

Do you beg him to stop drinking or drink less?

Yes _____ No _____

Do you have more arguments and family conflicts when he is drinking, than during periods of sobriety?

Yes _____ No _____

Have you ever told him he must leave the home?

Yes _____ No _____

Have you ever been forced to go to work, or used your income to keep the family going financially?

Yes _____ No _____

Have you contacted Alcoholics Anonymous, Alanon, or any other alcohol treatment service?

Yes _____ No _____

Do you fear for your safety when he is drinking?

Yes _____ No _____

Has he ever hit you or the children when he has been drinking?

Yes _____ No _____

Have you paid his debts or bills?

Yes _____ No _____

Is he verbally aggressive and abusive when he is drinking?

Yes _____ No _____

Do you pretend to friends and family that all is well in the family?

Yes _____ No _____

Have you refused to sleep with him when he is drunk?

Yes _____ No _____

Have you made special arrangements about money matters?

Yes _____ No _____

Do you take over family finances when he is drinking?

Yes _____ No _____

When he drinks, do you feel too helpless yourself to do anything?

Yes _____ No _____

APPENDIX H

CHILDREN'S MODIFIED MEDICAL SYMPTOM CHECKLIST

CHILDREN'S MODIFIED MEDICAL SYMPTOM CHECKLIST

We would like to know if you have had any of the following problems in the last three months. We are interested in those symptoms that you have had quite often. You do not need to have been to a doctor about them. Please answer all questions below by ticking either Yes or No in the box provided.

I often get sick in my stomach

Yes _____ No _____

I do not sleep very well

Yes _____ No _____

I often like to be left alone

Yes _____ No _____

I often feel dizzy

Yes _____ No _____

I often get pains in my back

Yes _____ No _____

I sometimes act crazy

Yes _____ No _____

I often need to take medicines

Yes _____ No _____

I often don't feel like eating

Yes _____ No _____

I often feel tired

Yes _____ No _____

My heart often beats quickly

Yes _____ No _____

I often take pain relievers (e.g. dispirin, etc.)

Yes _____ No _____

I often have diarrhea

Yes _____ No _____

I often feel angry

Yes _____ No _____

I sometimes wet the bed

Yes _____ No _____

I often get painful headaches

Yes _____ No _____

I often get pains in my chest or legs

Yes _____ No _____

I often have bad dreams

Yes _____ No _____

REFERENCES

Alcoholic Liquor Advisory Council. (1986). Wellington: Alcoholic Liquor Advisory Council.

Al-Anon Family Group Headquarters, Inc. (1971). The dilemma of the alcoholic marriage. Cornwall, N.Y.: Cornwall Press.

Albertsen, C. S., & Vaglum, P. (1971). The alcoholic's wife and her conflicting roles - A cause for hospitalization. Acta Sociomedica Scandinavica, 1, 41-50.

Angell, R. O. (1936). The family encounters the depression. New York: Charles Scribner.

Antonovsky, A. (1979). Health stress and coping. San Francisco: Jossey-Bass.

Appley, M. H., & Trumbull, R. (Eds.). (1967). Psychological stress. New York: Appleton-Century-Crofts.

Armour, D., Polich, J., & Stambul, H. (1976). Alcoholism and treatment. Santa Monica, California: Rand Corporation.

Bacon, S. D. (1978, November). Alcohol Research Policy. Journal of Studies on Alcohol, Suppl. 8, 3-17.

Bailey, M. B. (1961). Alcoholism and marriage: A review of research and professional literature. Quarterly Journal of Studies on Alcohol, 22, 81-97.

Bailey, M.B. (1965). Al-Anon family groups as an aid to wives of alcoholics. Social Work, 10, 68-74.

Bailey, M. B. (1967). Psychophysiological impairment in wives of alcoholics as related to their husbands' drinking and sobriety. In R. Fox (Ed.), Alcoholism: Behavioral research, therapeutic approaches (pp. 134-142). New York: Springer.

Bailey, M. B., Haberman, P., & Alksne, H. (1962). Outcomes of alcoholic marriages: Endurance, termination or recovery. Quarterly Journal of Studies on Alcohol, 23, 610-623.

Banks, M. H., Clegg, C. W., Jackson, P. R., Kemp, N. J., Stafford, E. M., & Wall, T. D. (1980). The use of the General Health Questionnaire as an indicator of mental health in occupational studies. Journal of Occupational Psychology, 53, 187-194.

Baraga, D. J. (1978). Self-Concept in children of alcoholics (Doctoral dissertation, University of North Dakota, 1977). Dissertation Abstracts International, 39, 368B 378,242.

Barnard, C. P. (1981). Families, alcoholism and therapy. Springfield, Illinois: Charles C. Thomas.

Barnes, G. E. (1979). The alcoholic personality: A reanalysis of the literature. Journal of Studies on Alcohol, 40(7).

Batt, R.D. (1978). A National Alcohol Crisis. Massey University Publication. Massey University, Palmerston North, New Zealand.

Becker, A. & Rush A. (1975). A cognitive model of anxiety formation and anxiety resolution. In I. G. Sarason & C. D. Spielberger (Eds.), Stress and anxiety (Vol. 2) (pp. 75-79). Washington, D.C.: Hemisphere Publishing Company.

Becker, J. V. & Miller, P. M. (1976). Verbal and nonverbal marital interaction patterns of alcoholics and nonalcoholics. Journal of Studies on Alcohol, 37(11), 1616-1623.

Bentovim, A. (1982). Family therapy. Psychiatry, 425-428.

Berenson, D. (1976). Alcohol and the family system. National Institute on Alcohol Abuse and Alcoholism, Department of Health, Education, and Welfare. In P. J. Guerin (Ed.), Family therapy: Theory and practice. New York.

Berger, A. (1981). Family involvement and alcoholics' completion of a multiphase treatment program. Journal of Studies on Alcohol, 42(5).

Berry, R., Boland, J., Laxson, J., Hayler, D., Sillman, M., Fein, R., & Feinstein, P. (1974, March 31). The economic costs of alcohol abuse and alcoholism - 1971. (Contract #HSM-42-73-114). Prepared for the National Institute on Alcohol Abuse and Alcoholism.

Billings, A. G., Kessler, M., Gomberg, C. A., & Weiner, S. (1979). Marital conflict resolution of alcoholic and nonalcoholic couples during drinking and nondrinking sessions. Journal of Studies on Alcohol, 40(3).

Blood, R. W. & Wolfe, B. M. (1960). Husbands and wives; the dynamics of married living. New York: Free Press.

Boggs, M. H. (1944). The role of social work in the treatment of inebriates. Quarterly Journal of Studies on Alcohol, 4, 557-567.

Bosma, W. G. H. (1972). Children of alcoholics - A hidden tragedy. Maryland State Medical Journal, 21, 34-36.

Boss, P., McCubbin, H., & Lester, G. (1979, March). The corporate executive wife's coping patterns in response to routine husband-father absence. Family Process, 18, 79-86.

Bourque, L. & Back, K. (1977). Life graphs and life events. Journal of Gerontology, 32, 669-674.

Bowen, M. (1973, April). A family systems approach to alcoholism. Paper presented at the annual meeting of the National Council of Alcoholism, Washington, D.C.

Bowen, M. (1974). Alcoholism as viewed through family systems theory and family psychotherapy. Annals of the New York Academy of Sciences, 233, 115-225.

Bowen, M. (1976). Family reaction to death. In P. Guerin (Ed.), Family Therapy. New York: Gardner Press.

Bowen, M. (1976). Theory in the practice of psychotherapy. In P. Guerin (Ed.), Family Therapy. New York: Gardner Press.

Bowman, R. G. (1977). Self-Instructional training in stress management. Unpublished doctoral dissertation, The University of British Columbia, Canada.

Boyatzis, R. E. (1977). Alcohol and interpersonal aggression. Plenum Press: New York.

Brew, M. (1982). Stress and distress. Auckland: Methuen Publications.

Broderick, C. B. (1971, February). Beyond the five conceptual frameworks: A decade of development in family Theory. Journal of Marriage and The Family, 4.

Brown, B. B. (1980). Perspectives on social stess. In H. Selye (Ed.), Selye's guide to stress research (pp. 21-45). London: Van Nostrand Reinhold Co.

Brown, W. J. & Adler, M. D. (1959, April). The role of alcoholism in preserving the neurotic Marriage. Unpublished paper read at a meeting of the American Psychiatric Association.

Bullock, S. C. & Mudd, E. H. (1959). The interaction of alcoholic husbands and their nonalcoholic wives during counseling. American Journal of Orthopsychiatry, 29, 519-527.

Burgess, E. W. & Cottrell, L. S. (1939). Predicting success or failure in marriage. New York: Prestige Hall.

Burr, W. R. (1970). Satisfaction with various aspects of marriage over the life cycle: A random middle class sample. Journal of Marriage and the Family, 32, 29-37.

Burr, W. R. (1973). Theory construction and the sociology of the family. New York: John Wiley and Sons.

Burton, G. & Kaplan, H. M. (1968a). Group counseling in conflicted marriages where alcoholism is present. Client's evaluation of effectiveness. Journal of Marriage and the Family, 30, 74-79.

Burton, G. & Kaplan, H. M. (1968b). Marriage counseling with alcoholics and their spouses. II. The correlation of excessive drinking behavior with family pathology and social deterioration. British Journal of Addictions, 63, 161-170.

Camp, H. (1976). Structural family therapy: An outsider's perspective. Supervisor, Institute for Juvenile Research, Chicago, Illinois.

Cappell, H. & Herman, P. C. (1972). Alcohol and tension reduction. Quarterly Journal of Studies on Alcohol, 33, 33-64.

Carter, E. (1976). Transgenerational scripts and nuclear family stress. Topeka, Kansas: The Menninger Foundation.

Casswell, S. (1980). Drinking by New Zealanders. Wellington: Alcohol Liquor Advisory Council and Auckland: Alcohol Research Unit.

Cavan, R., & Ranck, K. R. (1938). The family and the depression. Chicago: University of Chicago Press.

Cermak, T. L., & Brown, S. (1982, July). international group therapy with the adult children of alcoholics. International Journal on Group Pyschotherapy, 32(3).

Chafetz, M. (1971). First special report to the U.S. Congress on alcohol and health. (Publication #(ADH) 74-68). Washington, D.C.: Department of Health, Education & Welfare.

Chafetz, M., Blane, H. T., & Hill, M. J. (1971). Children of alcoholics. Quarterly Journal of Studies on Alcohol, 32, 687-698.

Chiles, J. A., Stauss, F. S., & Benjamin, L. S. (1980). Marital conflict and sexual dysfunction in alcoholic and non-alcoholic couples. British Journal of Psychiatry.

Cisin, I. H. (1979, November). From morass to discipline in one grand leap. Journal of Studies on Alcohol, (Suppl. 8).

Clausen, J. A., & Yarrow, M. R. (1955). The impact of mental illness on the family. Journal of Social Issues, 11, 3-65.

Clifford, B. J. (1960). A study of the wives of rehabilitated and unrehabilitated alcoholics. Social Casework, 41, 457-460.

Coelho, G., Hamburg, D., & Adams, J. (1974). Coping and adaptation. New York: Basic Books.

Cohen, D. C., & Krause, M. S. (1971). Casework with the wives of alcoholics. New York: Family Service Association of America.

Cohen, P. T. (1966). A new approach to the treatment of male alcoholics and their families. American Journal of Orthopsychiatry, 36.

Cotton, N. S. (1979). The familial incidence of alcoholism. Journal of Studies on Alcohol, 40(1).

Cox, T. (1978). Stress. London: The MacMillian Press, Ltd.

Cox, T., & Mackay, C. (1985). The measurement of self-reported stress and arousal. British Journal of Psychology, 76, 183-186.

Cozby, P. C. (1985). Methods in research (3rd. ed.). London: Mayfield Publishing Company.

Crawford, A., Hinton, J. W., Docherty, C. J., Dishman, D. J., & Mulligan, P.E. (May 1982). Alcohol and Crime. 1. Self-Reported alcohol consumption of Scottish prisoners. Journal of Studies on Alcohol, 43,(5).

Crowe, R. R., Pauls, D. L., Slymen, D.J. & Noyes, R. (1980). A family study of anxiety neurosis. Archives of General Psychiatry, 37, 77-79.

Davidson, P. O. & Davidson, S. M. (1980). Behavioral medicine: Changing health lifestyle. New York: Brunner/Mazel.

Davis, D. I., Berenson, D., Steinglass, P., & Davis, S. (1974). The adaptive consequences of drinking. Psychiatry, 37, 209-215.

de Saugy, D. (1962). L'alcoolique et sa femme; etude psycho-sociale et statistique sur led conditions de leur development individuel et de leur vie en commun. Hygiene Mental, 51, 81-128, 145-201.

Deniker, P., de Saugy, D., & Ropert, M. (1964). The alcoholic and his wife. Comprehsive Psychiatry, 5, 374-383.

Dohrenwend, B. S., & Dohrenwend, B. P. (1974). Stressful life events. New York: John Wiley and Sons.

Dominian, J. (1972). Marital pathology: A review. Postgraduate Medical Journal, 48, 517-525.

Dulfano, C. (1977). Alcoholism in the family system. New Direction in Family Therapy.

Edwards, G. (1976). "Research priorities on alcohol - A summation". Addiction Research Unit, 101 Denmark Hill, London.

Edwards, P., Harvey, C., & Whitehead, P. C. (1973). wives of alcoholics: A critical review and analysis. Quarterly Journal of Studies on Alcohol, 34, 112-132.

Esser, P. H. (1970). Conjoint family therapy for alcoholics. A new approach. British Journal of Addiction, 64, 275-286.

Esser, P. H. (1971). Evaluation of family therapy with alcoholics. British Journal of Addiction, 66, 251-255.

Estes, N. J. (1974). Counseling the wife of an alcoholic spouse. American Journal of Nursing, 74, 1251-1255.

Ewing, J. A. (1974). Behavioral approaches for problems with alcohol. The International Journal of the Addictions, 9, 389-399.

Ewing, J. A., Long, V., & Wenzel, G. (1961). Concurrent group psychotherapy of alcoholic patients and their wives. International Journal of Group Psychotherapy, 11, 329-338.

Finlay, D. G. (1972). Anxiety and the alcoholic. Social Work, 17, 29-33.

Finlay, D. G. (1974). Alcoholism: Illness or problem in interaction? Social Work, 19, 398-405.

Finney, J. W. & Moos, R. H. (1981). Characteristics and prognoses of alcoholics who become moderate drinkers and abstainers after treatment. Journal of Studies on Alcohol, 42(1).

Fletcher, B., & Payne, R. (1980). Stress and work: A review and theoretical framework. Personnel Review, 9, 19-29.

Folkman, S., Schaefer, C., & Lazarus, R. S. (1979). Cognitive processes as mediators of stress and coping. In V. Hamilton & D. M. Warburton (Eds.), Human stress and cognition (pp. 205-298). Chichester: John Wiley and Sons.

Forrest, G. G. (1975). Treatment VI: Marital and family therapy. In G. G. Forrest (Ed.), The diagnosis and treatment of alcoholism. (1st. ed.). Springfield: Thomas.

Forrest, G. G. (1975). Treatment VIII: Toward a causative theory of alcohol addiction. In G. G. Forrest (Ed.), The diagnosis and treatment of alcoholism. (1st ed.). Springfield: Thomas.

Forrest, G. G. (1975). Personality characteristics of the alcoholic. In G. G. Forrest (Ed.), The diagnosis and treatment of alcoholism. (1st. ed.). Springfield: Thomas.

Fox, R. (1956). The alcoholic spouse. In V.W. Eisenstein (Ed.), Neurotic interaction in marriage. New York: Basic Books.

Fowler, F. G. & Fowler, H. W. (Eds.). (1924). The concise Oxford dictionary. Oxford: Oxford University Press.

Funkenstein, D. H., King, S. H., & Drolette, M. E. (1957). Mastery of stress. Cambridge, Mass.: Harvard University Press.

Gallant, P. M., Rich, A., Bey, E., & Terranova, L. (1970). Group psychotherapy with married couples: A successful technique in New Orleans alcoholism clinic patients. Journal of Louisiana Medical Society, 122, 41-44.

Gay, L. R. (1987). Educational research: Competencies for analysis and application. Columbus, Ohio: Merrill Publishing Company.

Glass, D. C., & Singer, J. E. (1972). Urban stress. New York: Academic Press.

Gliedman, L. H. (1957). Concurrent and combined group treatment of chronic alcoholics and their wives. International Journal of Group Psychotherapy, 7, 414-424.

Gliedman, L. H., Rosenthal, D., Frank, J. D., & Nash, H. T. (1956). Group therapy of alcoholics with concurrent group meetings of their wives. Quarterly Journal of Studies on Alcohol, 17, 282-287, 655-670.

Goldberg, D. (1972). The detection of psychiatric illness by questionnaire. London: Oxford University Press.

Goodwin, D. W. (1981). Family studies of alcoholism. Journal of Studies on Alcohol, 42(1).

Gorad, S. L. (1971). Communicational styles and interaction of alcoholics and their wives. Family Process, 10.

Gorad, S. L., McCourt, W. F., & Cobb, J. (1971). A communications approach to alcoholism. Quarterly Journal of Studies on Alcohol, 32, 651-668.

Gordis, E. (1983). The evaluation of treatment for alcoholism. Syllabus prepared for the 10th Biennial Summer School of the National Society on Alcoholism and Drug Dependence, New Zealand.

Grosser, G. H., Wechsler, H., & Greenblatt, M. (Eds.). (1964). The threat of impending disaster. Cambridge, Mass.: M.I.T. Press.

Gunderson, E. K. & Rahe, R. H. (1974). Life stress and illness. Springfield, Illinois: Charles C. Thomas.

Haberman, P. W. (1964). Psychological test score changes for wives of alcoholics during periods of drinking and sobriety. Journal of Clinical Psychology, 20, 230-232.

Hackman, J. R. (1970). Tasks and task performance in research on stress. In J. E. McGrath (Ed.). Social and psychological factors in stress (pp. 202-237). New York: Holt.

Haley, J. & Hoffman, L. (1967). Techniques of family therapy. New York: Basic Books, Inc.

Hall A. & Fagan, R. (1956). Definition of a system. General Systems Yearbook, 1, 18-28.

Hamilton, V. & Warburton, D. M. (Eds.). (1981). Human stress and cognition: An information processing approach. Chichester: John Wiley and Sons, Ltd.

Hansen, D. A., & Hill, R. (1964). Families under stress. In H. T. Christensen (Ed.). Handbook of marriage and the family (pp 782-819). Chicago, Ill.: Rand McNally.

Hansen, D. A., & Johnson, V. (1979). Rethinking family stress theory: Definitional aspects. In W. Burr, R. Hill, F. Nye, & I. Reiss (Eds.), Contemporary theories about the family (Vol. 1). New York: The Free Press.

Hanson, K. J. & Estes, N. (1977). Dynamics of alcoholic families. In N. J. Estes & M. E. Heineman (Eds.), Alcoholism; development, consequences, and interventions (pp. 67-75). New York: Academic Press.

Hanson, P. G., Sands, P. M., & Sheldon, R. B. (1967, September 1-5). Patterns of communication in alcoholic marital couples. Houston Veterans Administration Hospital and the Texas Research Institute for Mental Sciences. Presented at 75th Annual Convention of American Psychological Association.

Harburg, E., Davis, D. R., & Caplan, R. (1982). parent and offspring alcohol use. Journal of Studies on Alcohol, 43(5).

Hatsukami, D., & Pickens, R. W. (1982, December). Post-treatment depression in an alcohol and drug abuse population. American Journal of Psychiatry, 139(12).

Hersen, M., Miller, P. M., & Eisler, R. M. (1973). Interactions between alcoholics and their wives: A descriptive analysis of verbal and nonverbal behavior. Quarterly Journal of Studies on Alcohol, 34, 516-520.

Hill, R. (1949). Families under stress. New York: Harper and Row, Publishers.

Hill, R. (1958). Generic features of families under stress. Social Casework, 49, 139-150.

Hill, R. (1970). Family development in three generations. Cambridge, Mass.: Schenkman Publishing Company.

Hill, R., & Joy, C. (1979). Conceptualizing and operationalizing category systems for phasing of family development. Unpublished manuscript, University of Minnesota.

Hindman, M. (1975-76, Winter). Children of alcoholic parents. Alcohol Health and Research World, 2-6.

Hindman, M. (1976, Spring). Rational emotive therapy in alcoholism teatment. Alcohol, Health and Research World 14-16.

Hoffman, L. (1981). Foundations of family therapy. New York: Basic Books, Inc.

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

Holroyd, J. (1974). The questionnaire on resources and stress. An instrument to measure family response to a handicapped family member. Journal of Community Psychology, 2, 92-94.

Huges, S. F., Berger, M., & Wright, L. (1978, October). The family life cycle and clinical intervention. Journal of Marriage and Family Counseling.

Hyman, M. M. (1971). Extended family ties among alcoholics: A neglected area of research. Quarterly Journal of Studies on Alcohol, 33, 513-516.

Intagliata, J. (1979). Increasing the responsiveness of alcoholics to group therapy: An interpersonal problem-solving approach. Group, 3(2), 106-120.

Irgens-Jensen, O. "Problem drinking and personality". A study based on the draw-a-person test. National Institute for Alcohol Research Publ. No. 9, 1971.

Jackson, D. D. (1965). Family rules. Archives of General Psychiatry, 12, 589-594.

Jackson, J. K. (1954). The adjustment of the family to the crisis of alcoholism. Quarterly Journal of Studies on Alcohol, 15, 562-586.

Jackson, J. K. (1956). The adjustment of the family to alcoholism. Marriage and Family, 18, 361-369.

Jackson, J. K. (1959). Family structure and alcoholism. Mental Hygiene, 43, 403-406.

Jackson, J. K. (1962). Alcoholism and the family. In D. J. Pittman & C. R. Snyder (Eds.), Society, culture and drinking patterns. Wiley: New York.

Jackson, J. K., & Kogan, K. L. (1963). The search for solutions: Help-Seeking patterns of families of active and inactive alcoholics. Quarterly Journal of Studies on Alcohol, 24.

Jacob, T., Ritchey, D., Cvitkovic, J. F., & Blane, H. T. (1981). Communication styles of alcoholic and aonalcoholic families when drinking and not drinking. Journal of Studies on Alcohol, 42(5).

Jahoda, G., Davies, J. B., & Tagg, S. (1980). Parents' alcohol consumption and children's knowledge of drinks and usage patterns. British Journal of Addiction, 75, 297-303.

James, J. E., & Goldman, M. (1971). Behavior trends of wives of alcoholics. Quarterly Journal of Studies on Alcohol, (CAAAL 13769), 32, 373-381.

Janzen, C. (1977). Families in the treatment of alcoholism. Journal of Studies on Alcohol, 38(1).

Janzen, C. (1978). Family treatment for alcoholism: A review. Social Work, 23(2), 135-141.

Kachadoor V. K. (1978). Alcohol and society. The origins and formulation of the disease concept of alcoholism. Master of Arts Program, Spring 1978, Hofstra University.

Kalashian, M. M. (1959). Working with the wives of alcoholics in an outpatient clinic setting. Marriage and Family Living, 21, 130-133.

Kammeier, Sister M. L. (1971). Adolescents from families with and without alcohol problems. Quarterly Journal of Studies on Alcohol, 32, 364-372.

Karlen, H. (1965). Alcoholism in conflicted marriages. American Journal of Orthopsychiatry, 35, 326-327.

Kasl, S. V. (1978). Epidemiological contributions to the study of work stress. In C. L. Cooper and R. Payne (Eds.), Stress at Work. Chichester: Wiley.

Kata, K. (1975). On anxiety in the Scandinavian countries. In I. G. Sarason & C. D. Spielberger (Eds.), Stress and Anxiety (Vol. 2). Washington, D.C.: Hemisphere Publishing Corporation.

Kaufman, E. & Pattison, E. M. (1981). differential methods of family therapy in the treatment of alcoholism. Journal of Studies on Alcohol, 42(11), 951-971.

Kelly, Sister D. (Pseudonym). (1973). Alcoholism and the family. From the Subcommittee on Alcoholism of the Medical and Surgical Faculty of the State of Maryland. Maryland State Medical Journal, 22(1), 25-30.

Kephart, W. M. (1954). Drinking and marital disruption. Quarterly Journal of Studies on Alcohol, 15, 63-73.

Keutzer, C. S. (1979). A note on assessing the effects of therapy. Journal of Community Psychology, 354-356.

Kimball, C. P. (1983, April). Stress disorders. American Journal of Psychiatry, 140(4), 503-504.

Klagsburn, M., & Davis, D. I. (1977, June). Substance abuse and family interaction. Family Process, 16(2).

Knight, R. P. (1937). The psychodynamics of chronic alcoholism. Journal of Nervous and Mental Disease, 86, 538-548.

Kogan, K. L. Fordyce, W. E., & Jackson, J. K. (1963). Personality disturbance in wives of alcoholics. Quarterly Journal of Studies on Alcohol, 24, 227-238.

Kogan, K. L., & Jackson, J. K. (1965a). Alcoholism: The fable of the noxious wife. Mental Hygiene, 49, 428-437.

Kogan, K. L., & Jackson, J. K. (1965b). Stress, personality and emotional disturbance in wives of alcoholics. Quarterly Journal of Studies on Alcohol. 26, 486-495.

Kohl, R. N. (1962). Pathologic reactions of marital partners to improvement of patients. American Journal of Psychiatry, 118, 1036-1041.

Konovsky, M. & Wilsnack, S. C. (1982). Social drinking and self-esteem in married couples. Journal of Studies on Alcohol, 319-333.

Koos, E. L. (1946). Families in trouble. New York: Kings Crown Press.

Krimmel, H. (1971). Alcoholism: Challenge for social work education. New York: Council on Social Work Education.

Krimmel, H. E. (1973). The alcoholic and his family. In P. Bourne & R. Fox (Eds.), Alcoholism, progress in research: Treatment, (pp. 297-310). New York: Academic Press.

Kupetz, K., Larosa, J., Klagsbrun, Micheline, D. C. P., & David, D. I. (1977, June). Drug abuse and the family. Family Process, 16(2).

Kutash, I. L., Schlesinger, L. B., & Associates. (1980). Handbook on stress and anxiety. San Francisco: Jossey Bass.

Langner, T. S., & Michael, S. T. (1963). Life stress and mental health. Thomas A.C. Rennie series in Social Psychiatry (Vol. 2). New York: Crowell-Collier Publishing Co.

Lansky, M. R. (1981). Family therapy and major psychopathology. London: Academic Press.

Lantz, J. E. (1978). Cotherapy approach in family therapy. National Association of Social Workers, Inc.

Lazarus, R. S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.

Lazarus, R. S. (1968). Emotions and adaptation: Conceptual and empirical relations. In W. J. Arnold (Ed.), Nebraska symposium on motivation (pp. 175-270). Lincoln, Nebraska: University of Nebraska Press.

Lazarus, R. S., & Averill, J. R. (1972). Emotion and cognition: With special reference to anxiety. In C. D. Spielberger, Anxiety: Current trends in theory and research (pp. 241-281). London: Academic Press.

Lazarus, R. S., Averill, J. R., & Opton, E. M., Jr. (1974). The psychology of coping: Issues of research and assessment. In G. V. Coelho, D. A. Hamburg, & J. E. Adams (Eds.), Coping and adaptation (pp. 249-311). New York: Basic Books, Inc.

Lazarus, R. S., Coyne, J. C., & Folkman, S. (1982). Cognition, emotion, and motivation: The doctoring of Humpty-Dumpty. In R. W. J. Neufeld (Ed.), Psychological stress and psychopathology (pp. 218-239). Auckland: McGraw-Hill Book Co.

Lazarus, R. S. & Launier, R. (1978). Stress- Related transactions between person and environment. In L. A. Pervin & M. Lewis (Eds.), Perspectives in interactional psychology (pp. 287-327). New York: Plenum Press.

Leavy, R. L. (April 1979). An alternative source of information on a popular topic: A course on drinking. Teaching of Psychology, 6(2).

Lemert, E. M. (1960). The occurrence and sequence of events in the adjustment of families to alcoholism. Quarterly Journal of Studies on Alcohol, 21, 679-697.

Levi, L. (Ed.) (1982). Stress and distress in response to psychosocial stimuli. Acta Medica Scandinavica, 191(Suppl. 528).

Levine, H. G. (1981). The vocabulary of drunkenness. Journal of Studies on Alcohol, 42(11).

Levinger, G. (1966). Sources of marital dissatisfaction among applicants for divorce. American Journal of Orthopsychiatry, 36, 803-807.

Lewis, J. (1979). Washington report. Journal of Studies on Alcohol, 40(3).

Lewis, M. L. (1954). The initial contact with wives of alcoholics. Social Casework, 35, 8-14.

Liepman, M. R., Nirenberg, T. D., & White, W. T. (1985). Family-Oriented treatment of alcoholism. Rhode Island Medical Journal, 68(3), 123-126.

Lint, J. de, & Schmidt, W. (1971). Alcohol use and alcoholism. Additions, 18(2).

Lipman-Blumen, J. (1975). A crisis framework applied to macrosociological family changes. Marriage, divorce, and occupational trends associated with World War II. Journal of Marriage and the Family, 27, 889-902.

Luciano, L., & Weeks, G. (1978, March). A bibliography of paradoxical methods in psychotherapy of family systems. Family Process, 17.

Ludwig, A. M., Cain, R. B., Wikler, A., Taylor, R. M., & Bendfeldt, F. (1977). Physiologic and situational determinants of drinking behavior. Plenum Press: New York.

Lynn, R. (1975). National differences in anxiety, 1935-65. In I. G. Sarason & C. D. Spielberger (Eds.), Stress and anxiety (Vol. 2). Washington, D.C.: Hemisphere Publishing Corporation.

Macgregor, R. (1962). Multiple impact psychotherapy with families. Family Process, 1, 15-29.

Makara, G. B., Palkovits, M., & Szentagothal, J. (1980). The endocrine hypothalamus and the hormonal response to stress. In H. Selye (Ed.), Selye's guide to stress research (pp. 280-337). London: Van Nostrand Reinhold Co.

Mally, M. A. (1965). A study of family patterns in alcoholic marriages. American Journal of Orthopsychiatry, 35, 325-326.

Mandelbaum, A. (1975, Fall/Winter). Family therapy. Menninger Perspective, pp 5-10.

Mandelbaum, A. (1979). "Notes on One Conceptual Framework for Family Therapy." Unpublished manuscript, Menninger Hospital, Topeka, Kansas.

Martin, P. R. (1983, April). Substance abuse. American Journal of Psychiatry, 140(4).

Mason, J. L. (1980). Guide to stress reduction. U.S.A. Peace Press.

Maultsby, M. C., Jr. (1975, June). The evolution of rational behavior therapy. Paper presented at the First National Conference of Rational Emotive and Behavioral Therapists, Chicago, Illinois.

Mayer, J., Black, R., & MacDonall, J. (1978). Child care in famillies with an alcohol addicted parent. In F. A. Seixas (Ed.), Currents in alcoholism. Vol. 4. Psychiatric, psychological, social, and epidemiological studies. New York: Grune & Stratton.

McAuley, T., Longabaugh, R., & Gross, H. (1978). Comparative effectiveness of self and family forms of the Michigan Alcoholism Screening Test. Journal of Studies on Alcohol, 39(9), 1622-1626.

McCrady, B. S. Paolino, T. J., Longabaugh, R. L., & Rossi, J. (1977). Effects on treatment outcome of joint admission and spouse involvement in treatment of hospitalized alcoholics reported. In T. J. Paolino & B. S. McCrady (Eds.), The alcoholic marriage. New York: Grune & Stratton.

McCubbin, H. (1979, August). Integrating coping behavior in family stress theory. Journal of Marriage and the Family, 41, 237-244.

McCubbin, H., Comeau, J., & Harkins, J. (1979). Family inventory of resources for management (FIRM). St. Paul, Minnesota: Family Social Science, University of Minnesota.

McCubbin, H., & Dahl, B. (1976). Prolonged family separation in the military: A longitudinal study. In H. I. McCubbin, B. Dahl, and E. Hunter (Eds.), Families in the military system (pp. 112-114). Beverly Hills: Sage Publications.

McCubbin, H., Dahl, B., Lester, G., Benson, D., & Robertson, M. (1976, August). Coping repertoires of families adapting to prolonged war-induced separations. Journal of Marriage and the Family, 38, 461-471.

McCubbin, H., Hunter, E., & Dahl, B. (1975). Residuals of war: Families of prisoners of war and servicemen missing in action. Journal of Social Issues, 31, 95-109.

McCubbin, H., Joy, C. B., Cauble, E. A., Comeau, J. K., Patterson, J. M., & Needle, R. H. (1980, November). Family Stress and coping: A decade review. Journal of Marriage and the Family.

McCubbin, H., & Marsden, M. (1979). The military family and the changing military profession. In F. Margiotta (Ed.), The changing world of the American military (pp. 207-222). Boulder, Colorado: Westview Press.

McCubbin, H., McCubbin, M., Patterson, J., Cauble, A., Wilson, L., & Warwick, W. (1977). CHIP-coping health inventory for parents: An assessment of parental coping patterns in the care of the chronically ill child. In H. McCubbin (Ed.), Family stress, coping and social support. New York: Springer Publishing Company.

McCubbin, H., & Metres, P. (1974) Maintaining hope: The dilemma of parents of sons missing in action. In H. McCubbin, B. Dahl, P. Metres, Jr., E. Hunter, and J. Plag (Eds.), Family separation and reunion (pp. 169-178). Washington, D.C.: U.S. Government Printing Office.

McCubbin, H., & Olson, D. (1980) Beyond family crisis: Family adaptation. Paper presented at the Families in Disaster Conference, Uppsala, Sweden.

McCubbin, H., Wilson, L., & Patterson, J. (1979). Family inventory of life events and changes (FILE). St. Paul, Minnesota: Family Social Science, University of Minnesota.

McGrath, J.E. (Ed.). (1970). Social and psychological factors in stress. New York: Holt.

McKenna, T., & Pickens, R. Alcoholic children of alcoholics. Journal of Studies on Alcohol, 42(11).

Mechanic, D. (1974). Social structure and personal adaptation: Some neglected dimensions. In G. V. Coelho, D. A. Hamburg, and J. E. Adams (Eds.), Coping and adaptation (pp. 32-44). New York: Basic Books.

Meeks, D. E., & Kelly, C. (1970). Family therapy with the families of recovering alcoholics. Quarterly Journal of Studies on Alcohol, 31.

Mehrabian, A. (1968a). Relationship of attitude to seated posture, orientation, and distance. Journal of Personality and Social Psychology, 10, 26-30.

Mehrabian, A. (1968b). Inference of attitudes from the posture, orientation and distance of a communicator. Journmal of Consulting and Clinical Psychology, 32, 296-308.

Menaghan, E. (in press) Assessing the impact of family transitions on marital experience: Problems and prospects. In H. McCubbin (Ed.), Family stress, coping and social support. New York: Springer Publishing Company.

Milgram, S. (1970). The experience of living in cities. Science, 167, 1461-1468.

Mills, K. C., Bean, J.W., Hutcheson, J.S., & Ewing, J. A. (1977). The temporal and volumetric components of stress induced drinking in rats. Plenum Press: New York.

Minuchin, S. (1982, October). Reflections on boundaries. American Journal of Orthopsychiatry, 52(4).

Mitchell, H. E. (1959). The interrelatedness of alcoholism and marital conflict. 4. Interpersonal perception theory applied to conflicted marriages in which alcoholism is and is not a problem. American Journal of Orthopsychiatry, 29, 547-559.

Mitchell, H. E., & Mudd, E. H. (1957). The development of a research methodology for achieving the cooperation of alcoholics and their nonalcoholic wives. Quarterly Journal of Studies on Alcohol, 18, 649-657.

Moore, R. A. (1972). The diagnosis of alcoholism in a psychiatric hospital; a trial of the Michigan Alcoholism Screening Test (MAST). American Journal of Psychiatry, 128, 1565-1569.

Moos, R. (1977). Coping with physical illness. New York: Plenum Medical Book Company.

Moos, R. H., Bromet, E., Tsu, V., & Moos, B. (1981). Family characteristics and the outcome of treatment for alcoholism. Journal of Studies on Alcohol, 42(11).

Morey, L. C., & Blashfield, R. K. (1981). Empirical classifications of alcoholism. Journal of Studies on Alcohol, 42(11), 925-937.

Mowren, H. R. (1940). A psychocultural analysis of the alcoholic. American Sociological Review, 15, 546-557.

Muchowski, P. M., & Washousky, R. (1977). A programmic approach to treating the alcoholic family. Paper presented at the ADPA Convention, Detroit, Michigan.

Murray, J. A. H., Bradley, H., Craigie, W. A., & Onions, C. T., (Eds.). (1933). The Oxford english dictionary. Vol. X, pp. 1110a-11c, Vol. III, pp. 532c-533a.

Myrsten, A. (1977). Interaction of alcohol with psychological stress. In M. M. Gross (Ed.), Alcohol intoxication and withdrawal (Vol. 3, pp. 319-331). Plenum Press: New York.

Nathan, P. E. Ph.D. (1981). Nonproblem drinking oputcomes: The data on controlled drinking. Advances in Alcoholism, 2(12).

Neff, J. A., & Husaini, B. A. (1982, March). Life events, drinking patterns and depressive symptomatology. Journal of Studies on Alcohol, 43(3).

Neufeld, R. W. J. (1982). Psychological stress and psychopathology. New York: McGraw-Hill.

New Zealand Department of Health. (1981). The public Health. Report of the Department of Health for the year ended 31 March 1981. Wellington: Government Printer.

Nicoletti, Jr., J. A. (1972). Anxiety management training. Dissertation, Abstracts International, 33, 6089B. (University Microfilms No. 73-13,059,197)

Noone, R., & Reddig, R. (1976). Case studies in the family treatment of drug abuse. Family Process, 15, 325-332.

Oie, T. P. S., & Jackson, P. R. (1982). Social skills and cognitive behavioral approaches to the treatment of problem drinking. Journal of Studies on Alcohol, 32(5).

O'Farrell, T. J. (1975). Marital stability among wives of alcoholics: Reported antecedents of a wife's decision to separate from or endure her alcoholic husband. Dissertation Abstracts International, 36, 1927B. (University Microfilms No. 75-21,006)

O'Farrell, T. J., Cutter, H. S. G., & Floyd, F. J. (1985). Evaluating behavioral marital therapy for male alcoholics: Effects on marital adjustment and communication from before to after treatment. Behaviour Therapy, 16, 147-167.

O'Farrell, T. J., Harrison, R. H., & Cutter, H. S. G. (1981). Marital stability among wives of alcoholics: An evaluation of three explanations. British Journal of Addiction, 76, 175-189.

O'Hagan, J. J. (Ed.). (1983). The more subtle effects of chronic alcohol usage on the brain. Paper presented at the 10th Biennial Summer School of the National Society on Alcoholism and Drug Dependence, Upper Hutt, Wellington, New Zealand.

Olson, D. H. (1970, November). Marital and family therapy: integrative review and critique. Journal of Marriage and the Family.

Olson, D. H. (1980, November). Marital and family therapy: A decade review. Journal of Marriage and the Family.

Olson, D. H. (1976). Treating relationships. Lake Mills, Iowa: Graphic Press.

Orford, J. (1973). Alcoholism and marriage. Journal of Studies on Alcohol, 36(11).

Orford, J. (1975). Alcoholism and marriage: The argument against specialism. Journal of Studies on Alcohol, 36, 1537-1560.

Orford, J. F., & Guthrie, S. (1968). Coping behavior used by wives of alcoholics: A preliminary investigation. Proceedings of the International Congress on Alcohol and Alcoholism, Abstract 28th, p. 97.

Orford, J. F., Guthrie, S., Nicholls, P., Oppenheimer, E., Egert, S., & Hensman, C. (1975). Self-reported coping behavior of wives of alcoholics and its association with drinking outcome. Journal of Studies on Alcohol, 36, 1254-1267.

Orford, J., Oppenheimer, E., Egert, S., Hensman, C., & Guthrie S. (1976). The cohesiveness of alcoholism-complicated marriages and it's influence on treatment outcome. British Journal of Psychiatry, 28, 318-339.

Overall, J. E., & Hollister, L. E. (1979). Comparative evaluation of research diagnostic criteria for schizophrenia. Archives of General Psychiatry, 36, 1198-1205.

Paolino, T. J., & McCrady, B. S. (1976, February). Joint admission as a treatment modality for problem drinkers: A case report. American Journal of Psychiatry, 133(2).

Paolino, T. J., and McCrady, B. S. (1977). The alcoholic marriage alternative perspectives. New York: Grune & Stratton.

Paolino, T. J., McCrady, B. S. & Diamond, S. (1978). Statistics on alcoholic marriages: An overview. The International Journal of the Addictions, 13(8), 1285-1293.

Paolino, T. J., McCrady, B. S., & Kogan, K. B. (1978). Alcoholic marriages: A longitudinal empirical assessment of alternative theories. British Journal of Addiction.

Parker, E. S., & Noble, E. P. (1977). Drinking practices and cognative functioning. Plenum Press: New York.

Pattison, E. M. (1968). A critique of abstinence criteria in the treatment of alcoholism. International Journal of Sociology and Psychiatry, 14, 260-267.

Pattison, E. M., Courlas, P. G., Patti, R., Mann, B., & Mullen, D. (1965). Diagnostic-therapeutic intake groups for wives of alcoholics. Quarterly Journal of Studies on Alcohol, 26, 605-616.

Pattison, E. M., Headley, E. B., Gleser, G. C., & Gottschalk, L. A. (1968). Abstinence and normal drinking; an assessment of changes in drinking patterns in alcoholics after treatment. Quarterly Journal of Studies on Alcohol, 29, 610-633.

Pattison, M. E. (1981). Differential diagnosis of the alcoholism syndrome: Clinical implications of empirical research. In E. Gottheil (Ed.), Matching patient needs and treatment methods in alcoholism. New York: Grune & Stratton.

Pattison, M. E. (1977, March). Ten years of change in alcoholism treatment and delivery system. American Journal of Psychiatry, 134(3).

Pattison, M. E., Defrancisco, D., Wood, P., Frazier, H., & Crowder, J. (1975, December, 1975). A psychosocial kinship model for family therapy. American Journal of Psychiatry, 132(12).

Pearlin, L., & Schooler, C. (1978, March). The structure of coping. Journal of Health and Social Behavior, 19, 2-21.

Pervin, L. A. & Lewis, M. (Eds). (1978). Perspectives in interactional psychology. New York: Plenum Press.

Pickens, R., Cunningham, M. R., Heston, L. L., Eckert, E., & Gustafson, L. K. (1977). Self-Administration of sedatives by humans. New York: Plenum Press.

Piercy, F. P., Sprenkle, D. H. & Associates. (1986). Family therapy source book. New York: Guilford Press.

Plueckhaln, V. D. (1982). Alcohol consumption and death by drowning in adults. Journal of Studies on Alcohol, 43(5).

Pohorecky, L. A., & Brick, J. (Eds.). (1983). Stress and alcohol use. Proceedings of the First International Symposium on Stress and Alcohol Use. New York: Elsevier Science Publishing Co., Inc.

Pomerleau, O. (1979, November). Research priorities in alcohol studies: The role of psychology. Journal of Studies on Alcohol, (Suppl. 8).

Popham, R. E., & Schmidt, W. (1981). Comments. Journal of Studies on Alcohol, 42(3).

Press L. (1975). Treating the family. Maryland State Medical Journal, 24(1), 32-36.

Price, G. M. (1945). A study of the wives of 20 alcoholics. Quarterly Journal of Studies on Alcohol, 5, 620-627.

Rae, J. B. (1972). The influence of the wives on the treatment outcome of alcoholics. British Journal of Psychiatry, 120, 601-13.

Rae, J. B., & Drewery, J. (1972). Interpersonal patterns in alcoholic marriages. British Journal of Psychiatry, 120, 615-621.

Rayner, T., & Chetwynd, J. (1984, September). High cost of alcohol abuse - New study. Alcohol Liqour Advisory Council Newsletter, p. 1.

Reynolds, F. D., O'Leary, M. R., Ph.D., Walker, R. D. (1982). Family environment as a predictor of alcoholism treatment outcome. The International Journal of the Addictions, 17(3), 505-512.

Rimmer, J., & Winokur, G. (1972). The spouses of alcoholics: An example of assortative mating. Dis. Ner. Sys., 33, 509-511.

Rothman, K., & Keller, A. (1972). The effect of joint exposure to alcohol and tobacco on risk of cancer of the mouth and pharnyx. Journal of Chronic Diseases, 25, 711-716.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80 (Whole number 609).

Rubington, E. (1980). The first year of abstinence: Notes on an exploratory study. Journal of Studies on Alcohol, 41(5).

Safilios-Rothschild, C. (1970). "The study of family power structure: A review 1960-1969."

Sager, R. R. (Ed.). (1978). Georgetown family symposia. Washington, D.C.: Georgetown University Press.

Schaffer, J. B., & Tyler, J. D. (1974). Degree of sobriety in male alcoholics and coping styles used by their wives. British Journal of Psychiatry, 135, 431-437.

Scheier, I. H., & Cattel, R. B. (1961). Handbook for the Neuroticism Scale Questionnaire - The NSQ. Champaign, Illinois. The Institute for Personality and Ability Testing.

Schneiderman, I. (1975). Family thinking in prevention of alcoholism. Academic Press, Inc. 1975. Preventive Medicine 4, 296-309.

Selye, H. (1956). The stress of life. New York: McGraw-Hill.

Selye, H. (1975, June). Confusion and controversy in the stress field. Journal of Human Stress, 37-44.

Selye, H. (1980). Selye's guide to stress research. (Vol. 1). New York: Van Nostrand Reinhold Co.

Selzer, M. L. (1971, June). The Michigan Alcoholism Screening Test: The quest for a new diagnostic instrument. American Journal of Psychiatry, 127(12).

Selzer, M. L., Vinokur, A., & Van Rooijen, L. (1975). A Self-Administered Short Michigan Alcoholism Screening Test (SMAST). Journal of Studies on Alcohol, 36(1), 117-126.

Sherfey, M. (1955). Psychopathology and character structure in chronic alcoholics. In O. Diethelm (Ed.) Etiology of chronic alcoholism. Illinois: Charles C. Thomas.

Shouksmith, G. (1986). Causes, impact and moderation of occupational stress. New Zealand: Massey University.

Simmons, R., Klein, S.,and Thorton, K. (1973). The family member's decision to be a kidney transplant donor. Journal of Comparative Family Studies, 4, 88-115.

Sloboda, S. (1974). The children of alcoholics: A neglected problem. Hospital and Community Psychiatry, 25, 605-606.

Smith, C. G. (1969). Alcoholics: Their treatment and their wives. British Journal of Psychiatry, 115, 1039-1042.

Smith, J. W., & Layden, T. A. (1972). Changes in psychological performance and blood chemistry in alcoholics during and after hospital treatment. Quarterly Journal of Studies on Alcohol, 33, 379-394.

Sorenson, A. A., & Cutter, H. (1982). Mystical experience, drinking behavior and the reasons for drinking. Journal of Studies on Alcohol, 43(5).

Sowder, B., Dickey, S., & Glynn, T. J. (1976). Family therapy: A summary of selected literature. National Institute of Drug Abuse.

Spielberger, C. D. and Sarason, I. G. (1975). Child-Rearing antecedents of low and high anxiety eighth-grade children. In C. D. Spielberger & I. G. Sarason (Eds.), Stress & anxiety (Vol. 4). New York: Halsted Press.

Spielberger, C. D., & Sarason, I. G. (1975). Stress and coping mechanisms. In C. D. Spielberger & I. G. Sarason (Eds.), Stress & anxiety (Vol. 5, pp. 19-24). New York: Halsted Press.

Spielberger, C. D. and Sarason, I. G. (1975). Theoretical considerations. In C. D. Spielberger & I. G. Sarason (Eds.), Stress & anxiety (Vol. 4, pp. 230-241). New York: Halsted Press.

Spitzer, R. L., Endicott, J. and Williams, J. B. W. (1979). Research diagnostic criteria. [Letter to the editor.] Archives of General Psychiatry, 36, 1381-1382.

Stafford, R. A. (1982). Locus of drinking problems as perceived by alcoholics and treatment personnel. Journal of Studies on Alcohol, 43(5).

Steinglass, P. (1971, September). Interational issues as determinants of alcoholism. American Journal of Psychiatry, 128(3).

Steinglass, P. (1975). The simulated drinking gang: An experimental model for the study of a systems approach to alcoholism. The Journal of Nervous and Mental Disease, 161(2).

Steinglass, P. (1976). Experimenting with family treatment approaches to alcoholism, 1950 - 1975: A review. Family Process, 15, 97-123.

Steinglass, P. (1977). Family therapy in alcoholism. treatment and rehabilitation of the chronic alcoholic. New York: Plenum Press.

Steinglass, P. (1978). The conceptualization of marriage from a systems theory perspective. In T. J. Paulino, & B. S. McCrady (Eds.), Marriage and marriage therapy. New York: Brunner/Mazel.

Steinglass, P. (1980). A life history model of the alcoholic family. Family Process, 19, 211-226.

Steinglass, P. (1981, May). The alcoholic family at home. Archives of General Psychiatry, 38.

Steinglass, P. (1982). The impact of alcoholism on the family. Relationship between degree of alcoholism and psychiatric symptomatology. Journal of Studies on Alcohol, 42(3).

Steinglass, P., Davis, D. I., & Berenson, D. (1975, May). In-hospital treatment of alcoholic couples. Paper presented at the American Psychiatric Association 128th Annual Meeting, Anaheim, California, May 5, 1975.

Steinglass, P., Davis, D. I., & Berenson, D. (1977). Observations of conjointly hospitalized 'alcoholic couples' during sobriety and intoxication: Implications for theory and therapy. Family Process, 16(1).

Steinglass, P., Weiner, S., & Mendelson, J. H. (1971a). A systems approach to alcoholics. A model and its clinical application. Archives of General Psychiatry, 24, 401-408.

Steinglass, P., Weiner, S., & Mendelson, J. H. (1971b). Interactional issues as determinants of alcoholism. American Journal of Psychiatry, 128, 275-279.

Straus, R. (1950). Excessive drinking and its relationship to marriage. Marriage & Family Living, 12, 79-82.

Straussner, S. L. (1979). Effects of alcoholism on the family. Health and Social Work, 4, 111-127.

Tennant, C., & Andrews, G. (1976). A scale to measure the cause of life events. Australian and New Zealand Journal of Psychiatry, 11, 163-167.

Terman, L. M. (1938). Psychological factors in marital happiness. New York: McGraw-Hill.

Voges, K. G., Long, N. R., Roache, M. S., & Shouksmuch, G. A. (1982). The perception of stress by prison officers and their wives: An occupational study. Department of Psychology, Massey University.

Wallich, E., & Cogan, D. (1965). Modes of thinking in young children. New York: Plenum Press.

Ward, R. F., & Faillace, L. A. (1970). The alcoholic and his helpers: A systems view. Quarterly Journal of Studies on Alcohol, 31, 684-691.

Watzlawick, P. (1966). A structural family interview. Family Process, 5, 256-271.

Watzlawick, P., Weakland, J. H., and Fisch, R. (1974). change: Principles of problem formation and problem Resolution. New York: Norton.

Webb, N. L., Pratt, T., & Charmichael, J. S. (1978). Focus on the family as a factor in differential treatment outcome. The International Journal of Addictions, 13(5), 783-795.

Weiner, S., Tamerin, J. S., Steinglass, P., & Mendelson, J. H. (1971). Familial patterns in chronic alcoholism: A study of a father and son during experimental intoxication. American Journal of Psychiatry, 127, 1646-1651.

Welford, A. T. (1973). Stress and performance. Ergonomics, 16(3), 567-580.

Wells, R. A., Dilkes, T. C., & Trivelli, N. (1972). The results of family therapy: A critical review of the literature. Family Process, 7, 189-207.

Whalen, T. (1953). Wives of alcoholics: Four types observed in a family service agency. Quarterly Journal of Studies on Alcohol, 14, 632-641.

Williams, J. (1972). Final report: Short-Term family therapy for alcoholics; A research and evaluation study. Avon Park, Florida: Department of Health and Rehabilitation Services, Division of Mental Health, Bureau of Alcoholic Rehabilitation.

Williams, W. (1975). Relaxation training in the management of anxiety and tension. Modern Medicine Australia, 18(2), 50-51.

Wine, J. D. & Smye, M. D. (Eds.). (1981). Social competence. New York: Guilford Press.

Woititz, J. C. (1978). Alcoholism and the family: A survey of the literature. Journal of Alcoholism and Drug Education, 23, 18-23.

Wolin, S. J., Steinglass, P., Sendroff, P., Davis, D., & Berenson, D. (1975). Marital interaction during experimental intoxication and the relationship to family history. In M. M. Gross (Ed.), Alchol intoxication and withdrawal. New York: Plenum Press.

Wolin, S. J. (1982, February). Some characteristics of families with alcohol abuse. Reprinted from Advances in alcoholism, 2(14).

Wolpe, J., & Lazarus, A. A. (1966). Behavior therapy techniques: A guide to the treatment of neuroses.. Oxford: Pargamon Press.

Women's Drug Research Project. (1978). Addicted women: Family dynamics, self perceptions, and support systems. National Institute on Drug Abuse.

World Health Organization. (1964). Cancer agents that surround us. World Health, 9, 16-17.

Wrubel, J., Benner, P., & Lazarus, R. S. (1981). social competence from the perspective of stress and coping. In J. D. Wine (Ed.), Social competence (pp. 61-99). London: Guilford Press.

Zaleznik, A., Kets de Vries, M., & Howard, J. (1977). Stress reactions in organizations: Syndromes, causes and consequences. Behavioral Science, 22, 151-162.