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PATTERNS OF DRINKING AND LEVEL OF ADAPTIVE FUNCTIONING IN YOUNG ALCOHOLIC FAMILIES

By

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ABSTRACT

PATTERNS OF DRINKING AND LEVEL OF ADAPTIVE FUNCTIONING IN YOUNG ALCOHOLIC FAMILIES

By

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This study examined the relationship between patterns of drinking and level of adaptive functioning in a non-clinical sample of young alcoholic families in which at least the husband was alcoholic. The husbands were categorized into binge and steady groups based upon their self-reported drinking behavior. Between-groups comparisons were made on measures of alcohol consumption and the adverse consequences of such consumption, family functioning, social functioning, and capacity for adaptation (i.e., utilization of effective coping strategies, ratings of adaptive functioning and psychological health). Levels of antisocial behavior and collateral drug use were covaried to test whether these variables accounted for any of the differences between the binge and steady groups.

The study provided only partial replication of the results reported by other researchers regarding levels of alcohol consumption and the results of such consumption in binge and steady drinking alcoholic men. The study also failed to clearly support hypotheses related to differing

levels of adaptive functioning in binge and steady drinkers and their partners.

To all who had the love and patience to teach me about rowboats, learning to fly, Little Jack Horner, making rope, playing chess, pieces of gold, struggling versus floundering, putting out fires, responsibility, being alone, and trust.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

Introduction to the Problem and Review of the Literature

Introduction

Nearly three decades have passed since the publication of the earliest empirical attempts to study marital relationships in which one partner is an alcoholic (Ballard, 1959; Mitchell, 1959). This is not to suggest that such marriages had not been studied prior to 1959, but that earlier literature had, for the most part, addressed alcoholic marriages by examining each spouse in isolation. The studies by Ballard and Mitchell, by contrast, represented initial attempts to focus attention on the marital relationship as a subject of investigation in its own right, rather than examining it as a vehicle wherein the alcoholic and his or her spouse enact their own individual roles.

As increasing numbers of investigators began to turn their attention to the study of alcoholic marriages, both the theoretical underpinnings and the research methodologies involved became more diverse. Researchers have drawn upon general systems theory, communication theory, social learning theory, and, more recently, family interaction frameworks to help them design models to predict and explain the behavior of spouses in alcoholic marriages. Although there is considerable diversity in the ways in which various investigators and theorists conceptualize alcoholic marital

interaction, there is a great deal of common ground as well. As Jacob and Seilhamer (1987) have noted:

> "Regardless of emphasis...this literature has clearly implied that the alcoholic and his spouse exhibit unique relationship patterns, that these patterns are repetitive and identifiable, and that such interchanges are relevant to the emergence and perpetuation of abusive drinking" (p. 536).

The present study continues the examination of the above mentioned repetitive and identifiable patterns by extending the work of investigators interested in family interaction models of alcohol abuse. Family interaction models suggest that although alcohol abuse may be detrimental and dysfunctional when viewed from the perspective of the individual, identical patterns of abusive drinking may, from the perspective of the family, be seen as actually serving adaptive and stabilizing functions in some families (Jacob, Favorini, Meisel, & Anderson, 1978).

As a result of efforts to identify and clarify the ways in which alcohol consumption might provide adaptive and stabilizing functions for some families, several investigators have attempted to identify drinking-related factors which may have a consistent impact on family-level behavior. One such factor is the pattern of alcohol consumption (steady v. binge drinking patterns). The current research will examine the relationships between this drinking-related factor and several indices of individual- and family-level functioning in a nonclinical sample of young families in which the father is alcoholic.

LITERATURE REVIEW

The study of alcoholic marital and family interaction has undergone radical changes on both the theoretical and empirical levels since its beginnings in the mid 1950s. This literature review will document some of those changes, and will provide a frame within which to view the present study.[1]

Early Clinical Reports

There are two early clinical reports which, in many ways, set the stage for much of the empirical work to follow. These studies were important not so much for their findings per se, but rather for their suggestions regarding ways to think about alcoholic family systems, as well as for their suggestions regarding future research efforts.

The first of these, by Joan Jackson (1954), provided researchers with a new perspective on the wives of chronic alcoholics. Prior to Jackson's paper, most theorists writing about the wives of alcoholics had embraced some variation of the "disturbed person" hypothesis (Futterman, 1953; Price, 1945; Whalen, 1953). This hypothesis cast wives in the "villain" role: they were seen as disturbed women with certain types of personality structures who, in order to satisfy deep unconscious needs, picked weak men that they could then dominate. This hypothesis assumed that the wife's pathology

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[1]Several section headings have been borrowed from Jacob and Seilhamer (1987). Their influence on this review is gratefully acknowledged.

existed prior to both the marriage and the onset of the husband's alcoholism.

Jackson proposed that this hypothesis was flawed, in that it lacked a proper developmental perspective. It looked at wives whose husbands were in advanced stages of alcoholism, and assumed that any observed pathology had always existed. Jackson suggested an alternative--the "sociological stress" hypothesis--that cast wives in the "victim" role: they were seen as women who had undergone similar stressful experiences, and were thus exhibiting similar reactions to what Jackson referred to as the "cumulative crisis" created by their husbands alcoholism (p. 563). After suggesting this alternative view, Jackson then proposed seven stages of adjustment through which all alcoholic families passed. These stages were based primarily on the compilation of three years of verbatim notes of discussions of wives at Al-Anon meetings (also see Bailey [1961] or Ablon [1976] for a further review of the literature regarding wives of alcoholics).

Jackson made two other contributions relevant to later research efforts. The first was the proposal of a model of family functioning that was systemically oriented, and took into account the influences of both personal and familial learning histories, as well as culturally defined roles and values. Jackson suggested that all family members act to maintain stability, and that these actions are guided by individual personality structure, family roles, the history

of the crisis, and the past effectiveness of any given family action. In addition, the actions of family members are guided by cultural definitions of the problem, cultural prescriptions regarding family roles, and culturally determined values regarding family solidarity, sanctity, and self-sufficiency. Jackson later augmented this model by considering factors such as the degree, duration, and type of alcoholism, the present state of the alcoholic (drunk v. sober), and the types of concurrent subcrises being experienced by the alcoholic and his or her family (Jackson, 1959). Even though it was developed in the mid to late 1950's, this is a relatively complete psychosocial model of family functioning.

The second of Jackson's contributions was her suggestion that a number of areas warranted future research. She emphasized the importance of considering cognitive distortions which might bias either spouse's report of their situation, and she called for an examination of problems specific to different types of drinking patterns. She reported that her data indicated different sequelae for different populations: "...for example, the periodic drinker, the steady drinker, the solitary drinker, the sociable drinker, the drinker who becomes belligerent, and the drinker who remains calm." (p. 585).

The second important clinical report was an attempt by Lemert (1960) to replicate Jackson's (1954) stages of familial adjustment to alcoholism. Lemert examined drinking behavior,

attributes of the family, and changes in family structure as reflected in interviews with spouses and immediate relatives of alcoholics. Respondents were lower-middle-class, varied widely in age, and were obtained via court records of commitment actions and divorce cases, referrals by probation officers and public assistance workers, and volunteers from Al-Anon groups.

Lemert's conclusions were both like and unlike those of Jackson. Unlike Jackson, Lemert found it impossible to demarcate clear stages of adjustment, and instead suggested that it was more feasible to cluster events as occurring either early, middle, or late in the adjustment process. Like Jackson, Lemert's more lasting contribution came from his suggestions for future research.

First, he called attention the fact that the same actions may have very different meanings for different families, and that different families react to alcohol use in different ways. This observation was to be repeated and strongly emphasized by Steinglass and his colleagues, starting in the 1970s and continuing to the present.

Second, Lemert called for an examination of these relationships before marriage, since many wives of alcoholics were aware of the problem before they married. He suggested looking not only at courtship and mate selection, but at individual levels of psychological functioning as well.

Transitional Studies

As mentioned in the introduction, the studies by Ballard (1959) and Mitchell (1959) marked the beginning of a shift in the alcoholism literature away from studying spouses as isolated individuals, and towards studying them as members of an alcoholic marriage--a relationship worthy of examination in its own right. Because the Ballard and Mitchell studies were a part of the shift from individual to dyadic levels of analysis, they are included in a group of studies referred to by Jacob and Seilhamer (1987) as "transitional studies". This section examines a number of these works.

The studies of both Ballard (1959) and Mitchell (1959) were part of a larger project designed to examine the relationship between alcoholism and marital conflict (Mitchell & Mudd, 1957). Both studies utilized subjects who had come to a clinic seeking marital counseling. The average ages of subjects in both studies were in the mid to late 30's, with marriages of approximately 10-12 years duration, and a wide range of years of education.

Ballard's paper addressed the question of whether or not the existence of alcoholism added "a distinctive tone" to marital conflict. That is, would conflicted marriages containing an alcoholic spouse differ significantly from similar marriages in which neither spouse was alcoholic?

To answer that question, Ballard examined selected MMPI scores of two sets of couples with conflicted marriages--one

with an alcoholic member and one without. There were few differences between the groups, and Ballard concluded that, for the most part, "the conflicted marriages that also involved alcoholism did not seem to constitute an altogether special case" (p. 541).

Mitchell (1959) also attempted to address the issue of the distinctiveness of conflicted alcoholic marriages, and whether or not they were significantly different from conflicted marriages where neither partner was alcoholic. Using interpersonal perception theory as a conceptual base, Mitchell argued that since the questions being asked were of an interactive nature, they could best be answered using the paired responses of marriage partners. Following this argument, Mitchell administered a personality inventory to two groups of conflicted marriage partners: one group of 28 couples in which the husband was an alcoholic, and a group of 28 couples in which neither spouse was alcoholic. The two groups were matched on age and religion, but the non-alcoholic group had attained a slightly higher level of education.

Mitchell asked spouses to make appraisals of the personalities of themselves and of their partners. Like Ballard (1959), Mitchell found that, on most measures, the experimental and control groups were quite similar. However, there were important group differences on measures of power, control, and dominance, as well as on measures of each partner's willingness to accept or assign responsibilities.

These issues were much more problematic for the alcoholic couples than for the control couples. In terms of interpersonal perceptions, the spouses in alcoholic marriages were unclear as to what each other's roles were, as well as how those roles were to be assigned and fulfilled.

In examining the studies by Ballard and Mitchell, it is clear that each has a number of methodological weaknesses. Both relied on self-report and examined relatively global and static trait descriptions, and neither used a nonpsychiatric control group (Jacob & Seilhamer, 1987). Like the clinical studies discussed in the last section, however, the importance of these studies lies not in their findings per se, but rather in their focus on the alcoholic marriage as the unit of study, and the impetus they provided for future studies of alcoholic marital interaction.

It was not until a decade later that interpersonal perception theory was again applied to the study of alcoholic marriages. Drewery and Rae (1969) set out to measure what they called "mutual marital insight" (p. 299), or the extent to which one spouse's description of the other matches the self-description of the second spouse (i.e. the similarity between a wife's description of her husband and his own self-description). To measure the extent to which such descriptions are shared, the investigators used the Interpersonal Perception Technique, which requires completion of the Edwards Personal Preference Schedule (Edwards, 1959)

from three points of view: "myself as I am", "my spouse as I see him/her", and "myself as I think my spouse sees me". The schedule was completed by 22 couples in which the husband had been admitted to a hospital with the presenting symptom of alcoholism, and by 26 normal control couples. The controls were usually couples known to the authors, who could be persuaded to take part in the assessment protocol. Couples in both groups were described as intelligent and middle class; on average the experimental couples were in their mid 40's, the control couples were in their mid 30's.

The investigators completed a number of analyses of perceived similarities and differences, and found, contrary to their expectations, that patients and controls did not differ significantly on any measures of predictive success. That is, there were no major differences in "mutual marital insight". It is important to note, however, that the nature of the insight was quite different in the two groups: the control husbands predicted that their wives would understand them, the alcoholic husbands predicted that their wives would <u>not</u> understand them, and both were correct. Overall, spouses in the experimental group exhibited a good deal of sociosexual role confusion, with each spouse saying that the other had an independence-dependence conflict. Specifically, the alcoholic men saw themselves as dependent, but their wives saw them as having strong needs for autonomy and aggression; conversely, the wives of alcoholics described themselves as hyperfeminine,

but their husbands saw them as aggressive and dominant. In short, the data indicated that the spouses in the experimental group had unshared and unclear perceptions of both self and other.

The last of the transitional studies to be reviewed also examines the extent to which perceptions of self and other are shared, but views these shared perceptions not as a measure of "mutual marital insight" as in Drewery and Rae's (1969) study, but rather as a indicator of the nature of the communication patterns existing in a marriage. Based upon their own clinical experience with alcoholic couples in group psychotherapy, as well as on writings in the area of self-disclosure, Hanson, Sands, and Sheldon (1968) suggested that the flow of information in alcoholic marriages was unidirectional instead of bidirectional. That is, the non-alcoholic partner discloses more information about him or herself than does the alcoholic partner. The investigators hypothesized that, given this imbalance in the flow of information, if each spouse is asked to predict the feelings and opinions of the other, the predictions of the alcoholic spouse should be more accurate than those of the non-alcoholic spouse. The investigators tested this hypothesis with 19 couples participating in group therapy for the husband's alcoholism. On average, couples were in their early to mid 40's.

Couples filled out a Personal Behavior Questionnaire which assessed their feelings, attitudes, and values regarding important areas of their lives. Each spouse filled out two questionnaires: one for themselves, and one predicting how their spouse would respond. Analyses of these questionnaires supported the hypothesis that the predictions of the alcoholic spouse would be more accurate than those of the non-alcoholic spouse--presumably due to the unidirectional flow of information in the marriage.

Although imperfect, the studies by Drewery and Rae (1969) and Hanson et al. (1968) represented important steps in the development of family interaction models of alcohol use: the former because it continued the shift in focus begun by both Ballard and Mitchell in 1959, and the latter because it alerted investigators to the importance of communication patterns in alcoholic marriages.

Interaction Studies: Outcome Measures

The two studies to be reviewed in this section represent both a theoretical extension of, and a methodological departure from, earlier work. Theoretically, they are a logical extension of previous interest in patterns of interaction and styles of communication in alcoholic marriages. Methodologically, however, there are few similarities. Because the work of Drewery and Rae (1969) and Hanson et al. (1968) was based on individual perceptions of self and other, actual patterns of interaction and styles of

communication could only be inferred. By contrast, the studies in this section start out with the expressed intent of studying actual patterns of interaction, and they accomplish that goal by examining the outcomes of various laboratory-based interaction games.

The first of these studies was conducted by Gorad (1971) in an attempt to support a communication-systems conceptualization of alcoholic marital interaction (Gorad, McCourt, & Cobb, 1971). Drawing on the work of several communication theorists (Haley, 1963; Watzlawick, Beavin, & Jackson, 1967), Gorad et al. (1971) suggested that drunken behavior, like all behavior, sends two messages: a content message and a command message. The command message gives the receiver extra information about the content message and how it is to be interpreted. In the case of drunken behavior, the command message is "I am drunk and therefore not responsible for my behavior". It is this responsibility-avoidance aspect of the communication of alcoholics that is most important for Gorad et al. (1971): "To be able to act and thus communicate one's definition of relationships, and to have everyone know that one is not responsible for one's acts, puts one in a position of unusual control" (pp. 653-654). Gorad et al. go on to argue that this responsibility-avoiding behavior is not just present when the alcoholic is drinking, but rather that it is a communication

style that pervades all of the alcoholic's interactions, both drunk and sober.

In order to test this hypothesis, Gorad (1971) engaged couples in a laboratory game situation requiring them to make decisions regarding the distribution of money. Twenty couples in which the husband was alcoholic and twenty matched control couples served as subjects. Average ages of husbands and wives in both groups were in the mid to late 30's. In each game, the spouses were required to send one of three messages to one another to determine how a set amount of money was to be split between them. The messages, which were called Win, Share, and Secret Win, were sent through the experimenter, who served as an intermediary. If both spouses picked Share, then equal but moderate amounts of money were earned by each. If one spouse picked Win or Secret Win, and the other picked Share, then the former would earn a large amount of money, and the latter would lose money. If both picked Win or Secret Win, then both earned nothing. In Gorad's conceptualization, picking either a Win or Secret Win message was functionally equivalent to trying to put one's self in a "one-up" position relative to one's spouse. Choosing a Share message was seen as either a cooperative attempt to be equal, or a willingness to be put in a "one-down" position relative to one's spouse. Gorad added an interesting twist to the play of the game by instructing the spouses that the experimenter could occasionally substitute Secret Win for one of their choices,

but that neither of them would know when the switch had taken place. Spouses were further instructed that since this could happen at any time, they could play Secret Win, and their partner would never know whether it had been played by them or by the experimenter. Thus, choosing Secret Win was the functional equivalent of attempting to put one's self "one-up", while at the same time attempting to avoid responsibility for this action. In reality, the experimenter never substituted any of the subject's choices.

Gorad proposed three hypotheses regarding the alcoholic's responsibility-avoiding style of communication, the more direct responsibility-accepting styles of their wives, and the flexibility and outcomes of their mutual interactions. All three of Gorad's hypotheses were supported. Alcoholics did exhibit greater responsibility-avoiding behavior than did their spouses or the control husbands and wives. In addition, the wives of the alcoholics displayed levels of responsibility-accepting behavior equivalent to those of the control husbands and wives. Finally, alcoholic couples showed greater levels of competition, slight husband dominance, and little willingness to take risks by starting to pick Share messages.

This study extended earlier interest in patterns of communication and interaction in alcoholic marriages and was methodologically important in many respects. It introduced the use of a paradigm that was clearly interactional in nature

using a carefully controlled set of interactions, and it used a reliable and objective observation measure to assess these interactions (Jacob, Favorini, Meisel, & Anderson, 1978; Jacob & Seilhamer, 1987). These innovations notwithstanding, this work had two methodological flaws worth noting. First, very little information is provided regarding the subjects. Data such as current drinking status, treatment history, history of social problems resulting from drinking, etc. would all be useful in attempting to generalize Gorad's findings. In addition, the utilization of a nondistressed, nonalcoholic control group rules out the possibility of determining whether or not the differences in styles between groups were due simply to the general marital distress of the alcoholic group, rather than to the presence of alcoholism per se (Jacob & Seilhamer, 1987; Steinglass & Robertson, 1983).

Both of Gorad's design flaws were eliminated in a later study by Kennedy (1976). Kennedy included three groups of couples in his design: 11 couples in which the husband had been hospitalized for alcoholism within the previous year, 11 "normal" control couples, and 6 "psychiatric" control couples in which the wife had been hospitalized for a neurotic or psychotic condition within the previous year. The three groups of couples were in their early 40's, early 30's, and late 30's, respectively. The inclusion of the psychiatric control group, as well as the provision of information

regarding the treatment history of the alcoholics allows one to draw clearer conclusions regarding Kennedy's findings.

Kennedy assessed the behavior of the couples in a mixed-motive tax game which required that they negotiate to determine the distribution of a fixed amount of play money. Kennedy examined the basic constructs of cooperation and competition through an analysis of game outcomes (profits and losses), process measures (time scores and quits), and communication behaviors (lies, threats, accusations, etc.). Kennedy was attempting to answer two main questions: first, do alcoholic couples as a group display similar patterns of interactional behavior, and second, does the behavior of alcoholic couples differ from that of normal and psychiatric control couples.

Kennedy's results indicated great within-group variation in the interactional style of alcoholic couples. Thus, the data did not support Gorad's finding of a common style of alcoholic marital interaction. In addition, and in contrast to what had been expected, game outcome scores and communication scores for the alcoholic couples were closer to those of the normal controls than to those of the psychiatric contrast group.

In terms of Kennedy's second question, he was able to identify common features of interactional behavior which differentiated alcoholic couples from other couples in the study. Specifically, Kennedy found that even though alcoholic

couples exhibited great variability in interactional styles, these various styles were all characterized by "ineffective or distorted communication, rigidity, and extremeness" (p. 32)--features that were not uniformly displayed by either of the control groups.

In comparing his results to those of Gorad (1971), Kennedy suggested that his failure to replicate Gorad's findings may be related to differences in their alcoholic samples. Specifically, Kennedy selected his subjects from two different settings, and subjects from each setting differed on a number of treatment history variables. One subgroup was comprised of alcoholics from a state rehabilitation center who had been recently hospitalized, had been dry for shorter periods of time, and had participated in treatment for less time than the second subgroup. By contrast, the second subgroup was comprised of alcoholics from a private psychiatric hospital whose wives were more actively involved in treatment than were those of the first subgroup. Kennedy's inpatient sample resembled his psychiatric couples, while his outpatient sample more closely resembled the normal control couples, as well as more closely resembling Gorad's sample of alcoholics.

Kennedy had both methodological and theoretical comments about these subgroup differences. On the methodological level, Kennedy underscored the importance of specifying and matching couple variables beyond simply the existence or

non-existence of a common diagnostic label. On the theoretical level, Kennedy hypothesized that, given the existence of stable subgroups, "it may be that the adaptive purposes served by addiction may be different but consistent for different experiential types among the population of alcoholic married couples" (p. 33-34). This possibility will be addressed at length in later sections of this literature review.

Taken together, the works of Gorad and Kennedy represent the beginnings of a shift in the examination of alcoholic marital interaction. Their studies introduced several methodological changes, such as Gorad's use of reliable and objective measures to assess controlled interactions within a clearly interactional paradigm, and Kennedy's inclusion of a distressed, non-alcoholic control group as well as his provision of more detailed demographic information regarding his sample. However, Gorad and Kennedy's reliance on laboratory games and outcome measures calls into question the validity and generalizability of their findings, as well as leaving unanswered a multitude of questions regarding the interactional processes which led up to the observed outcomes (Jacob, 1986; Jacob & Seilhamer, 1987). The studies to be reviewed in the following section attempt to address some of these questions by focusing directly on the interpersonal processes involved in laboratory-based interactions themselves, rather than on outcomes derived therefrom.

Interaction Studies: Process Measures

In the introduction to the first of these studies, Hersen, Miller, and Eisler (1973) pointed out that despite considerable theoretical and clinical interest in the interactions of alcoholics and their spouses, there existed no data which objectively quantified aspects of such interactions. In order to fill that void, Hersen et al. videotaped and coded the verbal and non-verbal interactions of four hospitalized alcoholics and their wives while they discussed both alcohol-related and non-alcohol-related topics. The husbands were hospitalized at a Veterans Administration facility. All of the husbands and wives were in their 40's.

The couples were videotaped for a total of 24 minutes, alternating between content areas every six minutes. "Looking" and "duration of speech" were the dependent variables. Drawing upon an operant behavioral framework, Hersen et al. hypothesized that wives would look at their husbands more when discussing alcohol-related topics than when discussing non-alcohol-related topics.

Analysis of the data supported the prediction of increased looking by wives during alcohol-related discussions. In addition, the duration of looking by husbands was found to increase during non-alcohol-related interactions. Hersen et al. suggest that perhaps the content of the husband's speech serves as a stimulus for the wife, who responds to

alcohol-related speech with increased looking, thereby reinforcing continued alcohol-related content.

The Hersen et al. study was important in several ways. First, it focused empirical attention on actual interactional processes themselves rather than on outcome measures. Second, the study introduced the use of videotape as a data recording tool, thereby facilitating the use of complex observation and coding schemes. However, several methodological flaws, including the size of the sample (only four couples), and the absence of a non-alcoholic control group, make it difficult to draw clear conclusions.

In a subsequent study, Becker and Miller (1976) attempted to replicate and extend the findings of Hersen et al. by incorporating several methodological changes. Becker and Miller increased the alcoholic sample size to six couples, and added a non-alcoholic control group of six couples in which the husband was hospitalized for neurotic problems. In addition, Becker and Miller expanded the list of coded behaviors to include not only looking and duration of speech, but also the number of positive statements, number of negative statements, number of interruptions, touching, and requests for new behavior. The mean ages of couples in both groups were in the 40's.

Like Hersen et al., Becker and Miller did find that alcohol-related speech by husbands was significantly related to increased looking by wives--a finding that held for both

normal and control couples. However, of their seven dependent measures, only one, number of interruptions, differentiated alcoholic and non-alcoholic couples. Thus, there was little that distinguished the two groups from one another.

The majority of the studies reviewed thus far have drawn their data from three sources: questionnaires, outcomes of laboratory-based game situations, and process measures of laboratory-based marital interactions. While these efforts have proven fruitful both theoretically and methodologically, the conclusions which can be drawn from the data are necessarily limited. The contrived nature of the laboratory-based games and discussions reduces the external validity and generalizability of any results (Jacob & Seilhamer, 1987). The studies to be reviewed in the following section avoid these pitfalls by observing, in naturalistic settings, the ongoing interactions of family members, at least one of whom is an alcoholic.

Naturalistic Inpatient Observations

Beginning in the mid-1960's, there appeared a number of published reports examining the behavior, beliefs, and expectations of alcoholics during both sober and intoxicated states (Mendelson, LaDou, & Solomon, 1964; Tamerin & Mendelson, 1969; Vanderpool, 1969; Tamerin, Weiner, & Mendelson, 1970; Berg, 1971). A number of common themes emerged from these works. As expected, experimenters often observed significant differences between sober and intoxicated

behavior of alcoholics. However, behaviors exhibited by alcoholics in experimental drinking situations did not always match behaviors which had been expected on the basis of "clinical wisdom". Most importantly, neither the experimenters nor the alcoholics themselves were able to anticipate or correctly predict intoxicated behavior on the basis of sober behavior. These findings led several investigators to question the validity and usefulness of data collected only in the sober state. Consequently, increased attention was directed towards examining ongoing behaviors in both sober and intoxicated states.

Perhaps the most rigorous and systematic program of study in this area was carried out by Steinglass and his associates. Their research ward was designed to examine various psychological, biochemical, and physiological correlates and sequelae of chronic alcohol abuse. Clinical studies conducted at the ward were carried out over 28-day periods, broken down into three phases:

1. A five-day predrinking period during which subjects became acclimated with the ward and baseline assessments were collected.
2. A 14-day drinking period during which subjects were able to purchase up to one quart of 100-proof beverage alcohol per day from a dispensing machine which kept accurate records of each subject's pattern of alcohol purchasing.

3. A seven-day withdrawal period during which laboratory and physical assessments were made and medication was administered as needed.

Ward facilities included private bedrooms for each subject, as well as common living areas, such as a kitchen and a recreational area. Six subjects took part in each study. The subjects, who were volunteers from a Washington, D.C. alcohol rehabilitation center, were encouraged to reproduce, as closely as possible, their normal patterns of drinking and interpersonal behavior. For a more complete description of ward facilities, subject selection, and subject management see Mello and Mendelson (1970).

During the course of these studies, Steinglass and his associates had the opportunity to observe, and subsequently report on, the interactions of three pairs of related individuals: a father and son, and two pairs of brothers. The father and son were initially discussed by Weiner, Tamerin, Steinglass, and Mendelson (1971), in the first published report to deal with related individuals observed concurrently while drinking. The reported interactions were based on daily individual and conjoint sessions with both subjects and two staff psychiatrists. These sessions took place during all three phases of the study.

During the predrinking phase of the study, the father (a 51-year-old with a 33-year history of alcoholism), and the son (a 26-year-old with a 10-year history of alcoholism) remained

distant from one another, both physically and emotionally. They slept in rooms at opposite ends of the facility, ate at different tables, and entered separate peer groups. In therapy, distance was created through verbal abuse and attacks, the majority of which came from the son and were directed at the father.

During the drinking phase of the study, the distance and antagonism that had characterized the predrinking phase disappeared, and was replaced by the open expression of warmth, caring, and affection. In addition, the subjects were able to discuss topics which, during sobriety, were not open for discussion. Finally, the subjects displayed numerous role reversals while drinking: the person most drunk at any given time would play the part of the helpless and dependent child, while the other would take on the caretaker role. The subjects were able to exchange these roles as necessary, displaying considerable flexibility in their interactions.

Upon entering the postdrinking phase, the subjects quickly reverted to their predrinking interactional patterns. The son resumed his verbal abuse of his father, and the father reverted to the position of passive receptor of that abuse.

The other two familial pairs, two sets of brothers, were discussed in a report by Steinglass, Weiner, and Mendelson (1971a). As in Weiner et al., the clinical material presented by Steinglass et al. was drawn from conjoint interviews with

each set of brothers, as well as from the observations of ward staff and two staff psychiatrists.

Although the interactions of the two pairs of brothers will not be detailed here, there are several noteworthy points. First, like the father and son discussed previously, both pairs of brothers exhibited dramatic shifts in behavior as they moved through the three phases of their respective studies. In addition, for both sets of brothers, alcohol use served common functions: it helped to solidify role definitions, aided in the controlled expression of aggression, and clarified patterns of dominance. However, it is important to note that while alcohol use did serve several common functions for the brothers, the actual patterns of interaction and behavior exhibited by the two pairs were vastly different. Steinglass et al. commented on both the commonalities and the differences: "Thus, alcohol had been used in two very different manners by the two systems.... However, although the style was different, in each instance the result was the stabilization of a dyadic system which might otherwise be expected to be characterized by chaos." (p. 408).

These observations combined to lead the investigators to begin to formulate a model of alcoholic family functioning based on systems theory. Steinglass et al. suggested that alcoholic marriages and families were best viewed as operational, working systems. In addition, it was suggested that alcohol use might serve different functions in different

families. In some families, where alcohol abuse has not been an ongoing problem, alcohol use might function as a warning signal that the system is experiencing some form of stress. In other families, abusive alcohol use, by virtue of the breadth and depth of its consequences, may become the central organizing principle around which family interactions revolve. In these families, alcohol use may be a more integral part of the working system, and may serve as a stabilizing factor (satisfying unconscious intrapsychic needs, clarifying roles, etc.).

Steinglass et al. suggested that several advantages accrue from the adoption of a family systems view of alcoholic family functioning. First, such a model provides a bridge between earlier "disturbed person" and "sociological stress" models of alcoholic marriages and families by postulating different functions served by alcohol use. Second, a family systems model helps to explain the diversity of clinical pictures often seen in the alcoholism literature, as the focus of interest becomes the common use of alcohol in the service of system maintenance, rather than a search for common "dynamic" features. Third, a systems approach can assist therapists by guiding the formulation of questions about the functions of alcohol use in any given family (see also Steinglass, Weiner, & Mendelson (1971b) for suggestions regarding treatment utility). Finally, a family systems model provides a framework for future research efforts by arguing

against unideterministic explanations of alcoholic functioning, and arguing for the study of "drinking systems" and the collection of interactional, systemic data.

Since these early studies by Steinglass and his associates were based on clinical observations of very small samples, they are certainly open for criticism on methodological grounds. However, these drawbacks are overshadowed by the introduction of an important new research strategy involving naturalistic observation of related individuals in both intoxicated and sober states (Jacob et al., 1978).

On the theoretical level, the importance of these initial studies, as well as that of the model developed therefrom, is clear: in suggesting that alcohol use may not be as wholly destructive as it first appears, but may at times actually act as a stabilizing force, Steinglass and his associates proposed an entirely new way to conceptualize alcoholic family functioning. Furthermore, since their model drew upon systems notions of circular as opposed to linear causality, it suggested that alcohol use both simultaneously maintains, and is maintained by, ongoing interactional patterns (Steinglass & Robertson, 1983).

In a subsequent article, Davis, Berenson, Steinglass, and Davis (1974) expanded upon the new family systems model presented by Steinglass et al. (1971a) by discussing more explicitly the factors which might be involved in systems

maintenance. In their article, Davis et al. approached alcoholism from a combination of systems and operant behavioral stances, suggesting that alcohol abuse has adaptive (although not necessarily desirable) consequences, that these consequences are sufficiently rewarding to maintain abusive drinking patterns, and that the primary rewards are different for each individual. Davis et al. went on to present four clinical vignettes which illustrated possible rewarding aspects of drinking at the individual, couple, and family system levels. Finally, they proposed that by concentrating on adaptive as well as destructive aspects of drinking, clinicians and researchers alike would gain more accurate and potentially useful pictures of alcoholic family systems.

In order to more thoroughly evaluate the usefulness and applicability of their systems-based model, Steinglass and his associates began a second set of naturalistic inpatient observation studies (Wolin, Steinglass, Sendroff, Davis, & Berenson, 1975; Steinglass, Davis, & Berenson, 1977). In contrast to the studies already discussed, the following studies enlisted married couples as subjects. At least one member of each couple was alcoholic. All of these couples had received some type of therapy for alcohol abuse in the past (including hospitalization), and most had experienced multiple therapeutic interventions. The majority of the couples volunteered for the study out of desperation and frustration with the failure of past treatments. In six of the couples

the identified alcoholic was the husband, in three of the couples it was the wife, and in one couple both were alcoholic. A wide range of ages was represented, from late 20's to mid 50's. In these respects, the sample was quite heterogeneous.

The inpatient period, which constituted the core of the Wolin et al. (1975) and Steinglass et al. (1977) reports, was only one phase of an intensive six-week treatment program. The complete program consisted of an initial two-week outpatient phase, during which subjects met for three therapy sessions per week; a seven- to ten-day inpatient phase, during which two or three couples per study were hospitalized; and a three-week post-hospitalization outpatient phase, during which couples met for two group therapy sessions per week.

During the inpatient period, couples were housed in a "home-like" atmosphere, and were encouraged to reproduce as closely as possible their typical interactional behavior, drinking patterns, and marital struggles. Couples shopped, prepared meals, and chose recreational activities on their own. Alcohol was freely available during the first seven days of the inpatient period. During hospitalization, all couples participated in daily, multiple-couple group therapy sessions.

The clinical material which was presented by Steinglass et al. (1977) focused not only on interactional behavior in the group therapy sessions and formal aspects of interactional behavior while drinking, housecleaning, socializing, etc., but

focused as well on differences in these behaviors while individuals were in sober versus intoxicated states. What emerged from these observations were rapidly identifiable couple-specific patterns of alcohol consumption and interactional behavior. Each couple displayed their own repetitive and predictable interactional cycle, alternating between two clearly distinguishable patterns of behavior: one associated with sobriety, the other associated with intoxication.

Compared to behaviors exhibited during sober states, those exhibited in intoxicated states appeared to be exaggerated and amplified, but restricted in range. In addition, within this restricted or narrow range, behaviors seemed decidedly non-random, highly patterned, and somewhat automated. Of further interest is the fact that not only were intoxicated behaviors more patterned and non-random, but they were subjectively and substantively different than behaviors exhibited during sobriety. For example, one couple was relatively polite and controlled while sober, but was angry and destructive while intoxicated, engaging one another in what Steinglass et al. referred to as a "mutually abusive, insulting 'dance of death'" (p.9). Another couple was sexually inhibited and affectively distant during periods of sobriety, but seemed able to directly engage one another both sexually and emotionally during periods of intoxication. And in yet another couple, the wife was sexually frigid, anxious,

and somaticized while sober, but was sexually responsive, aggressive, and irresponsible during bouts of drinking.

In speculating about possible systems maintenance functions of intoxicated behavior, Steinglass et al. suggested that such behavior might best be conceptualized as a form of problem-solving. For each couple, alcohol use and intoxicated behavior provided a solution (albeit a temporary solution) to a repetitive and chronic problem with which the couple was faced. Each time the problem reappeared, alcohol use and the subsequent shift from sober to intoxicated behavioral states again provided a temporary solution, thus reducing tensions in the system. Although this problem-solving strategy is clearly ineffective in the long run, it does provide the system with short-term adaptive consequences. If these consequences are repeatedly associated with the intoxicated state, Steinglass et al. suggested that such consequences may serve to reinforce further chronic alcohol use.

The studies which resulted from this second set of naturalistic inpatient observations by Steinglass and his associates (Wolin et al., 1975; Steinglass et al., 1977) suffer from many of the same methodological weaknesses as did those in the first set (Steinglass et al., 1971a; Weiner et al., 1971). Specifically, the studies were based exclusively on clinical observations and impressions of small, highly selective samples of alcoholic dyads, and no systematic empirical data or statistical analyses were reported. Indeed,

given the heterogeneity of the sample, such data, if reported, would have had very limited generalizability. Consequently, the models proposed by Steinglass must be regarded as tentative, preliminary, and in need of empirical validation (Jacob & Seilhamer, 1987).

Nonetheless, given the methodological limitations discussed above, the models presented by Steinglass and his associates clearly represented an important new direction in the study of alcoholic family functioning. The application of experimental drinking procedures to familial dyads, the incorporation of a family systems perspective, and the conceptualization of alcohol use as operantly reinforced problem-solving behavior, all gave new direction to the field and provided subsequent researchers with fertile areas of study.

In the studies to be reviewed in the following section, several sets of researchers follow Steinglass' lead in the utilization of experimental drinking procedures in the study of alcoholic marital dyads. However, the following studies differ from those of Steinglass in that couples are engaged in structured problem-solving and communication tasks, and empirical data are systematically collected and analyzed.

Laboratory Studies of Behavior in Sober v. Intoxicated States

There are five studies currently available which attempt to more carefully quantify and analyze both the sober and intoxicated interactions of alcoholic couples. In the first

of these studies, Billings, Kessler, Gomberg, and Weiner (1979) compared the conflict-resolution behavior of 12 alcoholic couples to that of 12 maritally distressed non-alcoholic couples and 12 non-maritally distressed non-alcoholic couples. Couples were recruited through newspaper advertisements and professional referrals. Alcoholic and non-distressed couples age's averaged in the mid to late 30's, while the distressed couples averaged in the late 20's to early 30's, although this difference was not statistically significant. There were differences in education level between the groups, with the non-distressed couples being more educated than the alcoholic couples. Finally, alcoholic and non-distressed couples had been married an average of 13 years, while the distressed couples had been married an average of 7 years.

Billings et al. engaged each of the couples in four conflict-resolution situations, under both drinking and non-drinking conditions. Although the general outline of each situation was predetermined, using the "Improvisational Scenes" developed by Raush, Barry, Hertel, and Swain (1974), the experimenters were free to vary the instructions given to each couple to maximize the personal involvement of each spouse. While the artificial nature of the laboratory situation was acknowledged, spouses were asked to interact as they normally would in similar conflictual situations. Depending on the particular condition (drinking or

non-drinking), alcoholic or non-alcoholic beverages were made freely available, and spouses were invited to drink as much as they desired. Blood alcohol levels were measured with a Breathalyzer after the drinking sessions were completed.

All conflict-resolution interactions were videotaped, transcribed, and subsequently analyzed using both non-content and communicational rating systems. Non-content dependent variables included duration of scenes, frequency of statements, and number of words. Communicational ratings were made using the Interpersonal Behavior Rating System (IBRS), developed by Leary (1957), and the Coding System for Interpersonal Conflict (CSIC), developed by Raush et al. (1974). The IBRS categorizes behavior along two dimensions: affiliation (Friendliness-Hostility) and power (Dominance-Submissiveness). The CSIC categorizes behaviors into one of six classes: cognitive, resolve, reconcile, appeal, reject, and coercion-attack.

Analyses of the non-content measures revealed a number of significant group differences. For example, the conflict resolution scenes of alcoholic and distressed couples were longer during drinking sessions than during non-drinking sessions, whereas no such differences were found for nondistressed couples. In addition, alcoholic and distressed couples made more statements during drinking sessions than during non-drinking sessions, whereas non-distressed couples made significantly fewer statements during drinking sessions.

Communicational ratings derived from the IBRS revealed that alcoholic and distressed couples displayed more hostile acts and fewer friendly acts than did non-distressed couples. In addition, CSIC results indicated that alcoholic and distressed couples showed more coercion-attack acts and fewer cognitive acts than did non-distressed couples. Neither communicational rating system revealed significant differences between drinking and non-drinking sessions for any group.

Perhaps the most important finding to emerge from this study was the consistent lack of differentiation between the communication patterns of the alcoholic couples and those of the maritally distressed non-alcoholic couples. This finding led Billings et al. to suggest that some of the dysfunctional communication patterns observed in alcoholic couples may not be specific to the marriages of alcoholics, but may instead be characteristic of distressed marriages in general, a possibility which had been raised previously by Orford (1975).

A second interesting finding of this study was that, with the exception of a few of the non-content measures, the investigators were unable to discern any significant differences between the drinking and non-drinking communicational patterns of alcoholics. This finding is in clear contrast to the previously reported findings of Steinglass and others. A good deal of the non-differentiation of drinking and non-drinking communicational patterns may be attributable to the procedures employed in the drinking

condition of Billings et al. Specifically, subjects were not compelled to drink alcoholic beverages, and in fact, almost half of the subjects in all three groups chose not to drink at all. Of those who did drink, the majority had one or two drinks, and the highest reported BAC was a relatively low 0.026. Thus, in the drinking sessions, the subjects were not intoxicated, which clearly limits the generalizability of the reported findings to other drinking situations.

Although Billings et al. did not comment extensively on the differences found on the non-content measures between drinking and non-drinking sessions, it seems possible that these differences are related to the intoxicated state/sober state distinction made by Steinglass and his associates (cf. Wolin et al., 1975; Steinglass et al., 1977). Although the weakness in the drinking manipulation may have obscured or prevented any other differences from being detected, perhaps even the small amounts of alcohol ingested in this study were enough to enable alcoholic couples to alter their interactional behavior.

Along with the variability allowed by the drinking manipulation, the Billings et al. study suffers in that very little demographic or historical data are provided for any of the subjects. No data are provided regarding the psychiatric status of either spouse, and minimal data are provided regarding previous treatment history for alcoholism or any other psychological dysfunction. These omissions make

generalization of the results to other alcoholic couples particularly difficult. These methodological flaws notwithstanding, however, in combining the experimental control made possible by a laboratory situation, the use of reliable and objective coding schemes, and the inclusion of a drinking condition, Billings et al. introduced a promising new research strategy to the study of alcoholic marital and family interaction.

In a subsequent study, Jacob, Ritchey, Cvitkovic, and Blane (1981) expanded on the work of Billings et al. (1979) by including not only husband-wife problem-solving interactions, but parent-child interactions as well. All interactions took place under both drinking and non-drinking conditions. Subjects for Jacob et al. included eight alcoholic and eight non-alcoholic families consisting of both biological parents and at least two children between the ages of 10 and 17 years of age. The alcoholic fathers had been involved in problem drinking for at least five years, and had engaged in problem-related drinking within the past three months. Demographically matched non-alcoholic families served as controls. All subjects were recruited through newspaper advertisements. On average, subjects were in their early 40's, had five children, had been married 19 years, and had completed 12th grade.

Prior to engaging in problem-solving sessions, all family members filled out the Revealed Differences Questionnaire

(RDQ), a "brief opinion questionnaire" consisting of 40 items focused on both neutral and family-relevant issues. In addition, both spouses completed the Areas of Change Questionnaire (ACQ), developed by Weiss (1980). The ACQ requires each spouse to indicate, for each of 34 behaviors, whether he or she desires any change in that behavior from his or her spouse, and if so, in what direction and to what magnitude. Responses to these questionnaires provided material for the problem-solving interactions.

During the interactions, each combination of family members (mother-father, mother-child-child, and father-child-child) was instructed to decide as a group how to answer five of the RDC questions. Having completed that task, the spouses were then asked to discuss and resolve two problem areas drawn from the ACQ. All 16 families completed this entire procedure under both drinking and non-drinking conditions. All problem-solving interactions were videotaped and coded using a revision of the Marital Interaction Coding System (MICS; Hops, Wills, Patterson, & Weiss, 1972). The MICS codes both verbal and nonverbal behaviors, and was used to provide summary codes for positive affect, negative affect, instrumental behavior, and agreement.

Data analysis revealed significant group differences in both positive and negative affect, as well as in assertive problem-solving behavior. Specifically, in personally relevant discussions regarding material drawn from the ACQ,

alcoholic couples displayed more negative affect and less positive affect than did non-alcoholic couples. In addition, negative affect and disagreement among the alcoholic couples increased during the drinking sessions, whereas a similar increase was not observed in the non-alcoholic couples. Analyses of instrumental behavior indicated that non-alcoholic husbands were more instrumental than their wives, while alcoholic couples were relatively equally instrumental, perhaps even tending towards more instrumental behavior on the part of the alcoholic wives. Finally, in problem-solving discussions, alcoholic husbands contributed fewer personally relevant statements than did their wives, whereas non-alcoholic spouses contributed approximately equal numbers of personally relevant statements. Thus, according to Jacob et al., the picture which emerges consists of "a general pattern of negative affect (which increases in the presence of alcohol) and an imbalance in the expression of instrumental, task-relevant communications in which the alcoholic engages in less problem-solving behavior than his spouse" (p. 477).

In terms of the interactions between the parents and their two children, the results indicated that alcoholic fathers engaged in less assertive problem-solving behavior than did non-alcoholic fathers, while alcoholic mothers exhibited more of these leadership behaviors than did non-alcoholic mothers. Although mother-father-children

interactions were not rated, Jacob et al. suggested that certain family influence structures could be inferred. Specifically, alcoholic families might exhibit a M>F=C family influence structure, while a F>M>C influence structure might characterize nonalcoholic families. Jacob et al. went on to suggest that these influence structures are compatible with both clinical and theoretical accounts of alcoholic family functioning (Jackson, 1954), as well as with the more general family interaction literature dealing with normal versus disturbed family patterns (Jacob, 1975).

While the results presented by Jacob et al. did provide interesting new data regarding influence structures and problem-solving behavior in alcoholic families, a number of methodological issues are worthy of note. One such issue involves the drinking manipulation. Although the drinking condition of Jacob et al. was clearly superior to that of Billings et al. (1979) in that all of the subjects chose to drink, there was still considerable within- and between-group variability, and the quantity of alcohol consumed by the groups was relatively low. The mean post-session BAC of the alcoholic husbands was 0.08--a moderate level given problem drinking histories of at least five years duration. The range of postsession BACs was 0.01-0.33, with the highest level being achieved by a subject who arrived at the session with an elevated BAC. Other design flaws revolve around sampling issues (Jacob, 1986; Jacob and Seilhamer, 1987).

First, very little information is provided regarding the psychiatric status of either the alcoholics or the controls. Subjects in either group may have had histories of psychiatric disturbances which could have confounded the results. Second, the absence of a maritally distressed non-alcoholic control group is problematic, especially in light of the inability of Billings et al. (1979) to discriminate between such a control group and the alcoholic group in their study. Third, the subjects in the experimental group were extremely heterogeneous--exhibiting a wide range of scores on various measures of drinking-related disturbances. Finally, the use of a such a small sample seriously limits not only the types of analyses which can be performed, but also the statistical power of such analyses, as well as the confidence one can subsequently place in the obtained results.

Many of the above methodological weaknesses were addressed and improved upon in a study by Frankenstein, Hay, and Nathan (1985a), which examined the effects of alcohol use on the communication and problem-solving behavior of alcoholic couples. Frankenstein et al. (1985a) noted some inconsistencies and weaknesses in the designs of Billings et al. (1979) and Jacob et al. (1981), especially in the areas of alcohol administration and relevance of interactional material. They attempted to exert greater experimental control over similar aspects of their own design.

Frankenstein et al. used newspaper advertisements to recruit eight alcoholics (two of whom where women) and their spouses to participate in their study as part of a behavioral treatment program for alcoholism. The alcoholics were required to have self-identified alcohol related problems in at least one significant life area, at least a three-year history of alcohol problems, and a minimum score of seven on the Michigan Alcohol Screening Test (MAST; Selzer, 1971). Potential subjects with primary psychiatric disorders and histories of violent behavior were excluded. Mean age of the subjects was 41, education levels ranged from high school graduates through advanced degree holders, and alcoholic subjects typically drank five to seven days per week. Subjects were interviewed to determine relevant areas of conflict to be used for the problem-solving discussions, and conflictual topics were rated by each spouse for frequency of discussion as well as the amount of conflict produced.

The subjects participated in two experimental sessions (drinking and non-drinking). During each session, the subjects were instructed to work towards a resolution for each of three problems: the alcohol problem, a major marital problem area, and a minor marital problem area. Prior to the drinking session, the spouses were separated, and the alcoholic spouse was given one hour to consume a quantity of alcohol designed to elevate his or her BAC to 0.10. BAC readings were taken before, during, and after drinking

sessions, and each spouse made ratings of the alcoholic's current subjective level of intoxication compared to levels of intoxication usually attained during drinking.

All interactions were videotaped and subsequently rated using the Marital Interaction Coding System (MICS; Hops et al., 1972). Dependent measures derived from the MICS included summary codes for positive and negative verbal and nonverbal behaviors, problem description, and problem solving. Non-content dependent measures included number of words spoken by each spouse.

Frankenstein et al. found that the administration of alcohol resulted in a number of significant changes in the communication and problem-solving behavior of the alcoholic couples. For example, alcoholics spoke more than their spouses, and spoke more when intoxicated than when sober. Intoxication was also correlated with an increase in positive verbalization by the couple--an effect which was related to a change in the positive verbalizations of the non-alcoholic spouse across sessions. Specifically, non-alcoholic spouses were significantly more verbally positive when their alcoholic spouse was intoxicated. By contrast, alcohol exerted no significant effects on negative verbalizations, such as complaints or criticisms. Finally, alcoholics made more problem-solving statements than their spouses, and tended towards making more problem-describing statements when intoxicated.

In discussing their findings, Frankenstein et al. suggested that their results are consonant with social-learning and systems-theory models of alcoholic system maintenance, which hold that alcohol use is maintained or reinforced by way of the adaptive consequences it may provide for the system (cf. Davis et al., 1974; Steinglass et al., 1977). Viewed within such a framework, increased positive verbalizations, increased talking by the alcoholic spouse, and possible increased problem-solving would certainly function as benefits to be derived from continued alcohol use.

The contrast between the results of Frankenstein et al. and those of Jacob et al. (1981) is striking. Jacob et al. (1981) reported increased negative affect and disagreement following the introduction of alcohol, whereas Frankenstein et al. reported the opposite. Frankenstein et al. discussed possible explanations for the apparently conflicting findings, and suggested that differences in treatment motivation between the two samples might be a factor. Jacob and Seilhamer (1987) offered alternative explanations for the divergent findings, suggesting that differences in the drinking manipulation (fixed dose versus ad lib drinking, drinking during the discussion versus prior to the discussion, etc.) may have contributed to the different outcomes. Finally, given the low number of subjects in each study, subject differences could certainly account for the lack of agreement between the two studies.

In another study conducted with the same subjects, Frankenstein, Nathan, Sullivan, Hay, and Cocco (1985b) attempted to assess the effects of intoxication on dominance and influence processes in alcoholic marriages. Drawing upon the writings of Huston (1983) regarding the distribution of power in close relationships, Frankenstein et al. used subjective and objective measures of dominance and assertiveness to study the ways in which alcohol use might alter the hierarchical power arrangements displayed by the couples in their sample.

Frankenstein et al. collected three different types of data during three phases of their study. Phase one data consisted of questionnaires filled out at intake. The questionnaire of interest was the Spouse-Specific Assertiveness Scale (SSA) (Rosenbaum & O'Leary, 1981), which was completed twice by each spouse--once for interactions while the alcoholic is intoxicated, and once for interactions while he or she is sober.

Phase two data consisted of objective ratings of communication and problem-solving behaviors exhibited by the alcoholic couples in the videotapes discussed in the study reviewed above (Frankenstein et al., 1985a). These measures included duration of talking, gaze maintenance, questions, interruptions, and proposed solutions.

Phase three data consisted of subjective ratings made by alcoholics, their spouses, and graduate students of dominance

and dominant behaviors exhibited by the alcoholic couples in the videotapes discussed in the study reviewed above (Frankenstein et al., 1985a). Specifically, the raters judged, on a minute by minute basis, "the extent that one spouse controlled the interaction" (p. 404- 405).

The results which emerged indicated that alcoholic spouses were more assertive and dominant when intoxicated, while their non-alcoholic spouses were more dominant during sessions when alcohol had not been consumed. Most interestingly, these shifts in dominance were not reported by either spouse on the SSA.

In discussing their results, Frankenstein et al. suggested that alcohol use may introduce a measure of interactional flexibility into alcoholic marriages, thus facilitating the types of role reversals generally observed in healthy, well-functioning couples. Frankenstein et al. go on to suggest that their findings are supportive of theories which postulate adaptive consequences derived from alcohol use. Indeed, the findings of Frankenstein et al. regarding role reversals during periods of intoxication do seem to provide empirical validation of similar clinical observations made by Steinglass and his associates (Steinglass et al., 1971; Weiner et al., 1971; Wolin et al., 1975).

The results and hypotheses which emerged from the two Frankenstein et al. studies (1985a; 1985b) were clearly important, in that they seemed to lend preliminary empirical

support to the hypotheses of Steinglass et al. regarding the possible adaptive consequences of drinking. However, several design flaws seriously limit the interpretability and generalizability of Frankenstein et al.'s findings. These design flaws include the extremely small sample size (eight couples), the heterogeneity of the sample (subjects ranged in age from 28-63, with alcohol problems of 3-32 years duration, 6 alcoholics were male, 2 were female, etc.), and the absence of any control group.

The most recent empirical investigation into the effects of intoxication on the interactions of alcoholic couples (Jacob & Krahn, 1988) is actually only one component of a larger investigation of alcoholic family interaction (Jacob, 1978). The overall design and objectives of the larger study will be described in detail in the following section, but the findings of Jacob and Krahn are particularly germane to the present discussion.

Jacob and Krahn (1988) reported on the interactions of 107 families, 38 with an alcoholic husband, 35 with a depressed husband, and 34 with a husband who was a social drinker with no current psychiatric diagnosis. Alcoholic and depressed husbands met only their respective diagnoses, and non-clinical control husbands, as well as wives in all groups, exhibited no current major psychiatric disorders. For the laboratory interactions described by Jacob and Krahn, parents

were asked to bring along their oldest child between the ages of 10 and 17 still living at home.

The procedures reported on by Jacob and Krahn are very similar to those previously discussed in the review of Jacob et al. (1981). During two sessions (one drinking and one non-drinking), family members were asked to discuss areas of conflict generated from ACQ responses. Discussions were held in four combinations: mother-child, father-child, mother-father, and mother-father-child. Interactions were videotaped and coded using the MICS, which provided summary codes for positive, negative, problem-solving, and congenial communications and behaviors.

Like the procedures utilized, the results reported by Jacob and Krahn were very similar to those of Jacob et al. (1981). During the non-drinking interactions, the non-clinical control couples were clearly more positive and congenial than couples in the two clinical groups, while the alcoholic couples displayed more negative communications than either the non-clinical or depressed controls. During the drinking sessions, all groups were more positive and more negative, with the alcoholic couples being particularly more negative while drinking.

Jacob and Krahn discussed the increased negativity of the alcoholic couples while drinking in a number of different ways. They suggested that the alcoholics might have been exhibiting the "responsibility-avoidance" style postulated by

Gorad (1971; Gorad et al., 1971), whereby alcoholics are able to attribute their deviant behavior to the effects of intoxication, thus disavowing themselves of blame. If such a process were indeed taking place, the experimental intoxication might have allowed the alcoholics to express negative affects which would not have otherwise been given full expression.

Alternatively, Jacob and Krahn suggested that perhaps the presence of alcohol and the occurrence of drinking acted as discriminative stimuli, triggering expectations of aversive interactions and resulting in increased negative exchanges between the spouses. Similarly, they suggested that the drinking might have triggered conditioned emotional responses which could have been experienced and reacted to as strongly negative.

Perhaps the most interesting finding reported by Jacob and Krahn involved a three-way interaction between the couple type, the drinking condition, and the gender of the participating child. Specifically, alcoholic couples with male children participating displayed decreases in positivity and problem-solving during drinking sessions, whereas alcoholic couples with female children participating exhibited increases in positivity and problem-solving while intoxicated.

Jacob and Krahn presented several possible explanations for this interaction having to do directly with the gender of the participating child (eg. relative comfort in drinking in

front of daughters as opposed to sons, fathers experiencing increased pressure to act as a role models for sons, etc.). However, these hypotheses lack explanatory power in that the gender of the participating child exerted a strong effect on interactions even when the child was not physically present. Faced with a lack of immediately apparent compelling explanations, Jacob and Krahn began to search for other differences in their alcoholic sample related to the gender of the participating child. The results of this search suggested that the three-way interaction is probably best understood in terms of differences in drinking patterns (binge versus steady) within the alcoholic group. These different patterns, their apparent concommitants, and their possible impact on the results of Jacob and Krahn are discussed in detail in the following section.

The Relationship Between Drinking Pattern And Marital Satisfaction

The relationship between patterns of drinking (binge versus steady) and levels of marital satisfaction and psychiatric symptomatology was first reported by Jacob, Dunn, and Leonard (1983).

Key features of the research program were intended to directly and systematically address the weaknesses characteristic of earlier investigations of alcoholic family interaction. Specifically, the design of the larger study utilized (a) a diagnostically homogeneous sample of alcoholics

with no additional psychiatric disorders, married to non-alcoholic spouses; (b) both normal and psychiatric control groups; (c) an experimental drinking procedure wherein couples consumed large quantities of alcohol ad lib.; (d) a theoretically relevant, empirically based coding system with which to quantify videotaped laboratory interactions; and (e) a relatively large sample of both alcoholic and control families, thereby maximizing both statistical power as well as opportunities to explore family typologies.

Potential subjects were recruited through newspaper advertisements, and were screened using numerous self-report instruments and interviews, including the Schedule for Affective Disorders and Schizophrenia (SADS), in order to determine Research Diagnostic Criteria (RDC; Spitzer & Endicott, 1977). The total sample included 107 families: 38 of which contained an alcoholic husband, 35 of which contained a depressed husband, and 34 of which contained a husband who was a social drinker. Alcoholic and depressed husbands met only their respective diagnoses, and non-clinical control husbands as well as wives and children in all groups exhibited no current major psychiatric disorders. Husband's ages averaged in the early to mid 40's, wive's ages averaged in the late 30's to early 40's. Couples had been married for an average of 17 years.

The data base established for each family included detailed accounts of past and present alcohol use, including

21 days of daily drinking data; teacher ratings of children's behavior; family histories of psychiatric disturbance and alcohol abuse; and a number of self-report measures assessing intellectual functioning, marital satisfaction, child behavior problems, and family social functioning. In addition, laboratory interactions were videotaped and coded, as were audiotapes of interactions in the home. (For a more detailed project description see Jacob, 1978; Jacob, 1986; or Jacob, Rushe, & Seilhamer, in press.)

As mentioned earlier, the relationship between drinking style and marital satisfaction was first reported by Jacob, Dunn, and Leonard (1983). The data reported on by Jacob et al. were drawn from an early stage of the program of study just described. During preliminary and secondary analyses of data collected on 27 of the alcoholic families, an interesting relationship emerged between data having to do with drinking, psychiatric symptomatology, and marital satisfaction. Alcoholics who exhibited high levels of alcohol consumption within the previous month were less symptomatic and had wives who were both less symptomatic and reported better marital relationships than did alcoholics who exhibited lower levels of alcohol consumption during the previous month. Specifically, husbands with higher Quantity Frequency Index scores (QFI; Jessor, Graves, Hansen, & Jessor, 1968) obtained relatively low scores on numerous Minnesota Multiphasic Personality Inventory scales (MMPI; Dahlstrom & Welsh, 1960),

and reported relatively high marital satisfaction on the Locke-Wallace Marital Adjustment Test (LW; Locke & Wallace, 1959) and the Dyadic Adjustment Scale (DAS; Spanier, 1976). In addition, their wives obtained relatively low scores on several MMPI scales, obtained relatively low scores on the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and reported relatively high marital satisfaction on the LW and the DAS.

In their efforts to understand these finding, Jacob et al. examined several variables which might have impacted on the relationships between alcohol use, marital satisfaction, and psychiatric symptomatology. This work suggested that the most important variable might be drinking pattern (binge versus steady). A steady drinker is "one who continuously drinks more or less the same amount on a day-to-day basis", while a binge drinker is "one who drinks heavily...every so often, with periods of little or no drinking in between binges" (Marlatt, 1976, p. 127). When the data were re-examined with subjects categorized as either binge or steady drinkers on the basis of the Marlatt Drinking Profile (Marlatt, 1976), most of the correlations between the QFI scores and the marital satisfaction and symptomatology scores were clearly significant for the steady drinkers, but were nonsignificant for the binge drinkers.

A search for other variables which might have shed additional light on the differences between binge and steady

drinkers produced mixed results. Few differences were found on demographic and social structure variables, and no differences were found on a number of indices of drinking-related difficulties, such as the Impairment Index (Ruggels, Armor, Polich, Mothershead, & Stephen, 1972), certain subscales of the Michigan Alcohol Screening Test (MAST; Selzer, 1971), and Goodwin's alcoholism criteria (Goodwin, Schlulsinger, Moller, Hermansen, Winokur, & Guze, 1974).

The two groups were clearly differentiated on a number of other variables. Steady drinkers were evenly split between those who drank in the home and those who drank out of the home, while binge drinkers for the most part drank out of the home. In addition, binge drinkers exhibited higher levels of psychopathology than did steady drinkers, as indicated by several elevated MMPI scale scores, as well as having had experienced more adverse social consequences as a result of their drinking. Specifically, binge drinkers reported increased levels of fights, lost jobs, neglect of familial and occupational obligations, and arrests for drunken behavior. Thus, the binge drinkers in Jacob et al.'s sample were significantly more antisocial and were involved in more disturbed relationships than were steady drinkers, in spite of the fact that the steady drinkers actually consumed significantly more alcohol than did binge drinkers.

Jacob et al. discussed their results in terms of the Steinglass model of alcohol use as serving "adaptive" functions for the family (Davis et al., 1974; Steinglass et al., 1977). Within this model, alcohol use serves a common "adaptive" function for families, in that it restores equilibrium to otherwise unstable family structures. Jacob et al. suggest that, insofar as steady drinkers are intoxicated more often and more consistently than are binge drinkers, their results support the Steinglass contention that periods of drinking may be at least temporarily associated with increased levels of stability and satisfaction. Jacob et al. hypothesized that high consumption periods might be associated with marital and family stability and satisfaction to the extent that, 1) the alcoholic's behavior is less predictable when he is not drinking than when he is consuming at a high rate, 2) the experience of stress and distress in family life is minimized during periods of high consumption, and 3) the family has adapted to and incorporated high-rate drinking into family life" (p. 384).

While the findings of Jacob et al. are suggestive of drinking as an adaptive behavior within the context of some marital relationships, some methodological considerations warrant cautious interpretation. The data were exclusively cross-sectional and therefore of minimal value in demonstrating connections over time. In addition, drinking pattern (binge versus steady) and drinking location (in home

versus out of home) were not considered independently in the Jacob et al. design, thus clouding the obtained results.

In order to address these issues, eight families containing a steady drinker were selected from the total sample of 38 alcoholic families in the larger Jacob study. These families were then involved in a longitudinal study, the results of which were reported by Dunn, Jacob, Hummon, and Seilhamer (1987).

Dunn et al. (1987) selected four steady in-home drinkers and four steady out-of-home drinkers from the larger sample of 38 alcoholic families. Over a 3-month period, data were collected on a daily basis. The alcoholic husbands filled out drinking logs which specified, for each beverage consumed, the type of beverage, the time of day, and the location in which it was consumed; both husbands and wives filled out a modified version of the Symptom Checklist-90 (SCL-90; Derogatis, 1977), a 90-item rating scale of psychiatric symptomatology; and both husbands and wives filled out marital satisfaction rating scales.

The volume of the collected data allowed Dunn et al. to utilize sophisticated and powerful statistical techniques in their analyses. Through the use of univariate and bivariate time-series analyses, the investigators were able to determine the causal or driving force variables involved in any equations, as well as the amount of change in the dependent variables as a function of the independent variable, and the

temporal relationship between the independent and dependant variables as indicated by various time-lags in the equations (i.e., a husband's drinking can be shown to be the cause of a reduction in his wife's marital satisfaction three days later).

The final results of Dunn et al. suggested that two out of three of the clearly defined steady in-home drinkers replicated the findings of Jacob et al. (1983), displaying a positive relationship between alcohol consumption and marital satisfaction. By contrast, all four steady out-of-home drinkers displayed a negative relationship between alcohol consumption and marital satisfaction. The results for one drinker who was recategorized as a mixed-location drinker on the basis of his drinking logs were closer to those of the out-of-home drinkers than those of the in-home drinkers.

In addition, the steady out-of-home drinkers and the mixed-location drinker displayed many of the same antisocial characteristics as did the binge drinkers from the Jacob et al. (1983) study. That is, they obtained elevated scores on several MMPI subscales and they experienced increased levels of adverse social consequences as a result of their drinking.

Toether, the results of Jacob et al. (1983) and Dunn et al. (1987) suggest that steady in-home drinkers present the clearest support for models of alcohol use as serving adaptive functions, since steady in-home drinkers display lower levels of individual psychopathology, higher levels of marital

satisfaction, and lower levels of adverse drinking-related social consequences than do either steady out-of-home drinkers or mixed-location drinkers.

These findings are further buttressed by data which have recently been reported by Jacob (1986) on a larger, more heterogeneous sample of alcoholics. This sample includes 140 married alcoholics who, along with their wives, display a wide range of additional psychopathology which had been screened out of Jacob's earlier sample. Preliminary analyses of data from 58 of these subjects support the cross-sectional findings of Jacob et al. (1983). That is, (a) positive correlations have been found between husband's alcohol consumption and wive's marital satisfaction, (b) binge versus steady comparisons have revealed stronger correlations for steady drinkers than for binge drinkers, and (c) the strongest correlations have been found for steady in-home drinkers, while steady out-of-home drinkers and binge drinkers exhibit substantially weaker relationships between husband's alcohol consumption and wive's marital satisfaction.

Jacob (1986) has also reported preliminary analyses of the laboratory interactions of 43 of the alcoholic families from this large, heterogeneous sample. The problem-solving interactions of steady in-home, steady out-of-home, and binge out-of-home drinkers were videotaped during both drinking and non-drinking sessions, and the videotapes were coded for negativity, positivity, and problem-solving.

Analyses of these data suggested that binge drinkers exhibited substantially higher levels of negativity than did steady drinkers, and that these communications became increasingly negative during the drinking session. In addition, couples in the binge group displayed reduced levels of problem-solving during the drinking session. This shift was particularly evident in the behavior of the wives. By contrast, steady in-home drinkers were less negative than were binge drinkers, and although steady in-home drinkers did display small increases in negativity during the drinking session, they also displayed substantial increases in positivity when moving from non-drinking to drinking conditions. Finally, steady in-home drinkers also exhibited increases in problem-solving communications during drinking sessions.

In discussing these findings, Jacob suggested that binge drinkers might follow a pattern of coercive control, whereby increases in the husband's negativity during periods of drinking might result in the wive's "backing down" from direct attempts to deal with problematic issues. For steady in-home drinkers, on the other hand, alcohol use may support attempts at problem-solving, which may either be associated with or result in increases in positive mood.

The most recent study to clearly demonstrate the utility of categorizing alcoholic families according to drinking pattern and drinking location is the Jacob and Krahn (1988)

study referred to earlier. In short, Jacob and Krahn found that during drinking and non-drinking problem-solving sessions, binge drinkers were less problem-focused and less positive in the drinking as opposed to the non-drinking session, whereas steady drinkers became more effective problems-solvers and displayed more positive affect during drinking as opposed to non-drinking sessions.

The findings of Jacob and his associates, which were initially based on cross-sectional data collected from small, unrepresentative samples with no control groups (Jacob et al., 1983), have been replicated both longitudinally (Dunn et al., 1987) and cross-sectionally, with a larger, more heterogeneous sample (Jacob, 1986). In addition, drinking pattern (binge versus steady) and drinking location (in-home versus out-of-home) have been shown to differentiate not only self-report data, but the laboratory interactions of alcoholic couples as well (Jacob, 1986; Jacob & Krahn, 1988).

Clearly, the results recently reported by Jacob and his associates (Jacob et al., 1983; Jacob, 1986, Dunn et al., 1987; Jacob & Krahn, 1988) have suggested ways to categorize alcoholic families and their interactions. One consistent finding to emerge from these studies is that there are important differences between categories or subtypes of alcoholic families. This finding would suggest that the conceptualization of "the alcoholic family" as a unitary group displaying homogeneous "alcoholic family interactions" is

inadequate, and masks important differences between subtypes.

The Impact of Family Alcohol Phase On Alcoholic Family Interaction

The inpatient observation studies reported by Steinglass and his associates in the early 1970's generated a new hypothesis regarding the maintenance of chronic alcohol use--specifically, that alcohol use might be maintained because it serves adaptive functions at a family systems level. It was suggested that alcoholic family systems cycle between sober and intoxicated interactional states, and that these cycles provide families with a measure of interactional flexibility not otherwise attainable. This flexibility serves to balance or stabilize otherwise unstable systems, thus serving the adaptive function hypothesized by Steinglass.

In a more recent extension of this theoretical model, Steinglass went on to hypothesize that the cyclical use of alcohol in alcoholic family systems occurs at two levels (Steinglass, 1980a). The cycle just described (between physiological states of sobriety and intoxication) occurs on a day-to-day level. However, this cycle can obviously occur only during periods of active drinking. Most alcoholics go through several wet-dry-wet-dry phases in their lifetime, and it is this more macroscopic level of cycling, through wet and dry family alcohol phases which occur over periods of months or even years, with which Steinglass has concerned himself in his most recent investigations.

Steinglass has examined various aspects and concommitants of family alcohol phases (Steinglass, 1979; 1980b; 1981a; 1981b; Steinglass, Tislenko, & Reiss, 1985). All of the reports have utilized the same sample of 31 alcoholics and their families, or some subsample thereof. The majority of the 31 families were recruited through newspaper, radio, and television advertisements, and a small number were referred by physicians, ministers, and treatment agencies. In each family, one spouse had a self-defined alcohol problem of at least five years duration. Final determination of alcoholism was made via two assessments: a structured interview which gathered data necessary to assess the alcoholism criteria set forth by Goodwin et al. (1974); and the Self-Administered Alcoholism Screening Test (SAAST; Swenson & Morse, 1975). All alcoholics in the sample reported major drinking-related problems in each area assessed (physical, social, and treatment history). In addition, families were required to be economically self-sufficient, and report no history of psychosis or psychiatric hospitalization. Although an attempt was made to recruit white, middle-class families in order to maintain sample homogeneity, families were not selected on the basis of the sex of the identified alcoholic, religious affiliation, age of the marital couple, or current drinking status of the alcoholic (wet or dry). As such, a relatively heterogeneous sample was recruited. Husband's and wive's ages averaged in the low 40's (range 27-65), couples had been

married an average of 15 years (range 2-38), 22 of the couples had completed four or more years of college, and the couples were described as middle-and upper-middle class. In 23 of the 31 families the husband was the identified alcoholic; there were no demographic differences between husband-alcoholic and wife-alcoholic families.

The first data to be reported from this sample were collected in the interaction laboratory and included data from only 17 of the 31 families. The families in this subsample were chosen because they had at least one child 12 years or older living at home. There were no demographic differences between this subsample and the total sample of 31 families.

Steinglass (1979) engaged families in the Reiss Pattern Recognition Card Sort procedure (Reiss, 1967), an interactional card-sorting task requiring individual family members to sort a set of cards containing sequences of letters or nonsense syllables. The complete procedure requires three separate sorts. In the first sort, individuals work independently and develop their own rules for arranging their cards. In the second sort, family members are allowed to communicate with one another, and generally work towards a common solution to their individual sorts. In the third sort, family members once again work independently on their own sorts.

An examination of the three sorts produces two scores for each family: a) a configuration score, which measures the

family's problem-solving effectiveness; and b) a coordination score, which measures the similarity between sorts produced by different family members during the sorting trials. A positive configuration score represents an improvement in problem-solving effectiveness across trials, and suggests that the family has benefited from the opportunity to discuss the task; a negative configuration score reflects a reduction in the family's problem-solving effectiveness across trials, and suggests that the discussion of the task has been detrimental. A positive coordination score suggests that the family works as a coordinated group during the second sort when they are communicating with one another, as well as during the final sort; a negative coordination score suggests that family members have developed their own individual rules for the card sort task, and that these rules are resistant to family influence.

To examine the relationship between family alcohol phase and card sort performance, Steinglass divided families into wet and dry groups--depending on whether or not the alcoholic member had been drinking during the previous week--and compared the configuration and coordination scores of the two groups. The clearest finding to emerge from this comparison was that dry families were high in coordination, while wet families produced low coordination scores. In addition, wet families tended towards obtaining higher configuration scores than did dry families, although the difference was not

statistically significant. Thus, it appears that although individuals in wet families acted relatively independently of one another, they were able to somewhat improve their problem-solving effectiveness. Dry families, by comparison, acted in a coordinated fashion, but this coordination not only failed to improve, but actually somewhat impaired, their problem-solving abilities.

In discussing these results, Steinglass suggests that the data support a conceptualization of the alcoholic family as a biphasic unit. Wet families exhibited a degree of freedom not displayed by dry families, and this freedom tended to improve their problem-solving effectiveness. Dry families, on the other hand, exhibited interactional patterns which emphasized uniformity and solidarity at the expense of problem-solving effectiveness. Steinglass suggests that neither of these family interactional patterns, by itself, is stable. However, he further suggests that just as interactional flexibility and subsequent stability are introduced at a microscopic level through cycling between sober and intoxicated states, interactional flexibility and subsequent stability may also be introduced at a more macroscopic level through cycling between wet and dry family alcohol phases.

In order to better understand the configuration and coordination scores, Steinglass compared a number of alcoholism and symptomatology variables (ie. SAAST scores,

duration of alcohol problem, amount of alcohol consumed during the study, SCL-90 scores, etc.) to the configuration and coordination scores obtained by the families. What emerged was a strongly significant relationship between SAAST scores and configuration scores. That is, the families who exhibited the highest problem-solving effectiveness were the same families who perceived alcohol as having the greatest impact on their lives. Although Steinglass did not comment extensively on this relationship, he did point out that it supports continued investigation into the relationship between alcohol use and family problem-solving effectiveness.

These initial data reported by Steinglass (1979) regarding the laboratory interactions of his alcoholic sample provided tentative support for the utility of categorizing families according to their current alcohol phase. Steinglass continued his investigation into the correlates of family alcohol phases by examining data collected not in the interaction laboratory, but rather in the homes of his alcoholic families (Steinglass, 1980b; 1981a).

The Home Observation Assessment Method (HOAM; Steinglass, 1979) was utilized to collect data on the interactional behavior of the spouses in each household. The HOAM requires that a trained observer be "attached" to each spouse, and follow that spouse as he/she goes about his/her daily activities. Observers recorded seven facets of each spouses behavior: 1) the location of the subject in the home; 2) the

identity of other people in the room; 3) actual physical distance between the spouse and whomever he/she interacts with; 4) rates of both physical and verbal interaction; 5) the content of each verbal exchange; 6) the affective level of each coded interaction; and 7) the outcome of each verbal exchange.

Home observations were collected on all 31 families in the sample. Each family was observed nine times during a six-month period. Observations were held on both weekdays and weekends, and each observation period lasted four hours.

These raw data, which amount to frequency counts of various aspects of interactional behavior, are used to calculate 25 indices of in-home, interpersonal interaction. These indices, in turn, make up five factors which, as conceptualized by Steinglass, reflect the family's efforts to regulate its internal environment:

1) Intrafamily Engagement. The physical and verbal interactions between family members and coders, as well as actual physical distances maintained during these interactions.

2) Distance Regulation. The family's use of space in the home, including items such as rates of interaction when in the same room, movement around the home, and amount of time spent alone.

3) Extrafamily Engagement. The presence of non-family members during coding, and tolerance of individual differences

in interactions with non-family members.

4) Structural Variability. The consistency of a family's interactional behavior and physical movement across sessions.

5) Content Variability. Decision-making behavior and the variability of affect displayed during decision-making.

In Steinglass (1981a), families were divided into three groups. Membership in these three groups was determined by the drinking behavior of the alcoholic during all six months of the study. "Stable wet" (SW) drinkers began the study "wet" and were still drinking at the end of the study; "stable dry" (SD) drinkers began the study abstinent, and remained so for the duration of the study; "transitional" (TR) drinkers entered the study either wet or dry but had changed their status by the end of the six-month data collection period.

Analyses of the HOAM variables of the three alcohol-phase groups (SW, SD, and TR) revealed that two of the HOAM variables, distance regulation and content variability, were alcohol phase sensitive. That is, distance regulation and content variability varied consistently with the current alcohol phase of the family. In terms of distance regulation scores, families were ordered in the following manner: SW>SD>TR. On content variability, families were ordered as follows: SD>SW>TR.

Given Steinglass' interpretation of the distance regulation and content variability scores, families in the SW

phase are characterized by family members who spread out within the home, interacting only when necessary for some purposeful reason. When such interactions do occur, their content, purpose, and affective level show a midrange degree of variability. By contrast, families in the SD phase are characterized by members who show a midrange level of distance regulation, exhibit high rates of decision-making and affective behavior, and allow disagreements to be expressed. Finally, TR families are characterized by members who manifest "physical closeness...to a degree that gives them the appearance of huddling together for warmth and protection" (p. 582). Their interactions revealed the narrowest range of content, purpose, affective range, and outcome of all three groups.

When all five HOAM factors were considered in a discriminant function analysis, the results suggested that the distinction between interactional behavior displayed in SW and SD phases is a polarity distinction. That is, "what is high during the SW phase is low during the SD phase and vice versa. Transitional behavior, on the other hand, seems to follow a different pattern" (p. 583).

In discussing the two alcohol-phase sensitive HOAM variables, distance regulation and content variability, Steinglass addresses the relative orderings of the SW, SD, and TR families on these variables, and how these orderings might reflect varying levels of flexibility or rigidity in the

interactions of these alcoholic families. For the distance regulation factor, Steinglass suggests that a midrange factor score would seem to represent a high level of flexibility. By contrast, for the content variability factor, a high score would seem to reflect a high level of flexibility. On both of the factors, SD families seem to exhibit the highest levels of flexibility, with SW and TR families in more rigid positions. Steinglass suggests that this increased level of patterning of behavior in SW and TR families might be in service of maintaining stability in families faced with an actively drinking member. It is interesting to note that detailed clinical interviews with wives who fit Stienglass's three categories clearly support this ordering of relative flexibility and rigidity in SW, SD, and TR families (Wiseman, 1981).

Although Steinglass does discuss relative levels of flexibility and rigidity, he does not argue that either the more flexible or the more rigid interactional patterns are inherently better or healthier for the families in his sample. However, data comparing the relative health and well-being of the alcoholic families to their HOAM interaction variables are presented by Steinglass in another paper (Steinglass, 1980b).

In an attempt to examine the relationship between family interaction patterns and various indices of symptomatology and health, Steinglass (1980b) compared the SCL-90 and SAAST scores of his alcoholic families to their scores on the five

HOAM factors. Several significant findings emerged from these comparisons.

First, there appears to be a strong negative relationship between the HOAM factors of intrafamily engagement and content variability, and levels of depression and anxiety in the alcoholic spouse; by contrast, no significant correlations emerged between HOAM variables and symptomatology on the part of the non-alcoholic spouse. According to Steinglass, this contrast suggests that certain aspects of family interactional behavior may be tied only to the symptomatology of the identified patient in the family--in this case, the alcoholic spouse.

Second, distance regulation was found to be strongly negatively related to the magnitude of alcoholism as measured by the SAAST. That is, as families reported higher levels of social, physical, and treatment related consequences of chronic alcohol use, they were more likely to display "huddling" behaviors as opposed to midrange or distant patterns of interaction.

When these data are compared to those in Steinglass (1981a), a number of interesting similarities become apparent. For example, in both studies alcohol use affected the families in specific and selective ways, rather than in an across-the-board fashion. In addition, distance regulation and content variability seem to be particularly related to symptomatology, consequences of drinking, and current family

alcohol phases.

It is noteworthy that HOAM variables were found to be related only to the psychiatric symptomatology of the alcoholic spouses. If one can assume that non-alcoholic spouses exhibit psychiatric symptomatology of their own, to what is it related? Steinglass examined the question of whether the consequences or the severity of alcoholism might have an impact on psychiatric symptomatology in a subsequent report (Steinglass, 1981b).

In order to assess the impact of alcoholism on psychiatric symptomatology, Steinglass compared the SAAST scores and Quantity-Frequency (QF) index scores of his alcoholic subjects to the SCL-90 scores of both the alcoholic and the non-alcoholic spouses in his sample. The SAAST is a measure of the consequences or degree of chronic alcohol abuse; the QF index is a measure of current drinking behavior; and the SCL-90 is a measure of current psychiatric symptomatology.

Findings from these data showed that the only significant relationship to be found was between the negative social-behavioral consequences of the alcoholic's drinking and the psychiatric symptomatology of the non-alcoholic spouses. No significant correlations were found between the SAAST scores and the SCL-90 scores of the alcoholic spouses, nor were any significant correlations found between the Q-F index scores and the SCL-90 scores of either alcoholic or

non-alcoholic spouses. These findings indicate that the spouses of alcoholics react not to the severity of drinking per se, but rather to the extent to which drinking-related consequences impact on family, work, and social aspects of life.

In a further analysis of these data, Steinglass grouped his couples according to the drinking status of the alcoholic spouse (wet versus dry), and again compared the SAAST and SCL-90 scores of his couples. He found that the correlation between the SAAST scores and the SCL-90 scores was almost completely accounted for by the "remarkably high" correlations exhibited by the wet group alone. When Steinglass then looked only at stable wet families (eliminating 3 families in which the alcoholic stopped drinking during the study), the SAAST/SCL-90 correlations approached almost perfect linearity. Thus, the highly positive correlation between the social-behavioral consequences of alcohol use and the psychiatric symptomatology of the non-alcoholic spouse seems only to hold for families in the stable-wet family alcohol phase, and not for stable dry or transitional phase families. Interestingly, clinical interviews with women who fit Steinglass' SW, SD, and TR phases clearly indicated elevated symptomatology in SW wives only (Bailey, Haberman, and Alksne, 1962).

Once again it is clear that alcohol-related variables do

not affect all alcoholic families, all aspects of family life, or all family members in an across the board fashion. In this case, only in some families (stable wet) were specific types of alcohol-related consequences (social-behavioral) shown to have been related to certain types of symtomatology in specific members of the family (the non-alcoholic spouse).

As one examines this most recent program of research by Steinglass and his associates, it becomes clear that the division of his alcoholic families into stable wet, stable dry, and transitional family alcohol phases, and the subsequent exploration of the correlates of these phases, represented significant new directions in research, and provided other researchers with a number of findings to replicate, extend, and interpret. In addition, Steinglass' repeated finding that drinking-, family interaction-, and symptomatology-related variables were correlated with one another in very specific and particular ways served to underscore the heterogeneous and complex nature of alcoholic families and their interactions.

However, as Jacob and Seilhamer (1987) have pointed out, Steinglass' work has been limited by the experimental design employed to examine the 31 families in his sample. Problems include an extremely small sample size (especially when divided into subgroups), failure to completely account for possible sociodemographic confounding variables, lack of information regarding the psychiatric status of either the

alcoholics or their spouses, failure to include any control group (either psychiatric or normal), and a lack of information regarding possible reactivity effects to the HOAM observation process.

Steinglass's Life History Model

As was mentioned earlier, one of the most important contributions of the recent program of study by Steinglass and his associates was the division of his alcoholic families into stable wet, stable dry, and transitional family alcohol phases, and the subsequent exploration of the correlates of these phases. Because the examination of wet-dry cycles and their correlates underscored for Steinglass the "potential usefulness of a model that traces the ebbs and flows of alcoholism over an extended time period", Steinglass undertook to develop just such a model (Steinglass, 1980a; p. 212).

The "life history model" presented by Steinglass attempted to apply the theoretical construct of the family life cycle to the specific life histories of alcoholic families. Drawing on Erikson's individual life cycle model (Erikson, 1963), Steinglass postulated that families have a life history that can be divided into stages, and that each of these stages must be completed successfully in order for the family to deal satisfactorily with subsequent stages. Steinglass suggested that the construction of a life history model of alcoholic families allows one to focus on distortions in the customary family life cycle which might be caused by

chronic alcohol abuse. The life history model developed by Steinglass is built around three elements: 1) the alcoholic family system, wherein alcohol has become the central organizing principle for the family, 2) alcohol use for family homeostasis, whereby cycles of alcohol use serve stabilizing functions, and 3) family alcohol phases: stable wet, stable dry, and transitional.

Steinglass has divided the family life history into five major periods: 1) premarriage, 2) early marriage, 3) mid-life plateau, 4) mid-life crisis, and 5) late resolution. Each of these major periods may be characterized as a) stable or unstable, and b) wet, dry, or transitional.

The premarriage period, as conceptualized by Steinglass, is a stable phase during which one of three combinations of spouses can occur: two non-alcoholics can marry, a non-alcoholic can marry an alcoholic, or two alcoholics can marry. During this period, a wide array of cultural and psychological variables come into play, many having to do with the use of alcohol and the acceptablility of alcoholic behavior. These variables determine the types of marital partners chosen by any given individual.

It is during the unstable early marriage period, Steinglass suggests, that the family determines the future role of alcohol use. During this period, when the stressors of determining family roles and rules are exacerbated by the stressors brought on by chronic alcohol abuse, the family

chooses one of two options. The first, which is especially likely if alcoholism emerges after the marriage rather than before, is divorce. The second is the incorporation of alcohol use into family life as something the family can "live with". This latter option signals the family's conversion from "a family with an alcoholic member" to "an alcoholic family". Alcohol use becomes a homeostatic mechanism for the family, and stability is achieved despite the day-to-day stressors associated with alcohol use.

By the time the family moves into the mid-life plateau period, alcohol use has become a central organizing principle for the family, and the family has entered a stable wet period. It is during this period that the microscopic cycling between sober and intoxicated interactional states occurs. For some families, this period may last several years, remaining relatively stable and unchanged. For most families, however, intervening stress variables, either intra- or extra-family, begin to impinge on the system and create instability in a previously stable system. Families respond to this instability either through increased alcohol consumption or through a transition to a dry state. Both of these solutions are frought with difficulties and uncertainties, and both may end in divorce. Alternatively, the family may make the transition successfully, and become

stable wet, stable dry, or may begin a succession of

transitions.

Eventually, according to Steinglass, the family enters the period of late resolution, during which the family may choose one of four alternative patterns: 1) the stable wet alcoholic family, which is a continuation of the steady state mid-life period; 2) the stable-dry alcoholic family, in which the alcoholic no longer drinks, but family life still revolves around alcohol use, both through AA, Al-Anon, and Alateen meetings, and through efforts to make sure the alcoholic stays "on the wagon"; 3) the stable dry non-alcoholic system, wherein the alcoholic no longer drinks, and alcohol use becomes a piece of family history, rather than an organizing principle for the family; and 4) the stable controlled-drinking non-alcoholic family, in which the alcoholic returns to a social-drinking pattern, and alcohol loses it's role as an organizing principle for family life.

After presenting this life history model of alcoholic families, Steinglass describes four families, each of whom fits one of the late-resolution patterns, and also suggests several implications of his life history model for both clinicians and researchers. For clinicians, Steinglass emphasizes the importance of the distinction between alcoholic and non-alcoholic family systems, as well as the importance of determining the homeostatic role of alcohol use in maintaining family stability. For researchers, Steinglass first underscores the importance of differentiating between

stable wet, stable dry, and transitional families. In addition, and more generally, Steinglass suggests that examining within-group differences as opposed to, or in addition to, examining across-group differences is the most prudent exploratory path to follow. Finally, he suggests that models that hypothesize typologies of alcoholic families will be more fruitful than those which hypothesize characteristics or interactional patterns associated with all alcoholic families.

If the life history model hypothesized by Steinglass is correct, then researchers would do well to consider the life cycle stages not only of their alcoholic subjects, but of their control group(s) as well. Failure to do so would seem to increase the chances that meaningful within- and between-group differences would be either obscured or lost completely. Similarly, in reviewing already published empirical research, consideration of family life cycle stages may allow a reader to shed new light on existing data.

Statement of The Problem

It is clear that the study of alcoholic family interaction has made significant strides in the last 30 years. Advances in theoretical underpinnings include the development of social learning based models of alcoholic family interaction which incorporate both systems theory and learning concepts, the identification of possible adaptive or stabilizing effects of alcohol consumption, and the

development of various typologies for use in differentiating between subtypes of alcoholics as well as patterns of alcoholic family interaction. Methodological advances include the use of multi-method assessment protocols as reflected in the increased use of observational as well as self-report data, the utilization of experimental drinking procedures, and the implementation of longitudinal as opposed cross-sectional research designs.

However, despite these advances, many studies suffer from vague criteria for alcoholism, use small and often unrepresentative samples, employ inappropriate and unsophisticated statistical analyses, use measures with questionable reliability and validity, and provide little information regarding the psychiatric status of alcoholics or their spouses. In addition, researchers have, for the most part, failed to incorporate developmental models within which to view behavior, and have failed to consistently employ alcoholism typologies in the study of alcoholic family interaction (Jacob & Seilhamer, 1987). Finally, when alcoholism typologies have been utilized, all examinations of any given typology have been carried out by one group of researchers (eg. the binge v. steady classification system has only been studied by Jacob and his associates), and there exists a need for findings to be replicated by other investigators.

The current study represents a contribution in this area

in that an attempt will be made to replicate and extend the findings of Jacob and his colleagues regarding differences between binge and steady drinking families. In addition, several distinctions will be made regarding a number of variables which have been examined by Jacob and his colleagues, in hopes that such distinctions will add clarity and increased precision to this domain.

One such distinction which can be drawn regarding the dependent variables examined by Jacob and his colleagues is between those which are individual-level variables, as opposed to those which deal with family-level phenomena. The main focus of the work of Jacob and his colleagues has been on the interface between individual- and family-level variables, specifically the relationship between an individual characteristic--drinking pattern--and family characteristics, eg. marital satisfaction, marital interaction, etc. However, considerable attention has also been paid to individual-level variables such as psychiatric symptomatology and personality measures. The current study will not only extend the examination of both individual- and family-level variables, but will enlarge the field to include variables which tap a broader range of adaptive functioning in the social sphere (i.e. work satisfaction, social support utilization), as well as those which more explicitly focus on measures of adaptive capability itself (i.e. utilization of effective coping strategies to deal with problems, ratings of adaptive

functioning and mental health, etc.).

Another distinction which can be made is that between what have been referred to as "drinking-specific" and "nondrinking-specific" variables. In 1979, Zucker presented a heuristic model that attempted to provide a framework within which to organize the many levels and factors which influence the acquisition and maintenance of drinking behavior. The model, which was later elaborated upon (Zucker & Noll, 1982; Zucker, 1987), specifies four levels or classes of influence: sociocultural and community influences; primary group influences; intimate secondary group influences; and intra-individual influences. Within each of these classes of influence, a distinction is made between "drinking-specific" and "nondrinking-specific" variables.

Drinking-specific variables, which are directly alcohol-linked, are examined with the assumption that the study of the acquisition and maintenance of drinking behaviors is best accomplished by concentrating upon drinking-related influences in the subject's environment. Examples of drinking-specific variables at the community level of influence include such items as the availability of alcohol in any given community, as well as sociocultural attitudes regarding drinking. In contrast, nondrinking-specific variables are those which, although not directly alcohol-related, are assumed to influence drinking behavior indirectly. Examples of nondrinking-specific variables at the

community level of influence include the socioeconomic status of the family, as well as ethnic, religious, and neighborhood value influences (Zucker, 1979).

Although the drinking-specific/nondrinking-specific distinction was originally applied by Zucker to the study of the acquisition and maintenance of drinking behaviors, it is clearly applicable to any discussion of drinking-related phenomena. In the case of Jacob and his associates, they have used a drinking-specific independent variable (binge v. steady drinking patterns) to examine several nondrinking-specific dependent variables (marital satisfaction, psychiatric symptomatology, etc.). As has already been stated, the current study will attempt to replicate and extend this work. Specifically, the correlates of both binge and steady drinking patterns (drinking-specific independent variables) will be examined, with emphasis put on indices of individual-level, family-level, and broad-context adaptive functioning (nondrinking-specific dependent variables). In addition to this analysis, a further goal of the current study will be to explore the differential utility of using a nondrinking-specific independent variable (level of antisocial involvement) to examine the same set of nondrinking-specific dependent variables. The choice of level of antisocial involvement as an alternative independent variable, as well as the rationale for conducting a differential analysis (via

hierarchical regression), will be explained below.

The choice of level of antisocial involvement as the alternative independent variable was influenced, in part, by Jacob's 1982 review in which he called attention to possible connections between (a) binge and steady drinking patterns and (b) various subgroups of alcoholics commonly identified in alcoholism typologies. Alcoholism typologies, which have been examined for nearly 40 years, represent attempts to categorize alcoholics according to various drinking-specific and nondrinking-specific criteria (cf. Babor & Lauerman, 1986). These criteria have included drinking pattern, level of consumption, personality and behavioral characteristics, etc. Several of these typologies seem relevant to the discussion of binge and steady drinkers, and will be briefly reviewed here.

In regard to drinking pattern, Jellinek (1960) identified Delta alcoholics, who are characterized by continuous drinking patterns, and Gamma alcoholics, who are characterized by intermittent heavy drinking or binge drinking. Similarly, DSM-III-R (American Psychiatric Association, 1987) differentiates between various patterns of drinking in the discussion of alcohol abuse and dependency. In regard to the amount of alcohol consumed, Whitelock, Overall, and Patrick (1971) found significant differences in alcohol consumption between two groups that had been identified on the basis of their Minnesota Multiphasic Personality Inventory (MMPI)

profiles. Higher use scores were found to be associated with anxiety and depression, while lower use scores were associated with antisocial and sociopathic tendencies. These findings have since been replicated (Sutker, Brantley, & Allain, 1980).

More directly related to the psychological and social correlates of different subtypes, the adoption studies of Cloninger (Cloninger, Bohman, & Sigvardsson, 1981) have differentiated type II or male-limited alcoholism from type I or milieu-limited alcoholism. The former is characterized by early onset of both alcohol problems and social complications from drinking, as well as high genetic loading and a family history of alcohol abuse and antisocial involvement, whereas the latter is characterized by later onset of problems, relatively weak genetic loading, and a family history of alcohol abuse without antisocial involvement. Cloninger's type I/type II distinction has been found to usefully differentiate subjects in terms of treatment outcome, physiological measures, and measures of personality (von Knorring, Palm, & Andersson, 1985; von Knorring, von Knorring, Smigan, Lindberg, & Edholm, 1987).

Finally, Zucker (1987) has proposed four subtypes of alcoholics based upon patterns of etiology and developmental manifestation. Two of these subtypes seem particularly relevant to the discussion of the concommitants of binge and steady drinking patterns. The first, antisocial alcoholism,

appears to be heavily genetically loaded, and is characterized by a family history of alcoholism and/or antisocial involvement, early onset of problems, overt antisocial involvement, and significant personal and legal difficulties. The second, negative affect alcoholism, is characterized by the use of alcohol to cope with or enhance relationships, a family history of depression, and unsatisfying social relationships in multiple domains (i.e. peers, job, marriage).

Thus, there seems to be considerable across-study agreement regarding two subtypes of alcoholics whose characteristics resemble those of binge and steady drinkers. The first subtype, which most closely matches Jacob's description of binge drinkers, can be described as antisocial, exhibiting a binge pattern of drinking with relatively low overall quantities of alcohol consumed, and experiencing significant social complications as a result of their drinking. The second subtype, which more closely resembles Jacob's description of steady drinkers, can be described as depressed and anxious, exhibiting a more continuous pattern of drinking with relatively higher quantities of alcohol consumed, and experiencing relatively fewer social consequences as a result of their drinking.

In Jacob's first discussion of the possible connections between binge and steady groups and these two subtypes of alcoholics (Jacob, 1982), Jacob mentions only that these

connections "deserve further attention" (p. 195). In a more recent article dealing with binge/steady differences, Jacob stresses this point further, stating that "it would be misleading to ascribe these differences in marital interaction solely to the differences in drinking style", and suggesting that "it would be of value to link these subtypes [binge and steady] to other schemas for subtyping alcoholics" (Jacob & Leonard, 1988, p.236): in other words, investigation of the relationship between the binge-steady classification system and nondrinking-specific spheres is clearly being suggested.

The current study represents a further attempt to clarify these phenomena. As stated above, along with the replication of the findings of Jacob and his associates regarding the differences between binge and steady groups, an analysis will be conducted in order to try to determine whether the level of antisocial involvement reported by each group might better account for any existing between-group differences. The rationale for this analysis is based on a prediction that it is alcoholism subtype membership (antisocial v. depressed/anxious) rather than drinking pattern per se which more completely accounts for the differences between the two groups. This prediction in no way implies that the binge/steady categorization is invalid. Rather, it suggests that in examining drinking patterns, Jacob and his associates are examining specific behaviors which in fact represent relatively smaller facets of larger behavioral constellations.

Thus, within this conceptualization, the drinking pattern of a binge drinker might best be considered a marker of a more central underlying behavioral style which is characterized by antisocial involvement and serious social and legal difficulties.

Finally, poly-drug use, or collateral drug use along with alcoholism, will be investigated. Such use has yet to be examined in the alcoholic family interaction literature.

The lack of attention accorded collateral drug use is surprising, given current estimates of such drug use. For example, Fine, Scoles, and Mulligan (1975) reported that 19.4% of their sample of drunk drivers admitted using one or more drugs during the last three months, primarily marijuana and tranquilizers. Similarly, 14% of another sample of drunk drivers reported illicit drug use, mostly marijuana (Sutker, Brantley, & Allain, 1980). And in yet another sample of drunk drivers, 50% reported some marijuana use, 15% reported occasional use of cocaine and stimulants, and 8% reported daily marijuana use (Hoffman, Ninonuevo, Mozey, & Luxenberg, 1987).

It does not appear to be the case that the above figures are inflated by virtue of being drawn from drunk driving populations. Helzer and Pryzbeck (1988) utilized data drawn from the Epidemiological Catchment Area (ECA) study (Regier et al., 1984) to examine the comorbidity between alcohol abuse/dependence and substance abuse/dependence, and found

that, in a sample of over 20,000 persons drawn from the general population, 18% of those with an alcohol abuse/dependence diagnosis also have a drug abuse/dependence diagnosis. In addition, half of these (9%) report abuse/dependence on hard drugs including sedatives, stimulants, and opioids. Finally, odds ratios for alcohol abuse/dependence and drug dependence indicate that those with an alcohol diagnosis are 11.2 times more likely to also have a drug dependence diagnosis than those without an alcohol diagnosis. Given these clear connections between alcohol abuse and drug abuse, an attempt will be made to examine the effects of such drug use on the dependent variables under investigation.

In summary, the goals of the current study are five-fold: (a) to attempt to replicate the findings of Jacob and his colleagues regarding between-group differences in levels of alcohol consumption as well as in the adverse consequences of such consumption for binge and steady drinkers; (b) to broaden the scope of this work by including not only family-level and individual-level variables, but adaptive funtioning variables in other social domains as well (i.e. work satisfaction, utilization of social support systems); (c) to explicitly examine the relationship of the binge/steady categorization system to capacity for adaptation itself (i.e. utilization of effective coping strategies, ratings of adaptive functioning and psychological health, etc.); (d) to determine whether

long-standing behavioral styles, as indicated by a measure of antisocial involvement, might better account for some of the differences between binge and steady groups; and (e) to examine the impact of collateral drug use on the relationships between drinking style, antisocial involvement, indices of individual- and family-level functioning, indices of functioning in the social domain, and indices of capacity for adaptive functioning itself. In contrast to the majority of the earlier work in this area, the current effort will utilize a heterogeneous, non-clinical sample of young alcoholic families in which the father is an alcoholic.

Formal Predictions

On the basis of the research of Jacob and his colleagues, there is reason to expect that binge and steady drinkers will differ substantially on measures of both alcohol consumption and the consequences of such consumption. Specifically, it is predicted that:

1) Steady drinkers will report higher levels of current consumption than will binge drinkers, as measured by Cahalan, Cisin, and Crossley's Quantity-Frequency-Variability Index (1969).

2) Steady drinkers will report fewer adverse consequences as a result of their drinking than will binge drinkers (eg. fights, lost jobs, lost friends, arrests, etc.).

As an extension of the work of Jacob and his colleagues,

it is expected that binge and steady drinkers and their respective spouses will differ substantially on several measures of individual- and family-level functioning, as well as on measures of functioning in social contexts, and measures which explicitly tap adaptive capacity itself.

In terms of individual-level functioning, it is expected that:

3) Steady drinkers and their spouses will report higher levels of overall functioning than will binge drinkers and their spouses, as measured by the Progress Evaluation Scale, DSM-III-R Axis V ratings, and the Composite Psychological Health Q-Sort.

In terms of family-level functioning, it is expected that:

4) Steady drinking families will report family environments which are lower in Conflict, and higher in Cohesion and Expressiveness than those of binge drinking families, as measured by the Family Environment Scale. In addition, it is expected that binge and steady drinking families will differ on other FES subscales, but no formal predictions of direction will be made.

In terms of functioning in social contexts, it is expected that:

5) Steady drinkers and their spouses will report having contact with larger and more supportive social support networks, as measured by the Social Support Interview.

In terms of tapping adaptive capability itself, it is expected that:

6) Steady drinkers and their spouses will report fewer hassles and more uplifts than will binge drinkers and their spouses, as measured by the Hassles and Uplifts Scale.

7) Steady drinkers and their spouses will report utilization of more effective coping strategies, and will report higher levels of perceived mastery than will binge drinkers and their spouses, as measured by the Pearlin Coping and Mastery Scale.

In addition, it is expected that the differences specified in hypotheses 1) through 7) are related to pervasive behavioral styles, which are reflected in differing levels of antisocial behavior exhibited by binge and steady drinkers. Consequently, levels of antisocial behavior in both groups will entered as an independent variable (along with binge v. steady group membership) in a hierarchical regression with the expectation that:

8) Differing degrees of antisocial involvement, as measured by the Antisocial Behavior Scale, will more completely account for any differences revealed in hypotheses 1) through 7) than will binge v. steady drinking patterns.

Finally, the role of collateral drug use accompanying alcoholism has not been systematically assessed in the alcoholic family interaction literature, so level of drug involvement will be entered as a third independent variable

in a hierarchical regression (along with binge v. steady group membership and level of antisocial involvement), with the expectation that:

9) Collateral drug use along with alcoholism will moderate the ability of binge v. steady group membership and level of antisocial involvement to predict individual-level, family-level, social, and adaptive functioning.

Chapter 2

Method

Subjects

The subject population consists of 90 alcoholic families. These families are a subgroup of a larger sample participating in the Michigan State University Longitudinal Study (Zucker et al., 1984), a prospective study examining factors involved in the intergenerational transmission of alcoholism and conduct disorders.

Potential subjects were drawn from a 100% population sample of all males in a three-county mid-Michigan area convicted of driving while intoxicated (DWI) or driving under the influence (DUIL). At the time of arrest, potential respondents must have registered a blood alcohol level (BAL) of at least 0.15% (150mg./100ml.)--levels which suggest the presence of significant tolerance for alcohol. At the time of recruitment, potential subjects must also have biological sons between 3.0 and 6.0 years of age, and currently be living in intact families. All candidates meeting these initial requirements are asked by their probation officers about their willingness to discuss "possible participation in a study of family health and child development" being run by Michigan State University researchers. There is a clear understanding that there is no commitment to participate, and that the study is not associated with the court. Potential subjects who agree to speak to MSU Family Study staff are contacted by

phone, and an initial home visit is arranged. During the home visit, detailed information regarding study procedures is given to the family. If the family agrees to participate, appropriate consent forms are signed, and initial health history and demographic information are collected which allow the interviewer to verify study suitability. The health history contains the Short Michigan Alcohol Screening Test (SMAST; Selzer, 1975), which is used to recheck the type and extent of alcohol problems. Less than 1% of those contacted have failed to reach admission criterion at this stage. Questionnaires and interviews which are administered during formal data collection procedures allow staff to verify that the father meets formal Feighner et al. diagnostic criteria for either probable or definite alcoholism (Feighner et al., 1972). Subjects are not excluded if they exhibit other psychiatric symptomatology along with alcoholism, and no attempt is made to exclude families in which the wife exhibits current alcoholism or other psychiatric symptoms. It is expected that this open selection procedure will result in a heterogeneous sample which is as highly variable with regard to husband's psychiatric status and wife's psychiatric and alcohol-abuse status as is true of the general population of alcoholics who drink and drive.

Data Collection Procedures

Numerous questionnaires, direct observation sessions, and interviews are completed by each participating family (see

Zucker et al. 1984; Zucker, Noll, & Fitzgerald, 1986). During formal data collection procedures, eight contacts are made with each family, totalling approximately 18 hours of contact with project personnel. The majority of the data collection procedures take place in each family's home, although families come to the university campus twice.

Each family completes an extensive assessment battery which includes developmental measures on the target child, as well as questionnaire and interview data collected from each parent. In addition, various ratings of all study participants are completed by the project staff. Project staff members include trained and supervised graduate and undergraduate students who are blind as to family's status (alcoholic or control).

All families receive compensation for participating in data collection procedures. Current monetary compensation is $150 for participation in the extensive assessment battery.

Measures

The particular measures that are of relevance for this study examine current and lifetime levels and patterns of alcohol use, as well as personal, social and occupational functioning, and family social environment.

Measuring Levels and Patterns of Alcohol Use

Parents complete several self-report instruments which are evaluated in combination in order to assess both past and present levels and patterns of alcohol use, as well as the

consequences associated with such use. Each parent is given (a) the Short Form of the Michigan Alcohol Screening Test (SMAST; Selzer, 1975), (b) the Drinking and Drug History (DDH; Zucker & Noll, 1980), and (c) is questioned about their drinking practices during the Diagnostic Interview Schedule (DIS; Robins, Helzer, Croughan, & Ratcliff, 1980). From the DDH it is possible to assign spouses a status level for their current (past six month) drinking which reflects both the amount and variability of their drinking behavior according to the Quantity-Frequency-Variability Alcohol Consumption Index (QFV; Cahalan et al., 1969). The QFV takes into account (a) the amount of any alcoholic beverage consumed on an average occasion (e.g. how often the respondent has 5 or 6, or 3 or 4, or 1 or 2 drinks); (b) the frequency with which each beverage is usually consumed (e.g. from "3 or more times a day", down to "once a year or never"); and (c) the variability of consumption, as indicated by the modal amount consumed, and the highest amount consumed at least occasionally. By cross-tabulating the frequency of drinking against the quantity-variability of the beverage used most frequently, each respondent can be assigned one of five general QFV status levels (Cahalan & Cisin, 1968).

A measure of lifetime drinking difficulty is calculated by incorporating information on: (a) the number of areas in which drinking problems are reported; (b) the duration and intensity of each reported problem; and (c) the age at which

the respondent reports first being intoxicated. The measures of these areas are standardized and summed to produce the Lifetime Alcohol Problem Score (LAPS; Zucker, 1988).

Of particular interest for this study is the measurement of binge versus steady drinking patterns. Previous authors (Dunn et al., 1987; Jacob et al., 1983; Jacob & Krahn, 1988; Seilhamer, 1987) have utilized information from the Marlatt Drinking Profile (Marlatt, 1976), as well as from daily drinking logs to discriminate between binge and steady drinkers. The question of interest on the Marlatt Drinking Profile asks: "Would you say that you were a periodic, intermittent drinker (one who drinks heavily on a binge or drinking bout every so often, with periods of little or no drinking between binges), or a steady, regular drinker (one who continuously drinks more or less the same amount on a day-to-day basis)?". Responses to this question were then verified using information from daily drinking logs.

Although the Marlatt Drinking Profile was not administered in the current study, it is possible to create relatively comparable categories of binge and steady drinkers with the available data. To do so, three dimensions of drinking patterns must be measured: the extent of binging, the frequency of drinking (i.e. daily, three times per week, once per week, etc.), and the variability of drinking (i.e. is the subject drinking more or less the same amount each time). As defined by the Marlatt Drinking Profile, binge drinkers are

those who "drink heavily on a binge...with periods of little or no drinking in between binges"--in other words, those who are relatively high on a measure of extent of binging and relatively low on a measure of frequency of drinking. By contrast, steady drinkers are defined by the Marlatt as those who "continuously drink more or less the same amount on a day-to-day basis"--that is, those who are relatively high on a measure of frequency of drinking and relatively low on a measure of variability of drinking.

The extent of binging for each of the fathers will be measured using information from the DIS. During the section of the DIS which deals with alcohol use, subjects are asked "Have you ever gone on binges or benders, where you kept drinking for a couple of days or more without sobering up?". If they answer affirmatively, they are asked whether or not they neglected responsibilities at that time, how often binges like that have occurred, and the approximate dates of their first and last binges. A Binge Index score will be computed by adding the number of binges (expressed as a standard score) to the number of years between the first and last binges (also expressed as a standard score).

A measure of frequency of drinking will be drawn from information from the DDH questionnaire. There are two questions on the DDH which tap frequency of drinking for all beverages. The first asks "Over the last <u>six</u> months, on the average, how many days <u>a month</u> do you have a drink?". The

second asks "When drinking anything, check how often you have any drink containing alcohol whether it is wine, whiskey, or any other drink. Make sure that your answer is not less frequent than the frequency reported on any of the preceeding questions.". The responses to these two questions will be pooled to produce a measure of how frequently respondents drink, from "three or more times per day", down to "once a year or never".

Data from the DDH will also be used to create a measure of variability of drinking. For each of three different beverage types (wine, beer, and whiskey or liquor) respondents are asked to indicate how regularly (nearly every time, more than half the time, less than half the time, once in a while, or never) they drink different amounts (more than six glasses, five or six glasses, three or four glasses, one or two glasses) of that beverage. By using a two-step process to combine these data, one of three variability scores (low, midrange, or high variability) can be assigned to each subject. The first step involves determining the respondent's modal beverage, that is, the one most often consumed. The second step involves examining the regularity with which the respondent drinks different amounts of that beverage (i.e. nearly every time, more than half the time, etc.). A variability score is then assigned according to the highest level of regularity, regardless of the amount consumed. Those respondents consuming any amount of their modal beverage

"nearly every time" will be assigned a low variability score; those consuming any amount of their modal beverage "more than half the time" will be assigned a midrange variability score; and those consuming any amount of their modal beverage "less than half the time" or "once in a while" will be assigned a high variability score. This means that if respondent A reports drinking "more than six glasses" of beer "more than half the time", and respondent B reports drinking "one or two glasses" of beer "more than half the time", they both will receive midrange variability scores, even though respondent A actually consumes considerably more beer.

Measuring Personal, Social, and Occupational Functioning

(A) Personal Functioning

The Pearlin Coping and Mastery Scale (Pearlin & Schooler, 1978) was devised to assess the extent to which individuals use various types of coping behaviors to protect themselves "from being psychologically harmed by problematic social experience" (p. 2). A revised version of the original scale is completed by both spouses. This revised version asks about parental coping responses which are divided into subscales such as selective ignoring, nonpunitiveness, and self-reliance, and also assesses respondent's feelings regarding their general sense of personal efficacy, control, or mastery. Scores for each coping subscale are obtained by summing the responses to each item in the subscale. This procedure yields coping subscale scores ranging from three to

nine. A mastery subscale score is obtained by summing the responses to each item in the subscale, resulting in scores ranging from zero to 21 (with higher scores indicating greater feelings of mastery). The Coping and Mastery subscales have demonstrated adequate internal consistency, with coefficient alphas ranging from .52 to .82 (Pearlin, personal communication, 1988).

The Hassles and Uplifts Scale (Kanner, Coyne, Schaefer, & Lazarus, 1981) is a set of two lists of daily life events which includes 117 hassles and 135 uplifts. These hassles and uplifts are rated by respondents for both occurrence and intensity. The hassles list includes irritating and frustrating events such as losing things, traffic jams, inclement weather, arguments, and financial and family concerns. The uplifts list includes positive experiences such as being in love, hearing good news, getting a good nights rest, getting along with friends and family, and financial success or security. Each item is first endorsed as to whether it occurred during the previous month, and then each endorsed item is rated on a three point scale for either severity (for hassles) or how often it occurred (for uplifts). Three different scores are derived from these ratings: frequency (total number of items endorsed), cumulated severity (a summation of the three point ratings), and intensity (cumulated severity divided by the frequency). Generally used as a measure of stress and its obverse (uplifts),this

instrument was developed as an alternative to conventional life events scales and has been found to be a better predictor of both current and subsequent psychological symptoms. Checks for validity have indicated that Hassles are significantly correlated with negative affect, while Uplifts are significantly correlated with positive affect. In addition, significant relationships have been found between Hassles and psychological symptoms over a 10 month period, with correlations of .41 and .60 for men and women, respectively (Kanner et al., 1981). An earlier paper which examined the Hassles and Uplifts scores of 30 couples from the current study reported that hassles were significantly related to both physical illness and current self-reported depression (Weil, 1987).

(B) Social Functioning

An expanded version of the Social Support Questionnaire developed by Norbeck, Jondsey, and Carrieri (1981) was administered to each spouse in interview format. Respondents are asked to generate a list of significant others in their life, and then answer a series of questions regarding those relationships. The expanded version of the questionnaire (Weil & Zucker, 1985) includes the original measures of network size, frequency of contact, duration of relationships, aid, affect, and affirmation, but also includes items which assess network density, interpersonal similarity, and organizational support (eg. club and church involvement).

Although the questionnaire yeilds 12 different scores, five of these have proven to be the most fruitful: network density (how well all the members of the network know one another), total network functioning (sum of all aid, affect, affirmation, and similarity scores), external support (membership in clubs and organizations + frequency of churchgoing), total number in network (number of persons listed in network), total social support (network density + total number in network + sum of the number of years respondent has known each person in network) (Weil, personal communication, 1988). Initial studies on the original Norbeck instrument found test-retest reliability to be quite good, with coefficients ranging from .85 to .92. Internal consistency for these items was also adequate, with inter-item correlations ranging from .69 to .98. Finally, responses were shown to be relatively unaffected by social desirability (Norbeck et al., 1981). Although psychometric data are not available for the small number of items added by Weil and Zucker, the additional variables should not alter the statistical properties of the original instrument.

Measuring Family Social Environment

The Family Environment Scale (Form R) (FES; Moos, 1974; Moos & Moos, 1976) is an empirically based measure which classifies families as they are perceived by family members themselves. Form R of the FES contains scales which describe dimensions of the family environment with which each family

member must cope. The subscale scores may be used to examine the family itself as the central focus, or they may be used to compare the extent of agreement between individual family members, or they may be used to compare different groups of families. The FES provides ten subscale scores in such areas as cohesion, conflict, moral-religious emphasis, and achievement orientation. Subscale scores are obtained by summing the responses for the items in each subscale, resulting in scores ranging from 0 to 6. The subscales have demonstrated adequate internal consistency, ranging from .64 to .79, good test-retest reliability, ranging from .68 to .86, and average subscale intercorrelations of around .20 (Moos, 1974). Earlier analyses of FES data collected from subjects in the current study revealed significant relationships between levels of current alcohol consumption and the conflict and cohesion subscales (Reider, 1987), and have demonstrated differences between alcoholic and control families on the moral-religious emphasis subscale (Zucker, Weil, Baxter, & Noll, 1984).

Measuring Overall Adaptive Functioning

Ratings on Axis V of DSM-III-R (American Psychiatric Association, 1987) were made to assess the highest level of adaptive functioning of each of the spouses within the last year. The data necessary to make Axis V ratings (eg. data regarding social, occupational, and leisure time fuctioning) were collected at the end of each DIS administration, and

ratings were made by the DIS interviewer. Ratings are made along a seven point scale ranging from superior to grossly impaired. At each of the seven levels, descriptions of functioning are provided, along with adult and child/adolescent examples. Axis V ratings are an index of social and personal competence which may be semi-independent of symptomatic status. Initial field trials sponsored by NIMH indicated that Axis V ratings displayed good intraclass reliability, with a coefficient of .80 (American Psychiatric Association, 1980). Inter-rater reliability for raters involved in the current project has been evaluated and is an acceptable .85 (Zucker et al., 1986).

The Progress Evaluation Scale (Ihilevich, Gleser, Gritter, Kroman, & Watson, 1985) is a brief instrument designed to assess current level of functioning in the areas of personal, social, and community adjustment. The instrument is made up of seven scales or domains, each consisting of five levels, from the most pathological to the healthiest levels of functioning. For each scale or domain, respondents are asked to indicate at which of the five levels they have been functioning during the preceeding two weeks. This indicated level of functioning becomes their score for each domain, producing scores ranging from one to five for each scale or domain. The seven domains include family interaction, occupation, getting along with others, feelings and mood, use of free time, problems, and attitude toward self. Studies of

construct validity have demonstrated that that the scales (a) differentiate between normal and patient groups, as well as between groups displaying various degrees of psychopathology; (b) are for the most part independent of demographic variables; (c) display convergent and discriminant validity based on ratings by clients and therapists; (d) measure independent domains of behavior and experience; and (e) are sensitive to changes in levels of personal, social, and community adjustment (Ihilevich et al., 1985).

The Composite Psychological Health Q-Sort (Livson & Peskin, 1967; 1981) is used to provide a measure of overall parental mental health. This measure utilizes the Block California Q-Sort (Block, 1961), a set of 100 statements that attempt to cover the domain of behavior seen in social settings, as well as psychological processes that might regulate such social behavior. Following the administration of the DIS, the interviewer sorts the items into a fixed, normally distributed set, ranging from most to least characteristic or salient for each individual. The psychological health measure is the correlation between the actual sort for each individual and a composite, expert sort for the "psychologically healthy personality", with scores ranging between 1.00 and -1.00. Inter-rater reliabilities for raters on the current project have been evaluated and are .78 and higher (Zucker et al., 1986).

Measuring Degree of Antisocial Involvement

The Antisocial Behavior Checklist (Zucker & Noll, 1980) is a revision of an earlier instrument (Zucker & Barron, 1973) that was modified so as to be more salient for adult antisocial activity. The checklist is a 46 item inventory of behaviors which have been categorized by content into nine homogeneous subscales. Examples of subscales include parental defiance, delinquent behavior, serious physical aggression, trouble with the law, etc. Each item is rated for lifetime frequency of involvement. Scores for each subscale are obtained by summing the responses to items in that subscale. A series of reliability and validity studies with various populations has shown that the checklist has adequate test-retest reliability (.81 over four weeks), and has a coefficient alpha of .84 (Zucker & Noll, 1980). The checklist has been shown to successfully discriminate between prison samples, district court samples, and university students (i.e. it successfully differentiates level of antisocial involvement) (Noll & Zucker, 1986). Previous analyses utilizing Antisocial Behavior Checklist responses of subjects from the larger project have demonstrated that the measure successfully discriminates between alcoholic and control families (Zucker et al., 1984), and that antisocial behavior is significantly and positively related to lifetime alcohol involvement (Reider, 1987; Weil, 1987).

Chapter III

Results

Division of Drinkers Into Categories

The current study examined the drinking patterns and adaptive functioning of couples in which the husband, at the least, was alcoholic. Beginning with a sample of 96 couples, the examination required that the men be categorized into steady and binge drinking groups based upon the husband's self-reported drinking behavior. As detailed previously, three dimensions of drinking patterns were measured: the extent of binging, the frequency of drinking, and the variability of drinking.

A Binge Index was derived for each man by adding his total number of binges (expressed as a standard score) to the number of years between his first and last binges (also expressed as a standard score). Because the distribution of number of binges was heavily skewed, the Binge Index, once calculated, failed to accurately reflect actual binging behavior. To correct this, the distribution of number of binges was normalized via a logarithmic transformation. The distribution of Binge Index scores can be seen in Figure 1.

A measure of frequency of drinking was derived from the husband's report of his drinking behavior during the past six months. The frequency score simply reflected how many days per month the respondent reported consuming any alcoholic

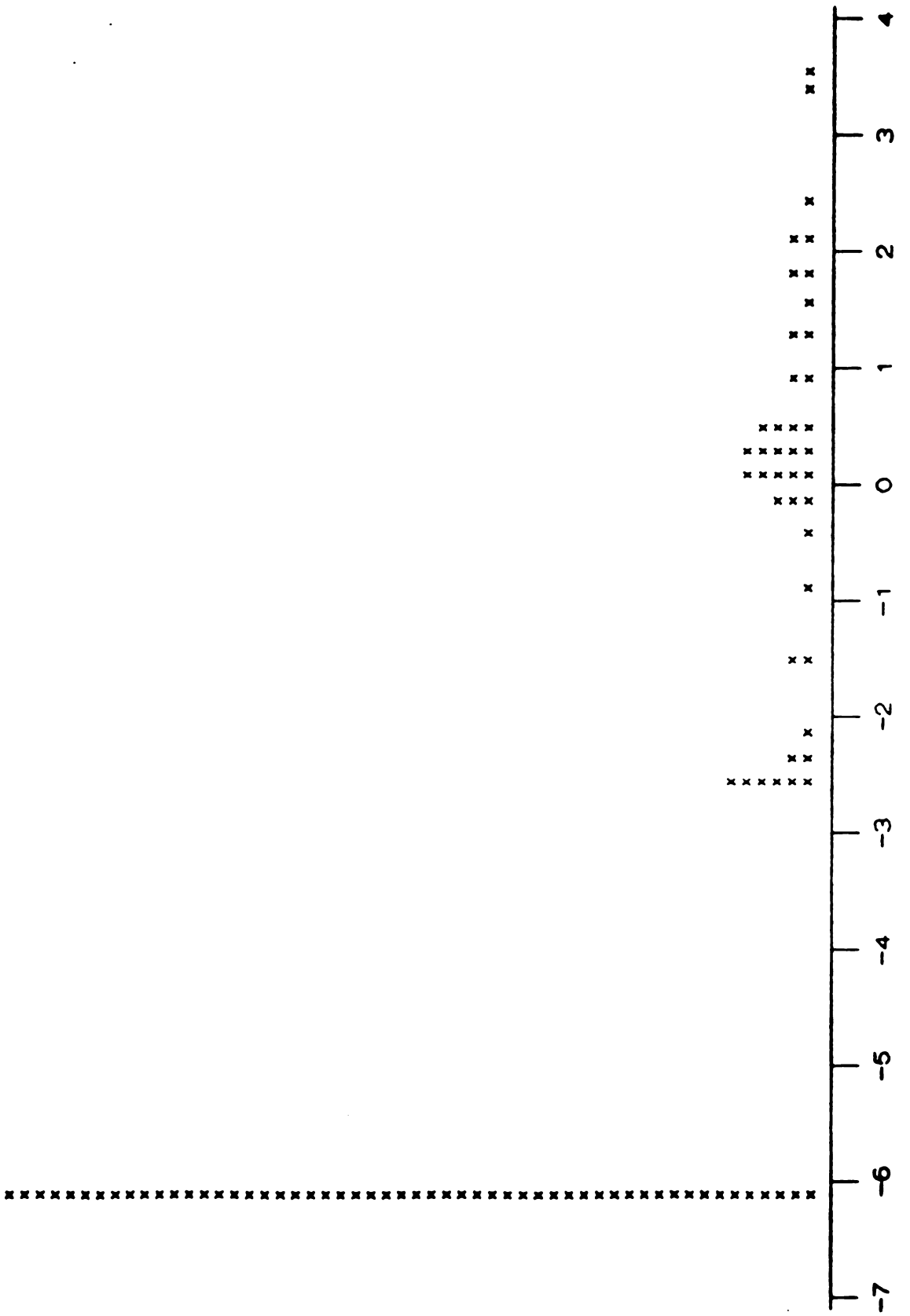


Figure 1. Frequency Distribution of Binge Index Scores.

beverage. The distribution of frequency scores is presented in Figure 2.

Finally, a measure of variability of drinking was constructed to reflect the man's highest report of how regularly (nearly all the time, more than half the time, less than half the time, once in a while) he consumed any amount of his modal beverage (from one or two glasses up to more than six glasses). A drinker whose highest reported level of regularity was "nearly every time" received a low variability score, while a drinker whose highest level of regularity was "once in a while" netted a high variability score. The distribution of variability scores is shown in Figure 3.

Since the current study involved an examination of the drinking patterns and adaptive characteristics of alcoholics who were drinking at the time of data collection (i.e., "wet" alcoholics), subjects who received a frequency score of 0 (i.e., "dry" alcoholics; n=25) at the time of data collection were excluded from all analyses. The Binge Index, frequency, and variability scores were then combined to divide the remaining alcoholics (n=71) into categories which met the definitions of Steady and Binge categories as described in the Marlatt Drinking Profile.

Because the Marlatt Drinking Profile describes a binge drinker as "one who drinks heavily on a binge or drinking bout every so often, with periods of little or no drinking between binges" (Marlatt, 1976, p. 127), Binge Index scores were first

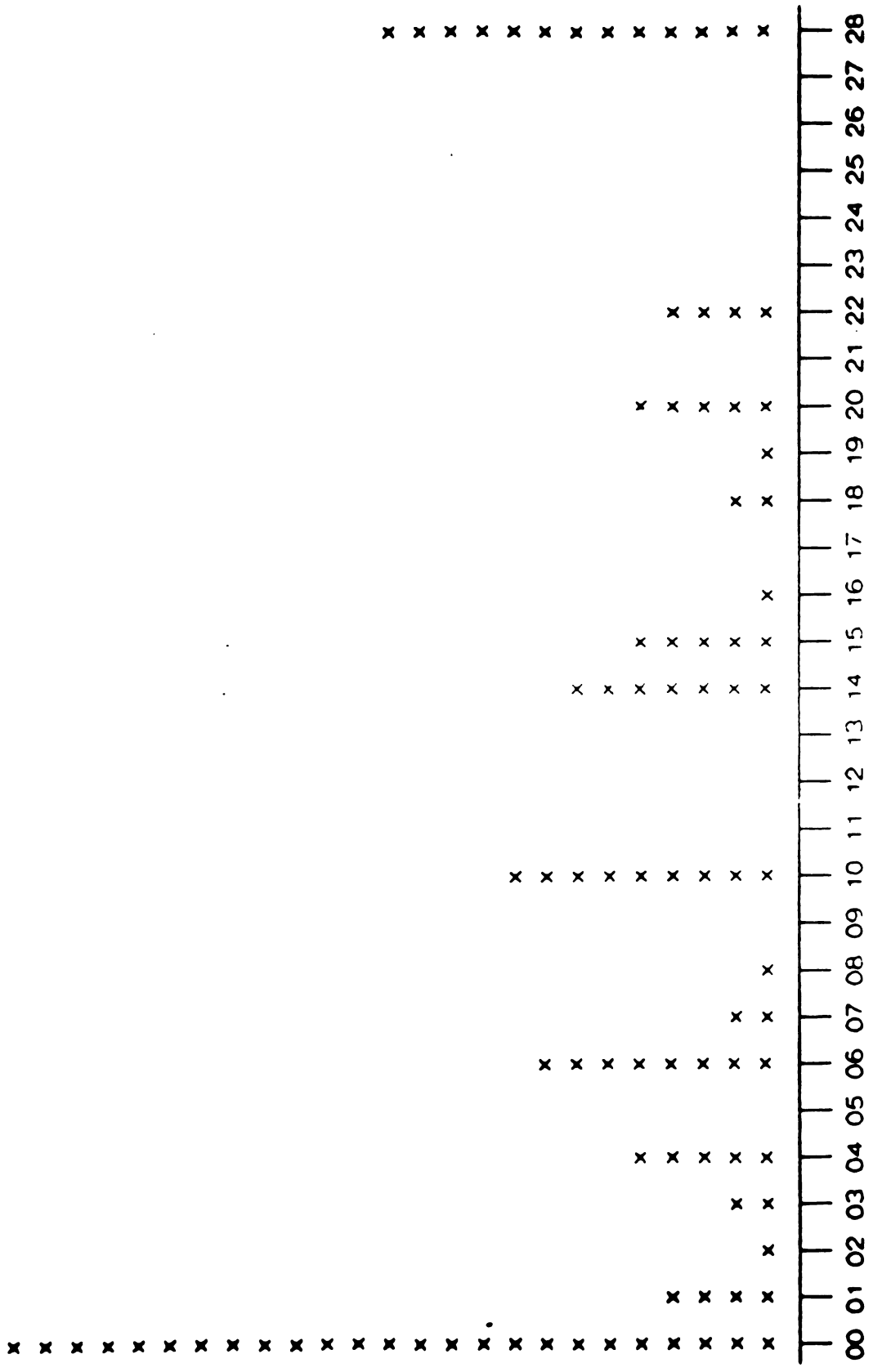


Figure 2. Frequency Distribution of Frequency Scores.

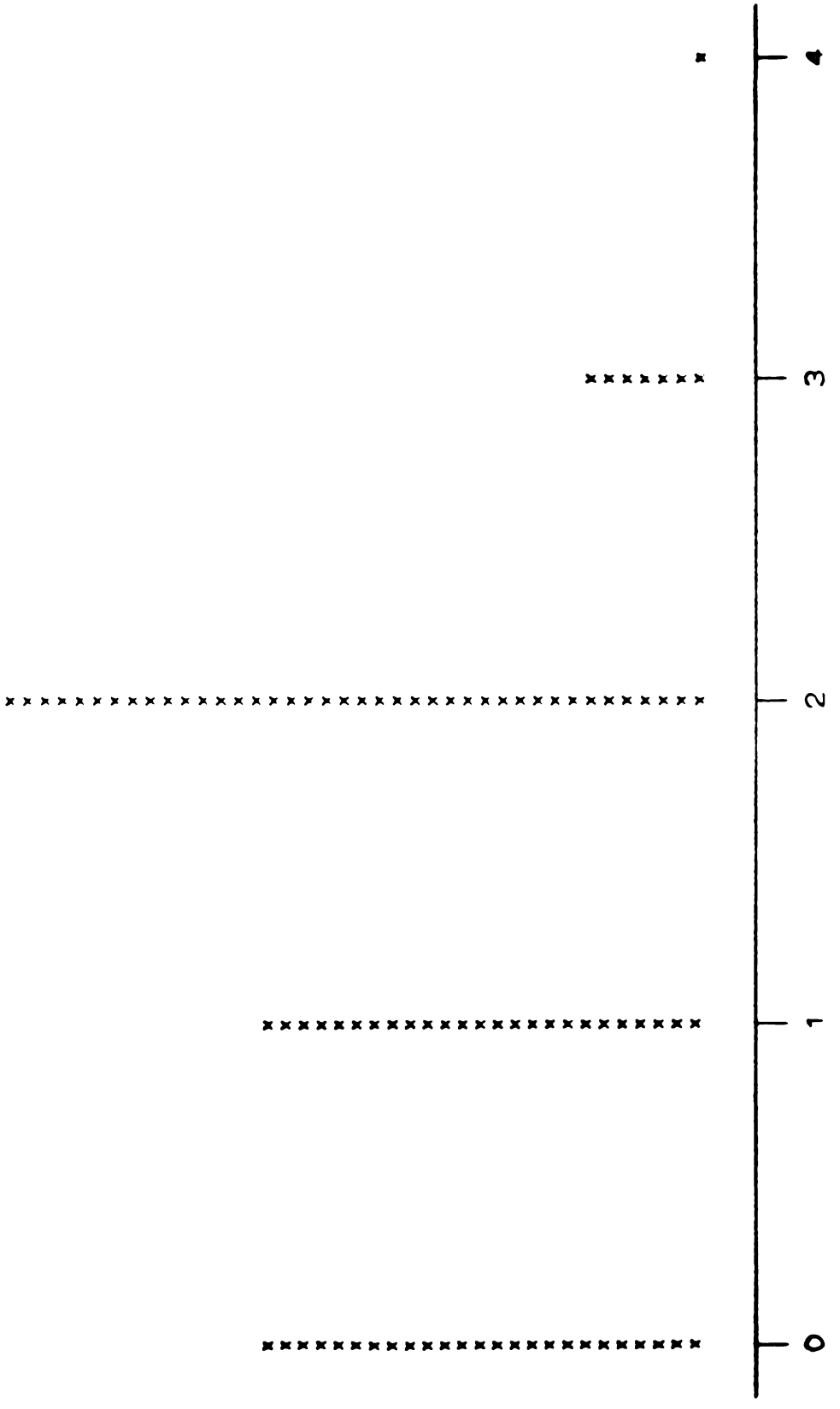


Figure 3. Frequency Distribution of Variability Scores.

plotted against frequency scores (see Figure 4). To satisfy the first part of the description (high binging), only those drinkers with a Binge Index score above 0.00 were considered for inclusion into the binge group. To satisfy the second part of the description ("periods of little or no drinking between binges", i.e., low frequency), only those drinkers who reported drinking an average of four days per week or less were eligible for binge group membership. Ten alcoholics fit these two criteria and constitute the binge group.

Creation of the steady group followed procedures similar to those used in creating the binge group. Because the Marlatt Drinking Profile describes a steady drinker as "one who continuously drinks more or less the same amount on a day-to-day basis" (Marlatt, 1976, p. 127), the frequency scores of the fathers not assigned to the binge group were then plotted against their variability scores (see Figure 5). To satisfy the first part of the description ("drinks more or less the same amount", i.e., low variability), only those drinkers with a variability score of one or two were considered eligible for steady group membership. To satisfy the second part of the description ("on a day to day basis", i.e.. high frequency), only those drinkers who reported drinking five days per week or more were considered for inclusion in the steady category. Twenty-one alcoholics fit these two criteria, and constitute the steady category. Those

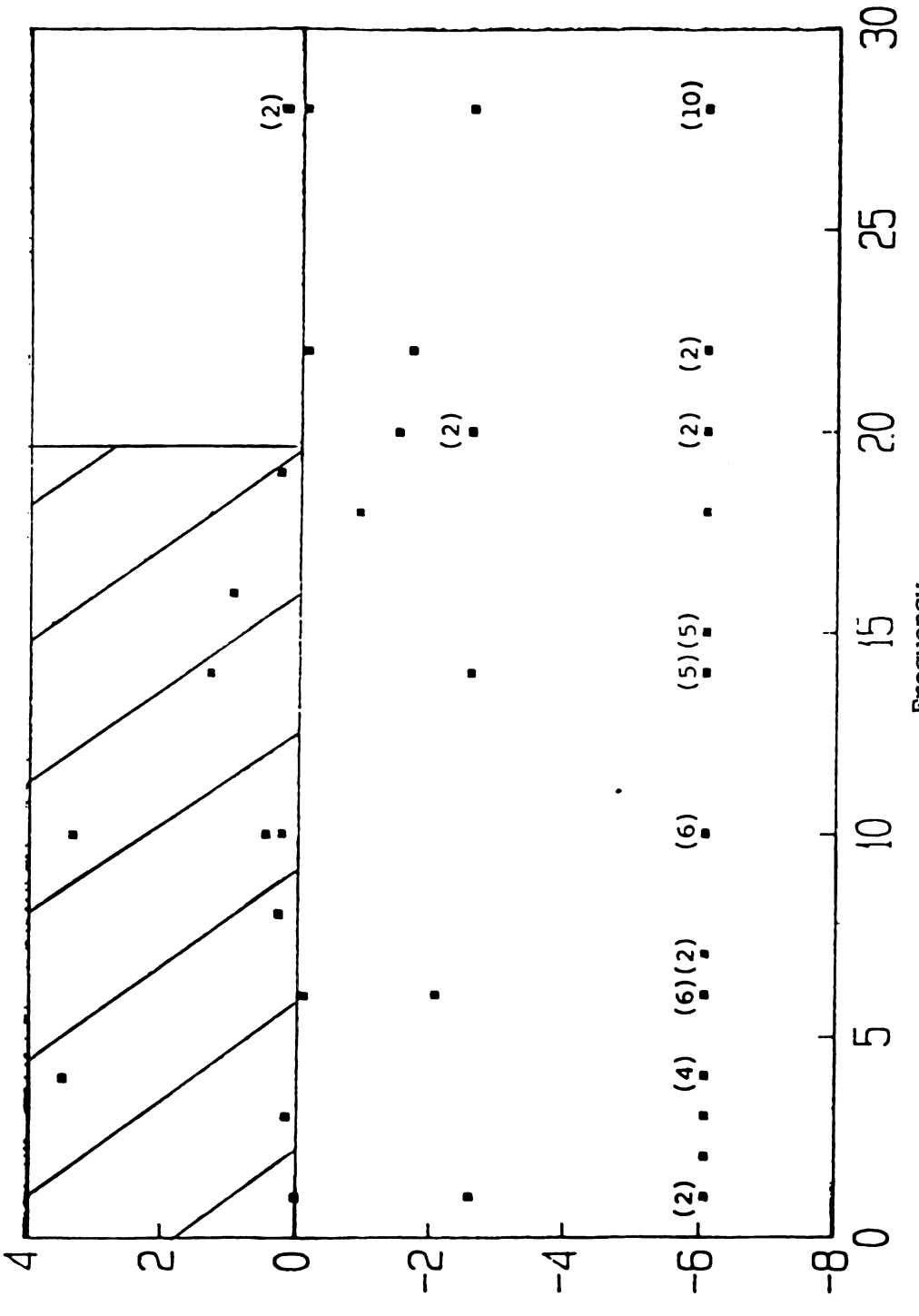


Figure 4. Relationship Between Binge Index Scores and Frequency Scores For All Drinkers.

Note: Numbered points indicate multiple subjects at that point.

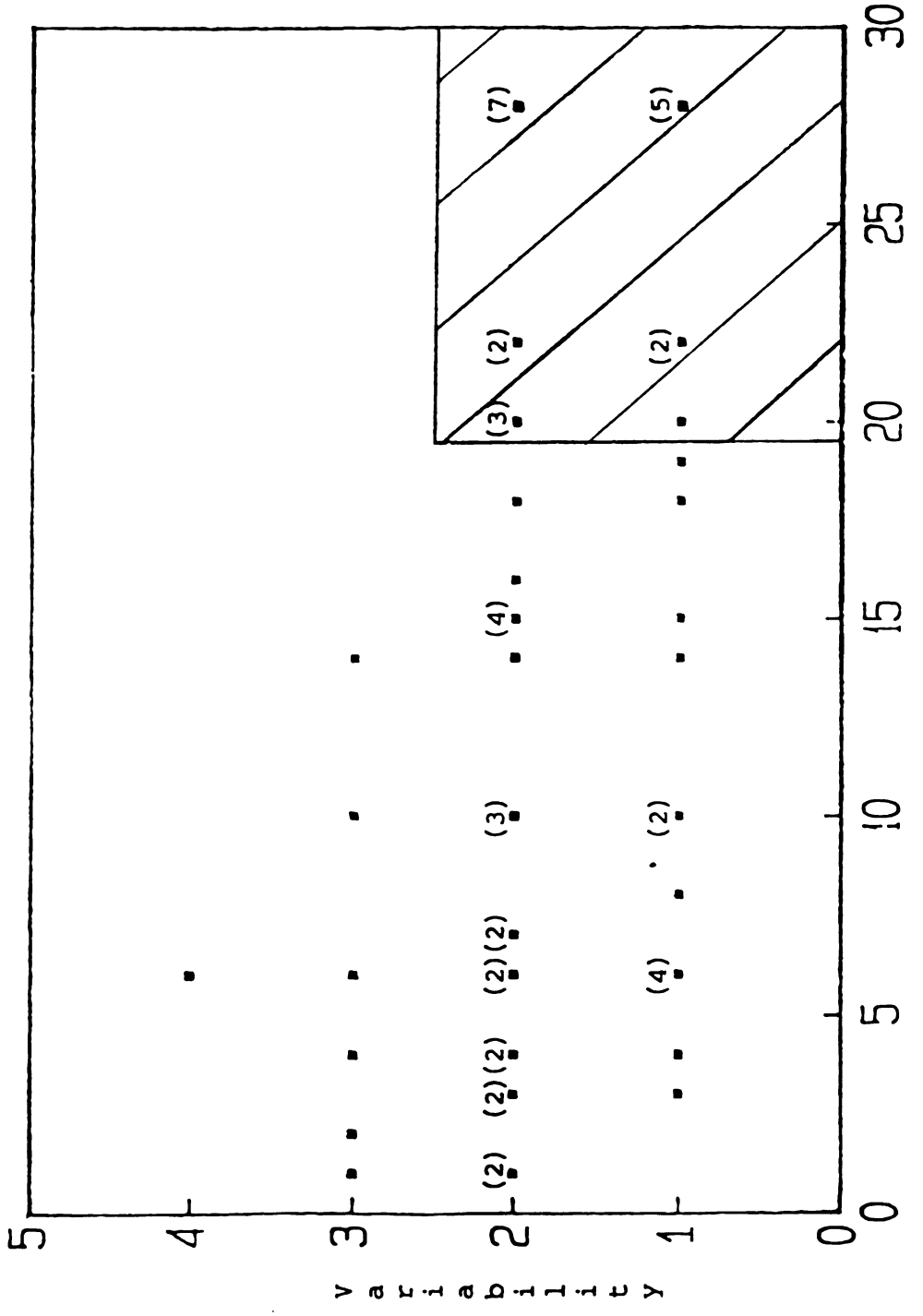


Figure 5. Relationship Between Variability Scores and Frequency Scores For All Non-Binge Drinkers.

Note: Numbered points indicate multiple subjects at that point.

drinkers not assigned to either the binge or steady categories were assigned to a residual category.

Method of Analysis

Between-groups comparisons of couples in the steady, binge, and residual groups were made for all of the dependent variables using procedure MANOVA of SPSS-X. A priori contrasts which compared steady versus binge drinkers and their wives were also completed, since the primary focus of the work involved this two-group comparison rather than the three-group one.

Differences Between Steady and Binge Groups

Demographic Characteristics.

The sociodemographic data for the steady and binge groups, presented in Table 1, show that both groups are composed of subjects whose ages average around 29 years old. The husbands and wives in both groups have completed, on average, just over twelve years of education. There were no significant between-groups differences on any of the socio-demographic variables.

Drinking-Related Characteristics ofSteady and Binge Drinkers.

The first two hypotheses, based on the work of Jacob and his associates, were intended to be replications of two of Jacob's basic findings. The first hypothesis, which predicted that steady drinkers would report higher levels of drinking than would binge drinkers, as measured by the Cahalan et al.

Table 1

Demographic Characteristics of Steady and Binge Drinking Alcoholic Men and Their Wives (N=31 couples)

	Steady (n=21)	Binge (n=10)	F
Men			
Age in Years			
x	29.38	30.50	.553
S.D.	3.39	3.27	
Years of Education			
x	12.71	12.40	.445
S.D.	2.28	1.35	
Duncan Social Prestige Index[a]			
x	28.42	26.06	.230
S.D.	13.27	8.38	
Religion (%)			
Protestant	19.0	10.0	
Catholic	19.0	30.0	
Other	9.5	10.0	
No Religion	52.4	50.0	
Wives			
Age in Years			
x	27.84	29.10	.551
S.D.	3.16	4.43	
Years of Education			
x	12.84	12.50	.455
S.D.	1.60	2.41	
Religion (%)			
Protestant	35.00	50.00	
Catholic	20.00	10.00	
Other	20.00	10.00	
No Religion	25.00	30.00	

a=Stevens & Featherman (1981)
Note: All Fs are non-significant

Quantity-Frequency-Variability (QFV) Index (1969), was strongly supported. Steady drinkers reported significantly higher levels of current alcohol consumption than did binge drinkers, as measured by a modified version of the QFV (Table 2).

The second hypothesis, that steady drinkers would report fewer adverse consequences as a result of their drinking than would binge drinkers, received no support. The means of the two groups on the LAPS were nearly identical (Table 2).

Individual-Level Adaptive Functioning in Binge and Steady Couples.

The third hypothesis, that steady drinkers and their spouses would report higher levels of adaptive functioning than would binge drinkers and their partners, as measured by the PES, Axis V ratings, and the Composite Psychological Health Q-Sort, received virtually no support.

The only significant between-groups differences for either the fathers or the mothers were found on the PES. For the fathers, the only significant between-groups differences were found in the domains of mood and problems. In the area of mood, the mean for the steady drinkers was significantly higher than that for the binge drinkers, suggesting that steady drinkers report experiencing more frequent good moods and less nervousness. In the area of problems, the binge drinking men reported having significantly more frequent and

Table 2

Drinking-Related Characteristics of Steady and Binge Drinking Alcoholic Men (N=31)

		Steady	Binge	F	p
QFVR[a]					
	x	3.74	2.89	12.01	.001
	S.D.	.42	.70		
LAPS[b]					
	x	10.10	10.52	.91	n.s.
	S.D.	2.51	1.56		

a=Quantity, Frequency, and Variability Index-Revised (Zucker & Davies, 1989)
b=Lifetime Alcohol Problem Score (Zucker, 1988)

more severe problems than did the steady drinking men (Table 3).

For the wives, the only significant between-groups difference was found in the domain of getting along with others. The wives of the steady drinkers reported having significantly more friends and getting along with them better than did the wives of the binge drinkers (Table 4).

There were no significant between-groups differences for either the mothers or the fathers on either the Axis-V ratings or the Composite Psychological Health Q-Sort (Tables 3 and 4).

Family-Level Functioning in Steady and Binge Couples.

The fourth hypothesis, that steady drinkers and their partners would report family environments lower in Conflict and higher in Cohesion and Expressiveness than would binge drinkers and their wives, as measured by the Family Environment Scale, received no support.

For the fathers, not only were there no significant between-groups differences for either Cohesion or Expressiveness, but the trend that is noted on the Conflict subscale is in the direction opposite to that predicted. That is, steady drinkers tended to report family environments that were higher in conflict than those of the binge drinkers (Table 5).

Along with the trend toward differences on the Conflict subscale, a significant between-groups difference was found

Table 3

Individual-Level Adaptive Functioning Characteristics of Steady and Binge Drinking Alcoholic Men (N=27)

	Steady (n=28)	Binge (n=9)	F	p
Progress Evaluation Scale				
Meets Basic Needs				
x	4.66	4.77	.035	n.s.
S.D.	.76	.44		
Occupation				
x	4.61	4.33	.350	n.s.
S.D.	.69	1.32		
Get Along With Others				
x	4.38	4.55	.732	n.s.
S.D.	.77	.52		
Good Mood				
x	4.94	4.22	7.316	.009
S.D.	.23	.83		
Recreation				
x	3.50	3.00	1.022	n.s.
S.D.	1.46	1.22		
Number of Problems				
x	1.50	2.22	4.135	.047
S.D.	.61	1.30		
Self-Attitude				
x	4.33	4.00	1.347	n.s.
S.D.	.76	.86		
Axis V				
x	51.77	48.22	.280	n.s.
S.D.	12.07	13.47		
Composite Psychological Health Q-Sort				
x	-.10	-.20	.341	n.s.
S.D.	.39	.24		

Table 4

Individual-Level Adaptive Functioning Characteristics of the Wives (N=27)

	Steady (n=18)	Binge (n=9)	F	p
Progress Evaluation Scale				
Meets Basic Needs				
x	4.66	4.77	.459	n.s.
S.D.	.48	.44		
Occupation				
x	4.83	4.66	.735	n.s.
S.D.	.38	.70		
Get Along With Others				
x	4.83	4.33	3.110	.083
S.D.	.38	.70		
Good Mood				
x	3.66	3.88	.485	n.s.
S.D.	1.53	1.05		
Recreation				
x	3.38	3.11	.450	n.s.
S.D.	1.24	1.16		
Number of Problems				
x	1.94	2.33	.901	n.s.
S.D.	.93	1.00		
Self-Attitude				
x	3.83	3.44	.570	n.s.
S.D.	1.15	.88		
Axis V				
x	58.05	54.11	.433	n.s.
S.D.	11.34	15.55		
Composite Psychological Health Q-Sort				
x	.09	.09	.008	n.s.
S.D.	.31	.42		

Table 5

Family-Level Functioning Characteristics of Steady and Binge Drinking Alcoholic Men (N=31)

	Steady	Binge	F	p
Family Environment Scale				
Cohesion				
x	6.76	6.00	.787	n.s.
S.D.	2.14	1.05		
Expressiveness				
x	5.76	5.60	.129	n.s.
S.D.	1.44	1.43		
Conflict				
x	4.00	2.80	2.936	.091
S.D.	2.02	1.22		
Independence				
x	6.47	5.70	2.885	.094
S.D.	1.03	1.33		
Achievement Orientation				
x	5.66	6.20	.528	n.s.
S.D.	1.77	2.30		
Intellectual/Cultural Orientation				
x	4.76	4.20	1.393	n.s.
S.D.	2.16	1.13		
Active/Recreational Orientation				
x	5.57	3.50	7.408	.008
S.D.	1.96	2.83		
Moral/Religious Orientation				
x	5.09	4.40	.316	n.s.
S.D.	1.89	1.35		
Organization				
x	5.42	5.60	.007	n.s.
S.D.	2.48	1.89		
Control				
x	5.33	5.00	.071	n.s.
S.D.	1.68	1.76		

on the Active/Recreational Orientation subscale, and a trend was also noted on the Independence subscale. Fathers in the steady category tended to perceive family members as encouraging one another to be assertive, self-sufficient, and to make their own decision more than did fathers in binge drinking category; in addition, fathers in the steady category perceived their families to be significantly more involved in recreational and sporting activities than did fathers in the binge category.

For the mothers, the only FES subscale to discriminate between the binge and steady groups was the Active/Recreational Orientation scale. Like their partners, mothers in the steady group perceive significantly greater involvement in recreational activities than did mothers in the binge group (Table 6).

It is difficult to interpret the tendency for higher Conflict scores to be reported by the steady drinking men. One obvious possibility is that these are chance findings. Data from other studies, as well as FES data from the mothers in the current study, suggest that this may be the case. In terms of data from other studies, although Jacob and his associates do not discuss levels of conflict per se, it is reasonable to infer levels of conflict from reports of marital satisfaction (Dunn et al., 1987; Jacob et al., 1983; Jacob, 1986), and from the results of problem-solving interactions (Jacob, 1986; Jacob and Krahn, 1988). That is, higher marital

Table 6

Family-Level Functioning Characteristics of the Wives (N=31)

	Steady	Binge	F	p
Family Environment Scale				
Cohesion				
x	6.52	5.50	.522	n.s.
S.D.	2.37	3.71		
Expressiveness				
x	6.09	5.90	.093	n.s.
S.D.	1.81	2.23		
Conflict				
x	4.23	5.60	1.388	n.s.
S.D.	1.92	2.27		
Independence				
x	6.19	5.20	1.781	n.s.
S.D.	1.75	2.09		
Achievement Orientation				
x	5.28	5.80	.731	n.s.
S.D.	1.90	1.22		
Intellectual/Cultural Orientation				
x	4.61	4.70	.151	n.s.
S.D.	2.26	2.54		
Active/Recreational Orientation				
x	5.52	3.10	9.396	.003
S.D.	2.13	2.33		
Moral/Religious Orientation				
x	4.85	4.70	.022	n.s.
S.D.	1.98	2.26		
Organization				
x	4.71	4.10	.051	n.s.
S.D.	2.23	2.33		
Control				
x	4.47	5.30	1.134	n.s.
S.D.	1.56	1.41		

satisfaction among the steady group would be anticipated to correlate with lower level of conflict. In terms of FES data from the mothers in the current study, mothers in the steady group reported less conflict than did mothers in the binge group (although admittedly this difference failed to reach statistical significance). On all these grounds, the present findings among the men are anomalous.

Social Support Network Characteristics of Steady and Binge Couples.

The fifth hypothesis, that steady drinkers and their partners would report having contact with larger and more supportive social support networks than would binge drinkers and their partners, as measured by the Social Support Interview, received virtually no support.

For the fathers, a significant between-groups difference was found for only one of the ten Social Support scales, External Support. Fathers in the steady category reported belonging to significantly more groups and organizations than did fathers in the binge category (Table 7).

There were no significant between-group differences for the mothers on any of the Social Support subscales (Table 8).

Adaptive Capability of Steady and Binge Couples.

The sixth hypothesis, that steady drinkers and their partners would report fewer hassles and more uplifts than would binge drinkers and their partners, as measured by the Hassles and Uplifts Scale, received no support. There were

Table 7

Social Support Network Characteristics of Binge and Steady Drinking Men (N=29)

	Steady (n=19)	Binge (n=10)	F	p
Total Number of Persons				
x	5.63	6.70	.692	n.s.
S.D.	2.91	2.66		
Network Density				
x	3.80	3.79	.398	n.s.
S.D.	.76	.80		
Instrumental Aid				
x	46.78	59.30	1.319	n.s.
S.D.	22.38	27.20		
Emotional Aid				
x	47.52	59.70	1.264	n.s.
S.D.	21.50	29.85		
Affirmation				
x	47.00	55.40	.603	n.s.
S.D.	22.94	28.22		
Similarity				
x	39.26	41.30	.006	n.s.
S.D.	19.00	21.20		
Affective Support				
x	47.73	58.90	.954	n.s.
S.D.	23.15	28.62		
External Support				
x	3.10	1.60	7.221	.009
S.D.	2.07	.96		
Total Network Functioning				
x	205.31	244.80	.655	n.s.
S.D.	97.45	119.49		
Total Social Support				
x	245.75	289.79	.597	n.s.
S.D.	112.51	134.91		

Table 8

Social Support Network Characteristics of the Wives (n=29)

	Steady (n=19)	Binge (n=10)	F	p
Total Number of Persons				
x	7.89	8.30	.000	n.s.
S.D.	3.60	5.05		
Network Density				
x	3.33	3.27	.026	n.s.
S.D.	.72	.97		
Instrumental Aid				
x	65.21	60.10	.450	n.s.
S.D.	31.49	36.49		
Emotional Aid				
x	67.89	67.60	.172	n.s.
S.D.	29.99	43.72		
Affirmation				
x	65.10	65.90	.007	n.s.
S.D.	29.60	45.20		
Similarity				
x	49.78	49.90	.039	n.s.
S.D.	23.62	39.82		
Affective Support				
x	68.15	67.30	.057	n.s.
S.D.	32.16	44.20		
External Support				
x	2.57	1.70	1.564	n.s.
S.D.	1.50	1.56		
Total Network Functioning				
x	282.36	275.80	.081	n.s.
S.D.	130.78	186.90		
Total Social Support				
x	333.70	328.67	.063	n.s.
S.D.	150.66	217.43		

no significant between-groups differences for either fathers or mothers on any of the Hassles and Uplifts subscales (Tables 9 and 10).

The seventh hypothesis, that steady drinkers and their spouses would report utilization of more effective coping strategies, and would report higher levels of perceived mastery than would binge drinkers and their spouses, as measured by the Pearlin Coping and Mastery Scale, also received virtually no support.

For the fathers, no significant between-groups differences were found on the Pearlin Coping and Mastery Scale (Table 9).

For the mothers, the only between-groups trend was for differences on the Non-Punitiveness subscale (Table 10). The mothers in the steady category tended to received lower scores than did mothers in the binge category, suggesting that the mothers in the steady category are more likely to remove privileges, scold their children, and threaten punishment than are mothers in the binge category. Inasmuch as these actions suggest a more active, assertive approach to child rearing, mothers in the steady category seem to exhibit more effective coping strategies in this area, at least according to Pearlin and Schooler's (1978) conceptualization of effectiveness. This small and perhaps not very reliable difference is nonetheless in the hypothesized direction.

Table 9

Adaptive Capability Characteristics of Steady and Binge Drinking Alcoholic Men (N=27)

	Steady (n=18)	Binge (n=9)	F	p
Hassles and Uplifts Scale				
Hassles Frequency				
x	25.27	25.11	.096	n.s.
S.D.	16.15	11.02		
Uplift Frequency				
x	46.61	32.00	1.628	n.s.
S.D.	25.94	29.85		
Cumulative Hassles				
x	39.33	37.66	.193	n.s.
S.D.	34.59	19.30		
Cumulative Uplifts				
x	76.55	51.55	1.082	n.s.
S.D.	41.58	41.90		
Hassles Intensity				
x	1.42	1.54	.124	n.s.
S.D.	.35	.55		
Uplifts Intensity				
x	1.64	1.78	.975	n.s.
S.D.	.31	.44		
Pearlin Coping and Mastery				
Selective Ignoring				
x	5.77	5.88	.012	n.s.
S.D.	1.06	.60		
Non-Punitiveness				
x	4.83	5.00	.268	n.s.
S.D.	.85	.86		
Self-Reliance				
x	7.44	7.44	.002	n.s.
S.D.	2.00	2.40		
Potency				
x	6.55	7.22	.776	n.s.
S.D.	1.24	1.20		
Mastery				
x	15.77	16.11	.076	n.s.
S.D.	3.13	1.16		

Table 10

Adaptive Capability Characteristics of the Wives (N=27)

	Steady (n=18)	Binge (n=9)	F	p
Hassles and Uplifts Scale				
Hassles Frequency				
x	26.11	25.55	.124	n.s.
S.D.	15.08	19.95		
Uplift Frequency				
x	39.77	34.22	.119	n.s.
S.D.	19.20	17.97		
Cumulative Hassles				
x	43.66	38.66	.554	n.s.
S.D.	31.30	27.81		
Cumulative Uplifts				
x	73.22	58.44	.148	n.s.
S.D.	40.43	37.45		
Hassles Intensity				
x	1.52	1.59	.069	n.s.
S.D.	.32	.54		
Uplifts Intensity				
x	1.79	1.65	.554	n.s.
S.D.	.32	.38		
Pearlin Coping and Mastery				
Selective Ignoring				
x	5.83	5.88	.435	n.s.
S.D.	1.15	.78		
Non-Punitiveness				
x	4.28	5.11	3.255	.077
S.D.	1.07	1.05		
Self-Reliance				
x	6.00	5.66	.685	n.s.
S.D.	1.97	2.82		
Potency				
x	7.50	6.77	2.624	n.s.
S.D.	1.20	1.64		
Mastery				
x	14.33	13.11	.026	n.s.
S.D.	3.48	1.76		

Differing Levels of Antisocial Involvement and Collateral Drug Use.

Hypotheses eight and nine, regarding the impact of antisocial behavior and collateral drug use on the results of hypotheses one through eight, received no support.

There were no significant between-groups differences for level of antisocial involvement as measured by the Antisocial Behavior Checklist (Table 11). Three indices were used to measure collateral drug use: the variety of drugs used during the alcoholic's lifetime, the total number of drug use events during the last year, and a weighted measure of lifetime drug use, in which standard scores were calculated for each drug use category and then summed, thus placing greater weight on less commonly used drugs. There were no significant between-groups differences on any of the measures of collateral drug use (Table 11).

Because of the number of subjects involved in the final analyses, completion of a hierarchical regression was impossible, but levels of antisocial behavior and collateral drug use were entered as covariates in the MANOVAs used for testing hypotheses one through eight.

Although both covariates produced a few significant regression coefficients, neither covariate consistently accounted for a significant amount of the variance between the groups. The impact of each of the covariates on the group differences reported above is as follows: level of antisocial

Table 11

Anti-Social Involvement and Collateral Drug Use Characteristics of Steady and Binge Drinking Alcoholic Men (N=28)

	Steady (n=28)	Binge (n=10)	F	p
Total Anti-Social Involvement				
x	24.89	30.90	.382	n.s.
S.D.	21.91	14.62		
Collateral Drug Use				
Lifetime Variety				
x	4.89	7.66	1.969	n.s.
S.D.	3.57	3.35		
Use In Last Year				
x	4.63	5.66	.029	n.s.
S.D.	4.92	5.22		
Weighted Lifetime Use				
x	-.81	6.26	2.771	n.s.
S.D.	7.88	10.12		

involvement, when entered as a covariate, eliminated the between-groups trends on the father's FES Conflict subscale; and level of collateral drug during the last year, when entered as a covariate, eliminated the between-groups trends on the father's FES Independence subscale and the mother's PES Getting Along With Others subscale. Clearly, the differences in functioning between the binge and steady groups are related to factors other than antisocial involvement and collateral drug use.

Chapter IV

Discussion

The results of the current study only partially replicate the results reported by Jacob and his associates regarding alcohol consumption and the results of such consumption in binge and steady drinking alcoholic men. The study also fails to clearly support hypotheses related to differing levels of adaptive functioning in binge and steady drinkers and their partners. There are five possible explanations for these findings.

The first explanation has to do with the inter-related issues of power and Type II error. Power is the probability that a test will lead to a correct decision to reject the null hypothesis when it should be rejected. Type II error, one possible outcome of too little power, occurs when a decision is made <u>not</u> to reject the null hypothesis when it actually is false. One of the determinants of power, and thus also of the probability for Type II error, is the size of the sample being tested. All other things being equal, the larger the sample size, the greater the power. This point is particularly germane to the current study: although the sample originally consisted of 96 couples, inclusion criteria for the binge and steady groups resulted in only 31 couples being included in the final analyses.

This potential explanation looses much of its explanatory power, however, when one examines Tables 1 through 11. Were

insufficient power responsible for the largely insignificant results, one would expect to find group differences that, while statistically insignificant, nonetheless were in the hypothesized direction. Examination of the results in Tables 1 through 11, however, reveals that, of the insignificant group differences, only about half are in the hypothesized direction.

A second possible explanation for the failure to replicate the results reported by Jacob and his associates, or to extend these results, is related to possible developmental differences between the samples being studied. The families examined by the Jacob group have been approximately twelve years older than those studied in the current work. It is possible that the differences previously reported do not begin to manifest themselves until later in life, and that the subjects in the current study, if examined twelve years from now, would show similar differences.

A third possible explanation is related to the indices of drinking used to categorize the fathers into binge and steady groups. Jacob and his associates always used reports of <u>current</u> drinking patterns to determine binge and steady group membership. By contrast, the current study combined current <u>and</u> lifetime measures of drinking to categorize the fathers into binge and steady groups. The measures of both frequency and variability were based on the husband's self-reported drinking patterns during the six months prior to data

collection, while the Binge Index was based on lifetime binging behavior. Thus, a father may have been assigned to the binge group based, in part, on drinking behavior very different from that currently being followed. In fact, a review of the data from the binge drinkers revealed that only five of the ten binge drinkers reported current binging. For the other five, their most recent binge was from two to 11 years ago, with a mean of seven years ago. Although it is impossible to estimate the relative impact of lifetime versus current drinking patterns, it seems likely that current patterns of drinking are more closely related to current patterns of adaptive functioning than are lifetime patterns of drinking.

Another possible reason for the failure to obtain the expected results is also related to the procedures used to categorize drinkers into binge and steady categories. In an attempt to approximate the categories used by Jacob and his associates, several indices of drinking were used to create binge and steady categories based on the self-reported drinking behavior of the alcoholic subjects. These indices were created from responses to relatively specific and detailed questionnaires regarding drinking behavior. By contrast, Jacob and his associates used the responses from a single, general question to categorize his alcoholic subjects (i.e., "Would you say that you were a periodic, intermittent drinker (one who drinks heavily on a binge or drinking bout

every so often, with periods of little or no drinking between binges), or a steady, regular drinker (one who continuously drinks more or less the same amount in a day-to-day basis)?"; Marlatt, 1976, p. 127).

It may be the case that, when answering the relevant question on the Marlatt Drinking Profile, the subjects examined by Jacob and his associates were responding to internalized representations of their drinking patterns which had little in common with the ways in which they actually drank. The only data reported by the Jacob group which would be of use in answering this question were reported by Seilhamer (1987). Seilhamer reported that, of four steady drinkers, three drank every day and one drank on 79% of the days in question. These patterns clearly fall within the criteria used to categorize steady drinkers in the current study. By contrast, Seilhamer reported that the four binge drinkers in her study (she referred to them as "episodic" drinkers) drank between 68% and 92% of the days in question. These patterns clearly do not fall within the criteria used to categorize binge drinkers in the current study.

Thus, a question remains regarding the extent to which an alcoholic's perception of him or herself as a binge or steady drinker accurately reflects his or her actual drinking pattern. In addition, it may be the case that an alcoholic's global perception of his or her drinking pattern is more

predictive of adaptive functioning than is his or her true drinking pattern.

The fifth explanation for the failure to find differences in adaptive functioning between binge and steady drinkers is that such differences simply do not exist. On the basis of Jacob's work, however, this appears not to be the case. Very faint indicators in the current data set cautiously support the hypotheses regarding between-groups differences. Table 12 lists all of the significant findings among the men, and also indicates their consistency (or lack thereof) with the hypotheses. These data show a very weak, but nonetheless supportive, pattern of relationships, including 4 that are consistent with the hypotheses, one not predicted at all, and none in the opposite direction. Given that these represent only 11.9 percent of the tests made, however, this comment is made with very great caution.

The current study has shed little light on the question of differences between relatively young steady and binge drinkers and their partners. The small sample size involved in the study, as well as problems in the measures used to categorize drinkers into binge and steady groups, make it impossible to render any confident judgments about differences between these two groups.

Questions raised by the current study which should be addressed in the future include possible developmental changes which may accentuate the differences between binge and steady

drinkers, and the relative influence of lifetime versus current drinking patterns in predicting current levels of adaptive functioning.

Table 12

Agreement Between Significant Findings and Hypothesized Direction

	Agreement With Hypothesized Direction		Not Predicted
	Yes	No	
QFV-R	X		
Good Mood	X		
Number of Problems	X		
External Support	X		
Active/Recreational Orientation			X

APPENDICES

Appendix A

Drinking and Drug History

Information on Drinking and Other Drug Use
(12/1/88) (13 pages)

R Number: _____
Given By: _____
Date: _____
T1.0
Ans. Chk: _____
P6

This questionnaire takes about 15 minutes to complete. All information will be used for research only and will be kept strictly confidential. If you are not sure of the answer to a question please answer the best you can. Please try to answer each item.

A. THE FOLLOWING QUESTIONS ARE ABOUT YOUR DRINKING OF ALCOHOLIC BEVERAGES:

1. HOW OLD WERE YOU THE FIRST TIME YOU EVER TOOK A DRINK? DO NOT COUNT THE TIMES WHEN YOU WERE GIVEN A "SIP" BY AN ADULT.

_____ years old.

2. OVER THE LAST 6 MONTHS, ON THE AVERAGE, HOW MANY DAYS A MONTH HAVE YOU HAD A DRINK?

_____ days a month.

3. OVER THE LAST 6 MONTHS, ON A DAY WHEN YOU ARE DRINKING, HOW MANY DRINKS DO YOU USUALLY HAVE IN 24 HOURS? (A DRINK IS A 12 OZ. CAN OF BEER, A 4 OZ. GLASS OF WINE, A SINGLE SHOT, OR A SINGLE "MIXED DRINK.")

_____ drinks per 24 hours.

4. OVER THE PAST 6 MONTHS, WHEN YOU GOT DRUNK, HOW BAD WAS YOUR HANGOVER?

_____ Never bad
_____ Not bad
_____ A little less than average
_____ Average
_____ A little more than average
_____ Pretty Bad
_____ Terrible
_____ Worst possible
_____ Never drank enough to get hangover

B. THE FOLLOWING QUESTIONS ARE ABOUT YOUR DRINKING PATTERNS. IN ANSWERING THE QUESTIONS, PLEASE THINK ABOUT WHAT YOU HAVE DONE ON THE AVERAGE OVER THE LAST SIX MONTHS.

1. WHEN DRINKING WINE:

a. HOW OFTEN DO YOU USUALLY HAVE WINE OR A PUNCH CONTAINING WINE?

_____ 3 or more times a day
_____ 2 times a day
_____ Once a day
_____ Nearly every day
_____ 3 or 4 times a week
_____ once or twice a week
_____ 2 or 3 times a month
_____ About once a month
_____ Less than once a month, but at least once a year
_____ Less than once a year
_____ NEVER [If checked, go to question #2a]

b. THINK OF ALL THE TIMES YOU HAD WINE RECENTLY. WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE 10 OR MORE GLASSES?

_____ Nearly every time: SKIP TO QUESTION #2 BELOW
_____ More than half the time: SKIP TO QUESTION #2 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

c. WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE AS MANY AS 7 TO 9 GLASSES?

_____ Nearly every time: SKIP TO QUESTION #2 BELOW
_____ More than half the time: SKIP TO QUESTION #2 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

d. WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE AS MANY AS 5 to 6 GLASSES?

_____ Nearly every time: SKIP TO QUESTION #2 BELOW
_____ More than half the time: SKIP TO QUESTION #2 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

e. WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE AS MANY AS 3 to 4 GLASSES?

_____ Nearly every time: SKIP TO QUESTION #2 BELOW
_____ More than half the time: SKIP TO QUESTION #2 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

f. WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE 1 TO 2 GLASSES?

_____ Nearly every time
_____ More than half the time
_____ Less than half the time
_____ Once in a while
_____ NEVER

2. <u>WHEN DRINKING BEER</u>

a. HOW OFTEN DO YOU USUALLY HAVE BEER?

_____ 3 or more times a day
_____ 2 times a day
_____ Once a day
_____ Nearly every day
_____ 3 or 4 times a week
_____ Once or twice a week
_____ 2 or 3 times a month
_____ About once a month
_____ Less than once a month, but at least once a year
_____ Less than once a year
_____ NEVER [If checked, go to question #3a]

b. THINK OF ALL THE TIMES YOU HAD BEER RECENTLY. WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE 10 OR MORE GLASSES?

_____ Nearly every time: SKIP TO QUESTION #3 BELOW
_____ More than half the time: SKIP TO QUESTION #3 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

c. WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE AS MANY AS 7 TO 9 GLASSES OR CANS?

_____ Nearly every time: SKIP TO QUESTION #3 BELOW
_____ More than half the time: SKIP TO QUESTION #3 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

d. WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE AS MANY AS 5 TO 6 GLASSES?

_____ Nearly every time: SKIP TO QUESTION #3 BELOW
_____ More than half the time: SKIP TO QUESTION #3 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

e. WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE AS MANY AS 3 to 4 GLASSES?

_____ Nearly every time: SKIP TO QUESTION #3 BELOW
_____ More than half the time: SKIP TO QUESTION #3 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

f. WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE 1 TO 2 GLASSES?

_____ Nearly every time
_____ More than half the time
_____ Less than half the time
_____ Once in a while
_____ NEVER

3. <u>WHEN DRINKING WHISKEY OR LIQUOR</u>

a. HOW OFTEN DO YOU USUALLY HAVE WHISKEY OR LIQUOR (SUCH AS MARTINIS, MANHATTANS, HIGHBALLS, OR STRAIGHT DRINKS INCLUDING SCOTCH, BOURBON, GIN, VODKA, RUM, ETC.)?

_____ 3 or more times a day
_____ 2 times a day
_____ Once a day
_____ Nearly every day
_____ 3 or 4 times a week
_____ Once or twice a week
_____ 2 or 3 times a month
_____ About once a month
_____ Less than once a month, but at least once a year
_____ Less than once a year
_____ NEVER [If checked, go to question #4]

b. THINK OF ALL THE TIMES YOU HAD DRINKS CONTAINING WHISKEY OR OTHER LIQUOR RECENTLY. WHEN YOU HAVE HAD THEM, HOW OFTEN DO YOU HAVE 10 OR MORE DRINKS?

_____ Nearly every time: SKIP TO QUESTION #4 BELOW
_____ More than half the time: SKIP TO QUESTION #4 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

c. WHEN YOU HAVE HAD DRINKS CONTAINING WHISKEY OR OTHER LIQUOR, HOW OFTEN DO YOU HAVE AS MANY AS 7 TO 9?

_____ Nearly every time: SKIP TO QUESTION #4 BELOW
_____ More than half the time: SKIP TO QUESTION #4 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

d. WHEN YOU HAVE HAD DRINKS CONTAINING WHISKEY OR OTHER LIQUOR, HOW OFTEN DO YOU HAVE AS MANY AS 5 TO 6?

_____ Nearly every time: SKIP TO QUESTION #4 BELOW
_____ More than half the time: SKIP TO QUESTION #4 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

e. WHEN YOU HAVE HAD DRINKS CONTAINING WHISKEY OR LIQUOR, HOW OFTEN DO YOU HAVE 3 TO 4?

_____ Nearly every time: SKIP TO QUESTION #4 BELOW
_____ More than half the time: SKIP TO QUESTION #4 BELOW
_____ Less than half the time
_____ Once in a while
_____ NEVER

f. WHEN YOU HAVE HAD DRINKS CONTAINING WHISKEY OR LIQUOR, HOW OFTEN DO YOU HAVE 1 TO 2?

_____ Nearly every time
_____ More than half the time
_____ Less than half the time
_____ Once in a while
_____ NEVER

4. WHEN DRINKING ANYTHING, CHECK HOW OFTEN YOU HAVE ANY DRINK CONTAINING ALCOHOL, WHETHER IT IS WINE, BEER, WHISKEY OR ANY OTHER DRINK. MAKE SURE THAT YOUR ANSWER IS NOT LESS FREQUENT THAN THE FREQUENCY REPORTED ON ANY OF THE PRECEDING QUESTIONS.

_____ 3 or more times a day
_____ 2 times a day
_____ Once a day
_____ Nearly every day
_____ 3 or 4 times a week
_____ Once or twice a week
_____ 2 or 3 times a month
_____ About once a month
_____ Less than once a month, but at least once a year
_____ Less than once a year

5. Now a question about earlier in your life: HOW OLD WERE YOU THE FIRST TIME YOU EVER DRANK ENOUGH TO GET DRUNK?

_____ years old.

6a. WE ARE ALSO INTERESTED IN THE OCCASIONS THAT MAY BE RARE (OR NOT), WHEN PEOPLE DRINK A LOT MORE THAN THEY USUALLY DO. IN THE LAST SIX MONTHS, THINK OF THE 24 HOUR PERIOD WHEN YOU DID THE MOST DRINKING; THIS WOULD BE A DAY SOMEWHERE IN THE PERIOD BETWEEN _____ (month), _____ (year) AND NOW.

On that day, how many drinks did you have? (A drink is a 12 oz. can of beer, a 4 oz. glass of wine, a single shot, or a single mixed drink).

_____ 30 or more drinks
_____ 25 - 29 drinks
_____ 20 - 24 drinks
_____ 15 - 19 drinks
_____ 10 - 14 drinks
_____ 7 - 9 drinks
_____ 5 - 6 drinks
_____ 3 - 4 drinks
_____ 1 - 2 drinks

6b. APPROXIMATELY WHEN DID THIS HAPPEN? _____ (month), _____ (year).

6c. NOW ANSWER THIS QUESTION FOR ANY TIME IN YOUR LIFE BEFORE THESE LAST SIX MONTHS. IN THE 24 HOUR PERIOD WHEN YOU DID THE MOST DRINKING, HOW MANY DRINKS DID YOU HAVE?

_____ 30 or more drinks
_____ 25 - 29 drinks
_____ 20 - 24 drinks
_____ 15 - 19 drinks
_____ 10 - 14 drinks
_____ 7 - 9 drinks
_____ 5 - 6 drinks
_____ 3 - 4 drinks
_____ 1 - 2 drinks

6d. APPROXIMATELY WHEN DID THIS HAPPEN? _____ (month), _____ (year)

ANSWER KEY FOR QUESTIONS BELOW:

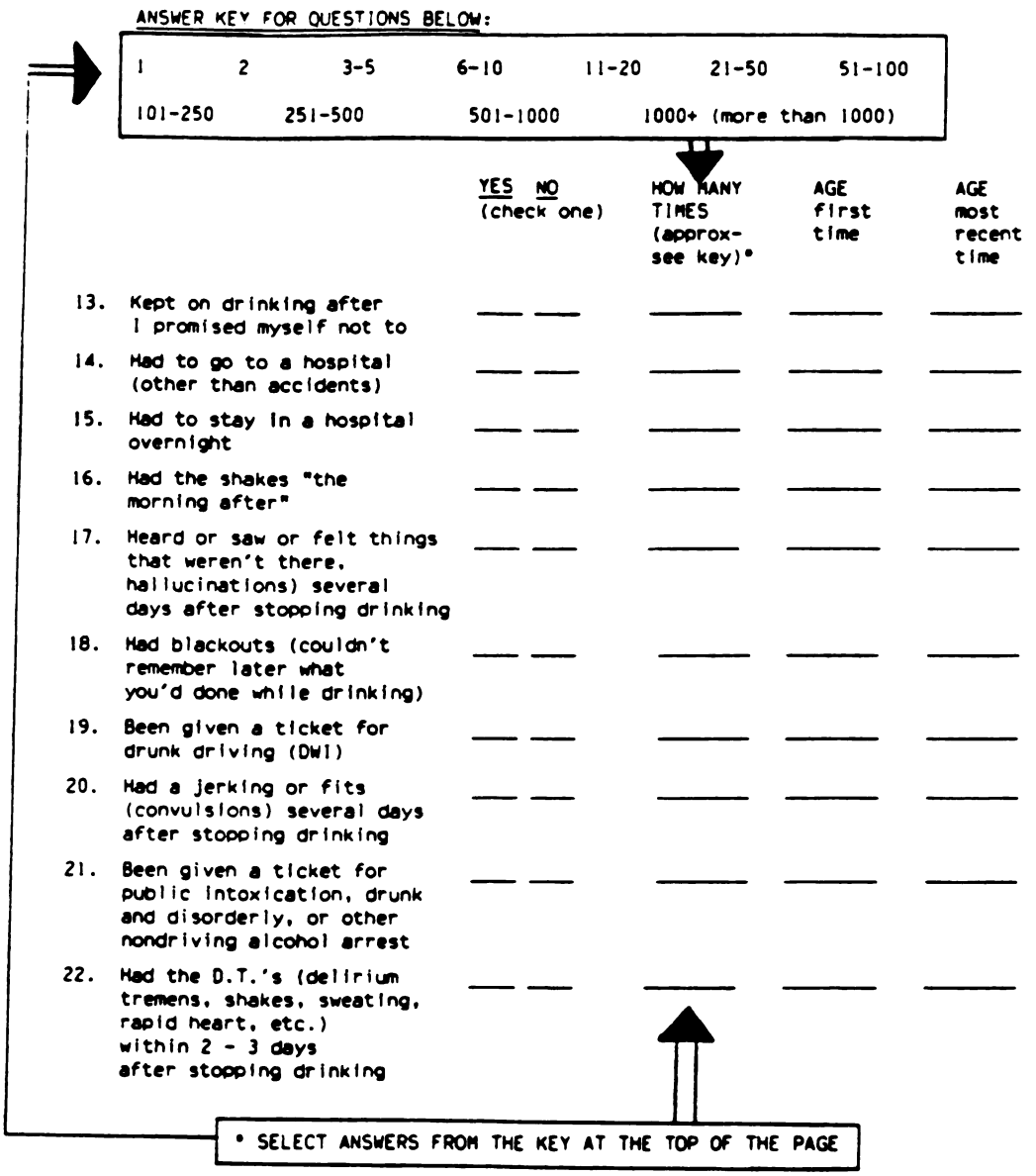
1	2	3-5	6-10	11-20	21-50	51-100
101-250	251-500	501-1000	1000+ (more than 1000)			

C. NOW SOME QUESTIONS ABOUT OUTCOMES PEOPLE SOMETIMES HAVE BECAUSE OF DRINKING. HAVE YOU EVER HAD ANY OF THE FOLLOWING HAPPEN BECAUSE OF YOUR DRINKING?

		YES	NO (check one)	HOW MANY TIMES (approx.- see key)*	AGE first time	AGE most recent time
1.	Missed school or time on job	___	___	_____	_____	_____
2.	Thought I was drinking too much	___	___	_____	_____	_____
3.	Gone on a binge of constant drinking for 2 or more days	___	___	_____	_____	_____
4.	Lost friends	___	___	_____	_____	_____
5.	My spouse or others in my family (my parents or children) objected to my drinking	___	___	_____	_____	_____
6.	Felt guilty about my drinking	___	___	_____	_____	_____
7.	Divorce or separation	___	___	_____	_____	_____
8.	Took a drink or two first thing in morning	___	___	_____	_____	_____
9.	Restricted my drinking to certain times of day or week in order to control it or cut down, (like after 5PM, or only on weekends, or only with other people)	___	___	_____	_____	_____
10.	Been fired or laid off	___	___	_____	_____	_____
11.	Once started drinking, kept on going till completely intoxicated	___	___	_____	_____	_____
12.	Had a car accident when I was driving	___	___	_____	_____	_____

* SELECT YOUR ANSWER FROM KEY AT THE TOP OF THE PAGE

Questions continue on the next page.



ANSWER KEY FOR QUESTIONS BELOW:

1	2	3-5	6-10	11-20	21-50	51-100
101-250	251-500	501-1000	1000+ (more than 1000)			

		YES (check one)	NO (check one)	HOW MANY TIMES (approx- see key)*	AGE first time	AGE most recent time
13.	Kept on drinking after I promised myself not to	___	___	_____	_____	_____
14.	Had to go to a hospital (other than accidents)	___	___	_____	_____	_____
15.	Had to stay in a hospital overnight	___	___	_____	_____	_____
16.	Had the shakes "the morning after"	___	___	_____	_____	_____
17.	Heard or saw or felt things that weren't there, hallucinations) several days after stopping drinking	___	___	_____	_____	_____
18.	Had blackouts (couldn't remember later what you'd done while drinking)	___	___	_____	_____	_____
19.	Been given a ticket for drunk driving (DWI)	___	___	_____	_____	_____
20.	Had a jerking or fits (convulsions) several days after stopping drinking	___	___	_____	_____	_____
21.	Been given a ticket for public intoxication, drunk and disorderly, or other nondriving alcohol arrest	___	___	_____	_____	_____
22.	Had the D.T.'s (delirium tremens, shakes, sweating, rapid heart, etc.) within 2 - 3 days after stopping drinking	___	___	_____	_____	_____

* SELECT ANSWERS FROM THE KEY AT THE TOP OF THE PAGE

D. THE LAST SECTIONS OF THIS QUESTIONNAIRE DEAL WITH VARIOUS DRUGS OTHER THAN ALCOHOL. THERE IS STILL A LOT OF TALK THESE DAYS ABOUT THIS SUBJECT, BUT VERY LITTLE ACCURATE INFORMATION, PARTICULARLY ABOUT PATTERNS OF USE OF THESE SUBSTANCES IN ADULTHOOD. THEREFORE, WE STILL HAVE A LOT TO LEARN ABOUT THE ACTUAL EXPERIENCES OF PEOPLE YOUR AGE.

WE HOPE THAT YOU CAN ANSWER ALL QUESTIONS; BUT IF YOU FIND ONE WHICH YOU FEEL YOU CANNOT ANSWER HONESTLY, WE WOULD PREFER THAT YOU LEAVE IT BLANK.

REMEMBER THAT YOUR ANSWERS WILL BE KEPT STRICTLY CONFIDENTIAL AND THEY ARE NEVER CONNECTED WITH YOUR NAME. THAT IS WHY THIS QUESTIONNAIRE IS IDENTIFIED ONLY WITH A CODE NUMBER.

THE FOLLOWING QUESTIONS ARE ABOUT CIGARETTES (CHECK THE BEST ANSWER):

1a. HAVE YOU EVER SMOKED CIGARETTES?

_____ Never (GO TO QUESTION 3)
_____ Once or twice
_____ Occasionally but not regularly
_____ Regularly in the past
_____ Regularly now

1b. HAVE YOU SMOKED CIGARETTES DURING THE PAST 12 MONTHS?

_____ Never (GO TO QUESTION 3)
_____ Once or twice
_____ Occasionally but not regularly
_____ Regularly for a while during this year, but not now
_____ Regularly now

2. HOW FREQUENTLY HAVE YOU SMOKED CIGARETTES DURING THE PAST 30 DAYS?

_____ Not at all
_____ Less than one cigarette per day
_____ One to five cigarettes per day
_____ About one-half pack per day
_____ About one pack per day
_____ About one and one-half packs per day
_____ Two packs or more per day

E. THE FOLLOWING QUESTIONS ARE ALL ABOUT NON-PRESCRIPTION USE OF DRUGS, EITHER FOR RECREATION OR FOR SELF-MEDICATION. (MARK ONE SPACE FOR EACH LINE).

3. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU USED MARIJUANA (GRASS, POT) OR HASHISH (HASH, HASH OIL)	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

(MARK ONE SPACE FOR EACH LINE).

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
4. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU USED LSD (ACID)									
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occas	More than 1000
5. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU USED PSYCHEDELICS OTHER THAN LSD (LIKE MESCALINE, PEYOTE, PSILOCYBIN, PCP)									
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occas	More than 1000
6. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU USED COCAINE (COKE OR CRACK)									
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the past 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
7. AMPHETAMINES ARE SOMETIMES PRESCRIBED BY DOCTORS TO HELP PEOPLE LOSE WEIGHT OR TO GIVE PEOPLE MORE ENERGY. THEY ARE SOMETIMES CALLED UPPERS, UPS, SPEED, CRYSTAL, CRANK, BENNIES, DEXIES, PEP PILLS, AND DIET PILLS. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU TAKEN AMPHETAMINES ON YOUR OWN--THAT IS, WITHOUT A DOCTOR TELLING YOU TO TAKE THEM									
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

(MARK ONE SPACE FOR EACH LINE).

8. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU USED QUAALUDES (QUADS, SOAPERS, METHAQUALONE) ON YOUR OWN-- THAT IS, WITHOUT A DOCTOR TELLING YOU TO TAKE THEM	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

9. BARBITURATES ARE SOMETIMES PRESCRIBED BY DOCTORS TO HELP PEOPLE RELAX OR GET TO SLEEP. THEY ARE SOMETIMES CALLED DOWNS, DOWNERS, GOOFBALLS, YELLOWS, REDS, BLUES, RAINBOWS. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU TAKEN BARBITURATES ON YOUR OWN -- THAT IS, WITHOUT A DOCTOR TELLING YOU TO TAKE THEM	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

10. TRANQUILIZERS ARE SOMETIMES PRESCRIBED BY DOCTORS TO CALM PEOPLE DOWN, QUIET THEIR NERVES, OR RELAX THEIR MUSCLES. LIBRIUM VALIUM, AND MILTOWN ARE ALL TRANQUILIZERS. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU TAKEN TRANQUILIZERS ON YOUR OWN -- THAT IS, WITHOUT A DOCTOR TELLING YOU TO TAKE THEM	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

(MARK ONE SPACE FOR EACH LINE).

11. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU USED HEROIN (SMACK, HORSE, SKAG)	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

12. THERE ARE A NUMBER OF NARCOTICS OTHER THAN HEROIN, SUCH AS METHADONE, OPIUM, MORPHINE, CODEINE, DEMEROL, PAREGORIC, TALWIN, AND LAUDANUM. THESE ARE SOMETIMES PRESCRIBED BY DOCTORS. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU TAKEN NARCOTICS OTHER THAN HEROIN ON YOUR OWN-- THAT IS, WITHOUT A DOCTOR TELLING YOU TO TAKE THEM	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occasions	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

13. ON HOW MANY OCCASIONS (IF ANY) HAVE YOU SNIFFED GLUE, OR BREATHED THE CONTENTS OF AEROSOL SPRAY CANS, OR INHALED ANY OTHER GASES OR SPRAYS IN ORDER TO GET HIGH	0 Occasions	1-2 Occasions	3-5 Occasions	6-9 Occasions	10-19 Occasions	20-39 Occasions	40-99 Occasions	100-1000 Occas.	More than 1000
In your lifetime?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 12 months?	( )	( )	( )	( )	( )	( )	( )	( )	( )
During the last 30 days?	( )	( )	( )	( )	( )	( )	( )	( )	( )

F. NOW SOME OTHER QUESTIONS ABOUT NONPRESCRIPTION USE OF DRUGS. HAVE YOU EVER HAD ANY OF THE FOLLOWING OUTCOMES BECAUSE OF YOUR USE OF THE NONPRESCRIPTION DRUGS ASKED ABOUT IN SECTION E (THE LAST SECTION)?

ANSWER KEY FOR QUESTIONS BELOW:

1	2	3-5	6-10	11-20	21-50	51-100
	101-250		251-500	500+ (more than 500)		

		YES	NO	HOW MANY TIMES (approx) (see key)*	AGE first TIME	AGE most recent TIME
1.	Missed school or time on job	___	___	_____	_____	_____
2.	Lost friends	___	___	_____	_____	_____
3.	Been divorced or separated	___	___	_____	_____	_____
4.	Been fired or laid off	___	___	_____	_____	_____
5.	Had a car accident when you were driving	___	___	_____	_____	_____
6.	Had to go to a hospital (other than accidents)	___	___	_____	_____	_____
7.	Had to stay in hospital overnight	___	___	_____	_____	_____
8.	Had to see a doctor because of drug use (unintentional overdose) or had a doctor say drugs had harmed your health	___	___	_____	_____	_____
9.	Gone through physical withdrawal from drugs	___	___	_____	_____	_____
10.	Been arrested for possession or sale of drugs other than marijuana	___	___	_____	_____	_____

* SELECT YOUR ANSWER FROM KEY AT THE TOP OF THE PAGE

11a. Have you ever taken drugs intravenously (using a needle)? Don't count shots you were given by a doctor or nurse or shots you may have taken for treatment of diabetes.

_____NO _____YES

11b. IF YES, WHAT DRUGS HAVE YOU TAKEN INTRAVENOUSLY (IV)? _____

_____

11c. AT WHAT AGE DID YOU FIRST TAKE AN IV DRUG? _____ years old.

11d. AT WHAT AGE WAS THE MOST RECENT TIME? _____ years old.

Appendix B

Pearlin Coping and Mastery

copmas 3-85

MICHIGAN STATE UNIVERSITY FAMILY STUDY
East Lansing, Michigan 48824-1117

Family Number: _____
Given By: _____
Date: _____
Test: PRE PT1 PT2 PT3 Post
Ans. Chk: _____

I. INSTRUCTIONS: This questionnaire asks about stress and related events. Please check the answer that best describes how you feel about the following statements. Mark your answer with an (X) in the box.

	Not At All	A Little	A Lot
A. How often do you:			
1) Remind yourself that things could be worse:	( )	( )	( )
2) Tell yourself that something in your children's behavior is not really important.	( )	( )	( )
3) Try to notice only the good things.	( )	( )	( )
B. When your children's behavior is troublesome, how often do you:			
4) Take away a privilege	( )	( )	( )
5) Scold them	( )	( )	( )
6) Threaten some kind of punishment	( )	( )	( )

C. In the past year or so, have you:

7) Asked for the advice of friends or neighbors concerning difficulties in your children's behavior ___ Yes ___ No

8) Asked for the advice of a relative ___ Yes ___ No

9) Asked for the advice of a doctor, teacher or other professional person ___ Yes ___ No

D. 10) As time goes by, has being a parent generally:

___ become easier ___ stayed the same ___ more difficult

E. 11) Would you guess that the next year or so being a parent will become:

__ easier __ stay the same __ more difficult

F. 12) When you compare yourself with other parents having children about the same age as yours, would you guess:

__ You have fewer problems __ About the same __ More problems

G. How strongly do you agree or disagree that:

	Strongly Agree	Agree	Disagree	Strongly Disagree
13) The way my children are turning out depends on their inner nature and there is little I can do about it.	( )	( )	( )	( )

H. How much do you agree that:

	Not at All	A Little	A Lot
14) There is only so much that I can do as a parent	( )	( )	( )
15) How often do you decide there's really nothing you can do to change this?	( )	( )	( )

II. INSTRUCTIONS: The remaining items also ask about life and its problems. Below are seven statements. Each one represents feelings or attitudes that people have. Please indicate how much you personally agree or disagree with each one of them. Circle the best answer.

1. There is really no way I can solve some of the problems I have.

Strongly Agree	Agree	Disagree	Strongly Disagree

2. Sometimes I feel that I'm being pushed around in life.

Strongly Agree	Agree	Disagree	Strongly Disagree

3. I have little control over the things that happen to me.

Strongly Agree	Agree	Disagree	Strongly Disagree

4. I can do just about anything I really set my mind to do.

Strongly Agree	Agree	Disagree	Strongly Disagree

5. I often feel helpless in dealing with the problems of life.

Strongly Agree	Agree	Disagree	Strongly Disagree

6. What happens to me in the future depends mostly on me.

Strongly Agree	Agree	Disagree	Strongly Disagree

7. There is little I can do to change many of the important things in my life.

Strongly Agree	Agree	Disagree	Strongly Disagree

Appendix C

Hassles and Uplifts

Hassles and Uplifts
4/88

Respondent Number: _____
Given By: _____
Date: _____
T1.0 T1.1 T1.2 T1.3 T2.0
Ans. Chk: _____

Hassles Scale

Directions: Hassles are irritants that can range from minor annoyances to fairly major pressures, problems, or difficulties. They can occur few or many times.

Listed on the following pages are a number of ways in which a person can feel hassled. Read through the list, and every time you find a hassle that has happened to you in the past month, underline that item. For example, the first item on the list is "Misplacing or losing things." If this has been an annoyance or problem for you in the past month, then underline that statement. For now, ignore the items to the right of the statement. Just read through the list and underline ALL the items that have hassled you. If an item has not hassled you in the past month, don't underline it.

	Somewhat Severe	Moderately Severe	Extremely Severe
1. Misplacing or losing things.....	1	2	3
2. Troublesome neighbors.....	1	2	3
3. Social obligations.....	1	2	3
4. Inconsiderate smokers.....	1	2	3
5. Troubling thoughts about your future.....	1	2	3
6. Thoughts about death.....	1	2	3
7. Health of a family member.....	1	2	3
8. Not enough money for clothing.....	1	2	3
9. Not enough money for housing.....	1	2	3
10. Concerns about owing money.....	1	2	3
11. Concerns about getting credit.....	1	2	3
12. Concerns about money for emergencies.....	1	2	3
13. Someone owes you money.....	1	2	3
14. Financial responsibility for someone..... who doesn't live with you.	1	2	3

	Somewhat Severe	Moderately Severe	Extremely Severe
15. Cutting down on electricity, water, etc.	1	2	3
16. Smoking too much	1	2	3
17. Use of alcohol	1	2	3
18. Personal use of drugs	1	2	3
19. Too many responsibilities	1	2	3
20. Decisions about having children	1	2	3
21. Non-family members living in your house	1	2	3
22. Care for pet	1	2	3
23. Planning meals	1	2	3
24. Concerned about the meaning of life	1	2	3
25. Trouble relaxing	1	2	3
26. Trouble making decisions	1	2	3
27. Problems getting along with fellow workers	1	2	3
28. Customers or clients give you a hard time.	1	2	3
29. Home maintenance (inside)	1	2	3
30. Concerns about job security	1	2	3
31. Concerns about retirement	1	2	3
32. Laid-off or out of work	1	2	3
33. Don't like current work duties	1	2	3
34. Don't like fellow workers	1	2	3
35. Not enough money for basic necessities	1	2	3
36. Not enough money for food	1	2	3
37. Too many interruptions	1	2	3
38. Unexpected company	1	2	3
39. Too much time on hands	1	2	3
40. Having to wait	1	2	3
41. Concerns about accidents	1	2	3
42. Being lonely	1	2	3
43. Not enough money for health care	1	2	3

	Somewhat Severe	Moderately Severe	Extremely Severe
44. Fear of confrontation	1	2	3
45. Financial security	1	2	3
46. Silly practical mistakes	1	2	3
47. Inability to express yourself	1	2	3
48. Physical illness	1	2	3
49. Side effects of medication	1	2	3
50. Concerns about medical treatment	1	2	3
51. Physical appearance	1	2	3
52. Fear of rejection	1	2	3
53. Difficulties with getting pregnant	1	2	3
54. Sexual problems that result from physical problems	1	2	3
55. Sexual problems other than those resulting from physical problems	1	2	3
56. Concerns about health in general	1	2	3
57. Not seeing enough people	1	2	3
58. Friends or relatives too far away	1	2	3
59. Preparing meals	1	2	3
60. Wasting time	1	2	3
61. Auto maintenance	1	2	3
62. Filling out forms	1	2	3
63. Neighborhood deterioration	1	2	3
64. Financing children's education	1	2	3
65. Problems with employees	1	2	3
66. Problems on job due to being a woman or man	1	2	3
67. Declining physical abilities	1	2	3
68. Being exploited	1	2	3
69. Concerns about bodily functions	1	2	3
70. Rising prices of common goods	1	2	3

	Somewhat Severe	Moderately Severe	Extremely Severe
71. Not getting enough rest	1	2	3
72. Not getting enough sleep	1	2	3
73. Problems with aging parents	1	2	3
74. Problems with your children	1	2	3
75. Problems with persons younger than yourself	1	2	3
76. Problems with your lover	1	2	3
77. Difficulties seeing or hearing	1	2	3
78. Overloaded with family responsibilities	1	2	3
79. Too many things to do	1	2	3
80. Unchallenging work	1	2	3
81. Concerns about meeting high standards	1	2	3
82. Financial dealings with friends or acquaintances	1	2	3
83. Job dissatisfactions	1	2	3
84. Worries about decisions to change jobs	1	2	3
85. Trouble with reading, writing or spelling abilities	1	2	3
86. Too many meetings	1	2	3
87. Problems with divorce or separation	1	2	3
88. Trouble with arithmetic skills	1	2	3
89. Gossip	1	2	3
90. Legal problems	1	2	3
91. Concerns about weight	1	2	3
92. Not enough time to do the things you need to do	1	2	3
93. Television	1	2	3
94. Not enough personal energy	1	2	3
95. Concerns about inner conflicts	1	2	3
96. Feel conflicted over what to do	1	2	3
97. Regrets over past decisions	1	2	3

	Somewhat Severe	Moderately Severe	Extremely Severe
98. Menstrual (period) Problems.....	1	2	3
99. The weather.....	1	2	3
100. Nightmares.....	1	2	3
101. Concerns about getting ahead.....	1	2	3
102. Hassles from boss or supervisor.....	1	2	3
103. Difficulties with friends.....	1	2	3
104. Not enough time for family.....	1	2	3
105. Transportation problems.....	1	2	3
106. Not enough money for transportation.....	1	2	3
107. Not enough money for entertainment and recreation.....	1	2	3
108. Shopping.....	1	2	3
109. Prejudice and discrimination from others..	1	2	3
110. Property, investments or taxes.....	1	2	3
111. Not enough time for entertainment and recreation.....	1	2	3
112. Yard work or outside home maintenance.....	1	2	3
113. Concerns about news events.....	1	2	3
114. Noise.....	1	2	3
115. Crime.....	1	2	3
116. Traffic.....	1	2	3
117. Pollution.....	1	2	3

HAVE WE MISSED ANY OF YOUR HASSLES? IF SO, WRITE THEM IN BELOW:

118._____	1	2	3

ONE MORE THING: HAS THERE BEEN A CHANGE IN YOUR LIFE THAT AFFECTED HOW YOU ANSWERED THIS SCALE? IF SO, TELL US

WHAT IT WAS:

_____

NOW GO BACK TO PAGE ONE, AND FOR ALL THE ITEMS THAT YOU'VE UNDERLINED, THINK ABOUT HOW SEVERE the hassle has been in the past month, and give your answer by circling a 1, 2, or 3. Only circle the items you have already underlined. Leave the others blank.

Uplifts Scale

Directions: Uplifts are events that make you feel good. They can be sources of peace, satisfaction, or joy. Some occur often, others are relatively rare.

Read through the list on the following pages and every time you find an event that has made you feel good in the past month underline that item. For example, the first item on the list is "Getting enough sleep." If this has been an uplift in the past month, then underline that statement. For now, ignore the items to the right of the statement. Just read through the list and underline ALL the items that have made you feel good. If an item has not made you feel good in the past month, don't underline it.

	Somewhat Often	Moderately	Extremely
1. Getting enough sleep	1	2	3
2. Practicing your hobby	1	2	3
3. Being lucky	1	2	3
4. Saving money	1	2	3
5. Nature	1	2	3
6. Liking fellow workers	1	2	3
7. Not working (on vacation, laid-off, etc.)	1	2	3
8. Gossiping; "shooting the bull"	1	2	3
9. Successful financial dealings	1	2	3
10. Being rested	1	2	3
11. Feeling healthy	1	2	3
12. Finding something presumed lost	1	2	3
13. Recovering from illness	1	2	3
14. Staying or getting in good physical shape	1	2	3
15. Being with children	1	2	3
16. "Pulling something off"; getting away with something	1	2	3
17. Visiting, phoning, or writing someone	1	2	3
18. Relating well with your spouse or lover	1	2	3
19. Completing a task	1	2	3
20. Giving a compliment	1	2	3

	Somewhat Often	Moderately Often	Extremely Often
21. Meeting family responsibilities.....	1	2	3
22. Relating well with friends.....	1	2	3
23. Being efficient.....	1	2	3
24. Meeting your responsibilities.....	1	2	3
25. Quitting or cutting down on alcohol.....	1	2	3
26. Quitting or cutting down on smoking.....	1	2	3
27. Solving an ongoing practical problem.....	1	2	3
28. Daydreaming.....	1	2	3
29. Weight.....	1	2	3
30. Financially supporting someone who doesn't live with you.....	1	2	3
31. Sex.....	1	2	3
32. Friendly neighbors.....	1	2	3
33. Having enough time to do what you want....	1	2	3
34. Divorce or separation.....	1	2	3
35. Eating out.....	1	2	3
36. Having enough (personal) energy.....	1	2	3
37. Resolving inner conflicts.....	1	2	3
38. Being with older people.....	1	2	3
39. Finding no prejudice or discrimination when you expect it.....	1	2	3
40. Cooking.....	1	2	3
41. Capitalizing on an unexpected opportunity.	1	2	3
42. Using drugs or alcohol.....	1	2	3
43. Life being meaningful.....	1	2	3
44. Being well-prepared.....	1	2	3
45. Eating.....	1	2	3
46. Relaxing.....	1	2	3
47. Having the "right" amount of things to do.	1	2	3
48. Being visited, phoned, orsent a letter...	1	2	3

	Somewhat Often	Moderately Often	Extremely Often
49. The weather	1	2	3
50. Thinking about the future	1	2	3
51. Spending time with family	1	2	3
52. Home (inside) pleasing to you	1	2	3
53. Being with younger people	1	2	3
54. Buying things for the house	1	2	3
55. Reading	1	2	3
56. Shopping	1	2	3
57. Smoking	1	2	3
58. Buying clothes	1	2	3
59. Giving a present	1	2	3
60. Getting a present	1	2	3
61. Becoming pregnant or contributing thereto	1	2	3
62. Having enough money for health care	1	2	3
63. Traveling or commuting	1	2	3
64. Doing yardwork or outside housework	1	2	3
65. Having enough money for transportation	1	2	3
66. Health of a family member improving	1	2	3
67. Resolving conflicts over what to do	1	2	3
68. Thinking about health	1	2	3
69. Being a "good" listener	1	2	3
70. Socializing (parties, being with friends, etc.)	1	2	3
71. Making a friend	1	2	3
72. Sharing something	1	2	3
73. Having someone listen to you	1	2	3
74. Your yard or outside of house is pleasing.	1	2	3
75. Looking forward to retirement	1	2	3

	Somewhat Often	Moderately Often	Extremely Often
76. Having enough money for entertainment and recreation	1	2	3
77. Entertainment (movies, concerts, TV, etc.)	1	2	3
78. Good news on local or world level	1	2	3
79. Getting good advice	1	2	3
80. Recreation (sports, games, hiking, etc.)	1	2	3
81. Paying off debts	1	2	3
82. Using skills well at work	1	2	3
83. Past decisions "panning out"	1	2	3
84. Growing as a person	1	2	3
85. Being complimented	1	2	3
86. Having good ideas at work	1	2	3
87. Improving or gaining new skills	1	2	3
88. Job satisfying despite discrimination due to your sex	1	2	3
89. Free time	1	2	3
90. Expressing yourself well	1	2	3
91. Laughing	1	2	3
92. Vacationing without spouse or children	1	2	3
93. Liking work duties	1	2	3
94. Having good credit	1	2	3
95. Music	1	2	3
96. Getting unexpected money	1	2	3
97. Changing jobs	1	2	3
98. Dreaming	1	2	3
99. Having fun	1	2	3
100. Going someplace that's different	1	2	3
101. Deciding to have children	1	2	3
102. Enjoying non-family members living in your house	1	2	3

	Somewhat Often	Moderately Often	Extremely Often
103. Pets	1	2	3
104. Car working/running well	1	2	3
105. Neighborhood improving	1	2	3
106. Children's accomplishments	1	2	3
107. Things going well with employee(s)	1	2	3
108. Pleasant smells	1	2	3
109. Getting love	1	2	3
110. Successfully avoiding or dealing with bureaucracy or institutions	1	2	3
111. Making decisions	1	2	3
112. Thinking about the past	1	2	3
113. Giving good advice	1	2	3
114. Praying	1	2	3
115. Meditating	1	2	3
116. Fresh air	1	2	3
117. Confronting someone or something	1	2	3
118. Being accepted	1	2	3
119. Giving love	1	2	3
120. Boss pleased with your work	1	2	3
121. Being alone	1	2	3
122. Feeling safe	1	2	3
123. Working well with fellow workers	1	2	3
124. Knowing your job is secure	1	2	3
125. Feeling save in your neighborhood	1	2	3
126. Doing volunteer work	1	2	3
127. Contributing to a charity	1	2	3
128. Learning something	1	2	3
129. Being "one" with the world	1	2	3
130. Fixing/repairing something (besides at your job)	1	2	3

	Somewhat Often	Moderately Often	Extremely Often
131. Making something (besides at your job)....	1	2	3
132. Exercising.....	1	2	3
133. Meeting a challenge.....	1	2	3
134. Hugging and/or kissing.....	1	2	3
135. Flirting.....	1	2	3

HAVE WE MISSED ANY OF YOUR UPLIFTS?
IF SO, WRITE THEM IN BELOW:

136. _____	1	2	3

ONE MORE THING: HAS THERE BEEN A CHANGE IN YOUR LIFE THAT AFFECTED HOW YOU ANSWERED THIS SCALE? IF SO, TELL US WHAT IT WAS:

_____

NOW GO BACK TO PAGE SIX, AND FOR ALL THE ITEMS THAT YOU'VE UNDERLINED, THINK ABOUT HOW OFTEN the uplift event has made you feel good in the last month; give your answer by circling a 1, 2, or 3. Only circle the items you have already underlined. Leave the others blank.

Appendix D

Social Support Interview

Social Support Interview

(Next) I'd like to ask you some questions about the different people that you know well. First, I'd like to ask you who the people are who you feel provide help and personal support for you or who are important to you. These people might include the following:

-your spouse or partner
-family members or relatives
-friends
-work or school associates
-neighbors
-health care providers
-counselor or therapist
-minister/priest/rabbi
-others

Can you give me the first names or initials, so that I can list them: then, I'm going to ask you a number of other questions about them. OK, go ahead.

(GET LIST)

Is there anyone else who is important to you or who provides you with personal support?

(ADD ANY ADDITIONAL NAMES)

Now, as I read the list back to you, could you tell me each person's relationship to you? [If respondent describes more than one relationship, (e.g. friend/boss), ask which of these relationships is the primary; then list that one first. (In general, we only prefer one relationship description, but if respondent insists there are two, list both)].

(RECORD RELATIONSHIP)

OK, now I'm going to ask you some questions about the people you have mentioned. I'll read the first name on your list and then ask you some questions about him or her. I want you to think of each person, and answer each question according to the following scale:

(GIVE RESPONDENT A CARD OF THE SCALE)

Scale for Question #3 to #11

1 = not at all
2 = a little
3 = moderately
4 = quite a bit
5 = a great deal

You can answer the first two questions by just giving me a number.

(INTERVIEWER SHOULD THEN TRANSFORM RESPONDENT'S ANSWER INTO CORRESPONDING SCALE SCORE)

Question #1	Question #2
1 = once a year or less	1 = less than 6 months
2 = a few times a year	2 = 6 to 12 months
3 = monthly	3 = 1 to 2 years
4 = weekly	4 = 2 to 5 years
5 = daily	5 = more than 5 years

(INTERVIEWER SHOULD SUBSTITUTE A NAME FOR "THIS PERSON")

1. How often do you usually have contact with this person (phone calls, visits, letters)?

2. How long have you known this person?

3. How alike are you and this person?

4. How much does this person believe in you and accept your thoughts and ideas?

5. How much can you trust this person and confide in her/him?

6. How much would this person be likely to help if you needed to borrow a few dollars or get a ride somewhere?

7. How much would this person help if you were upset, depressed, blue?

8. If you were sick in bed for more than a week, how much would this person be likely to help?

9. How much can you depend on this person in a crisis?

10. How much does this person make you feel liked or loved?

11. How much is this person someone you'd like to be like?

12. How close does this person live to you? (Or how close is the office if referring to a professional person).
    1 = < 15 miles
    2 = < 50 miles
    3 = in state
    4 = midwest
    5 = farther

13. When was the last time you had contact with this person?
    1 = < 2 days
    2 = < 1 week
    3 = < 1 month
    4 = < 6 months
    5 = > 6 months

14. How much support or help do you give this person? (Use scale for questions 3--11).

15. Now I want to find out how well the people you have mentioned know each other. Remember to use the scale card for question 3--11 for your answers. OK, how well does (first name on list) know (each remaining names on the list)?

THE INTERVIEWER SHOULD PROCEED IN THIS FASHION UNTIL THE ATTACHED MATRIX IS COMPLETE. NOTE THAT ONLY 1/2 OF THE MATRIX NEED BE COMPLETE TO COVER ALL POSSIBLE COMBINATIONS.

16. Are there any people that you give help or support to who do not return the help that you give them? For example, a young child or an aging parent, etc. INSTRUCTIONS TO INTERVIEWER: THIS WILL NOT INCLUDE ANY PEOPLE ALREADY LISTED.

If yes: We do not care about their names, but we'd like to know their relationship to you. Can you tell me what they are?

NOW I HAVE A COUPLE MORE GENERAL QUESTIONS FOR YOU.

17. How many clubs and organizations do you belong to?

18. How often do you attend religious services?

Social Support Interview Form
5/88

Respondent Number: _____
Given By: _____ Date_____
T1.0 T1.1 T1.2 T1.3 T2.0 T3.0
Ans. Check: _____

NAME	RELATION	QUESTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Note: Item 15 is the matrix; Item 16 is list of names.

17. Clubs and Organizations _____

_____

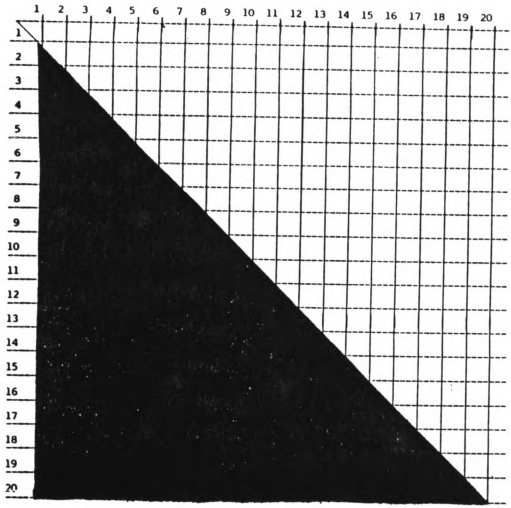
18. Religious Services _____

_____

Social Support Interview Form
5/88

Respondent Number: _____
Given By: _____
Date: _____
T1.0 T1.1 T1.2 T1.3 T2.0 T3.0
Answer Chk: _____

815.



page 2 of 2
answer sheet

Social Support Interview Form
5/88

Respondent Number: _____
Given By: _____ Date____

T1.0 T1.1 T1.2 T1.3 T2.0 T3.0
Ans. Check: _____

#16.

List of people to whom help is provided but not returned.

No one (circle)

Person 1. Relation _____

Person 2. Relation _____

Person 3. Relation _____

Person 4. Relation _____

Person 5. Relation _____

Person 5. Relation _____

Person 6. Relation _____

Person 7. Relation _____

Person 8. Relation _____

Person 9. Relation _____

Appendix E

Progress Evaluation Scale

PES(AF) 3/85

MICHIGAN STATE UNIVERSITY FAMILY STUDY
East Lansing, Michigan 48824-1117

Family Number: _____
Given By: _____
Date: _____
Test: PRE PT1 PT2 PT3 Post
Ans. Chk: _____

INSTRUCTIONS: Circle the one statement in each row that describes best how you have been in the last two weeks:

A.	Often must have help with basic needs (e.g., feeding, dressing, toilet).	Takes care of own basic needs but must have help with everyday plans and activities.	Makes own plans but without considering the needs of other family members.	Tries to consider everyone's needs but somehow decisions and actions do not work well for everybody in the family.	Usually plans and acts so that own needs as well as needs of others in the family are considered.
B.	Holds regular job, or attends classes, or does housework (or some combination of these) with little or no difficulty.	Holds regular job, or classes, or does housework (or some combination of these), but with difficulty.	Sometime holds job, or attends some classes, or does limited housework.	Seldom holds job, or attends classes, or cares for home.	Does not hold job, or care for home, or go to school.
C.	Gets along with others most of the time; has regular close friends.	Gets along with others most of the time; has occasional friends.	Sometimes quarreling, but seldom destructive; difficulties in making friends.	Seldom able to get along with others without quarreling or being destructive; or is often alone.	Always fighting or destructive; or always alone.
D.	Almost always feels nervous, or depressed, or angry and bitter, or no emotions at all.	Often feels nervous, or depressed, or angry and bitter, or hardly shows any emotion for weeks	Frequently in a good mood but occasionally feels nervous, or depressed, or angry	Usually in a good mood, but occasionally feels nervous, or unhappy, or angry all day.	In a good mood most of the time, and usually able to be as happy, or sad, or angry as the situation calls for.

GO TO NEXT PAGE

E. Participates in, as well as creates variety of own recreational activities and hobbies for self and others.	Often participates in recreational activities and hobbies.	Participates in some recreational activities or hobbies.	Only occasional recreational activities, or repeats the same activity over and over again.	Almost no recreational activities or hobbies.
F. Severe problems most of the time.	Severe problems some of the time or moderate problems continuously.	Moderate problems most of the time, or mild problems almost continuously.	Occasional moderate problems.	Occasional mild problems.
G. Negative attitude toward self most of the time.	Negative attitude toward self much of the time.	Almost equal in positive and negative attitude toward self.	Positive attitude toward self much of the time.	Positive attitude toward self most of the time.

ANY COMMENTS ON YOUR ANSWERS? _____

_____

_____

Appendix D

Antisocial Behavior Checklist

FY Study - ASB

MICHIGAN STATE UNIVERSITY
Department of Psychology East Lansing, MI 48824

Many of us have had adventures during our lives.. times that were exciting and carefree, even though they may have been a bit impulsive or happy-go-lucky. Please read each of the following items. Indicate (with a check) if you have ever done any of the following activities and how often.

NEVER - you have never done this

RARELY - once or twice in your life

SOMETIMES - three (3) to nine (9) times in your life

OFTEN - more than ten (10) times in your life

Family Number:
Given By:
Date:
Test: PRE PT1 PT2 PT3 Post
Ans. Chk:
M.S.

NEVER	RARELY	SOMETIMES	OFTEN	
				1. Skipped school without a legitimate excuse for more than 5 days in one school year.
				2. Been suspended or expelled from school for fighting.
				3. Been suspended or expelled from school for reasons other than fighting.
				4. Lied to a teacher or principal.
				5. Cursed at a teacher or principal (to their face)?
				6. Hit a teacher or principal.
				7. Repeated a grade in school.
				8. Taken part in a gang fight.
				9. "Beaten up" another person.
				10. Broken street lights, car windows, or car antennaes just for the fun of it.
				11. Gone for a ride in a car someone else stole.
				12. Teased or killed an animal (like a dog or cat) just for the fun of it.
				13. Defied your parent's authority (to their face).

NEVER	RARELY	SOMETIMES	OFTEN	
				NEVER = you have never done this RARELY = done only once or twice in your life SOMETIMES = done three (3) to nine (9) times in your life OFTEN = done more than ten (10) times in your life
				14. Hit your parents.
				15. Cursed at your parents (to their face).
				16. Stayed out overnight without your parent's permission.
				17. Run away from home for more than 24 hours.
				18. Lied to your parents.
				19. Snatched a woman's purse.
				20. Rolled drunks just for the fun of it.
				21. Shoplifted merchandise valued over $25.
				22. Shoplifted merchandise valued under $25.
				23. Received a speeding ticket.
				24. Been questioned by the police.
				25. Taken part in a robbery.
				26. Taken part in a robbery involving physical force or a weapon.
				27. Been arrested for a felony.
				28. Resisted arrest.
				29. Been arrested for any other nontraffic police offenses (except fighting or a felony).
				30. Been convicted of any nontraffic police offense.
				31. Defaulted on a debt.
				32. Passed bad checks for the fun of it.
				33. Ever used an alias?
				34. Gone AWOL from the military.
				35. Received a bad conduct or indesirable discharge from the military.

NEVER	RARELY	SOMETIMES	OFTEN	
				NEVER = you have never done this RARELY = done only once or twice in your life SOMETIMES = done three (3) to nine (9) times in your life OFTEN = done more than ten (10) times in your life
				36. Performed sexual acts for money.
				37. Engaged in homosexual acts.
				38. Had intercourse with more than one person in a single day.
				39. "Fooled around" with other women/men after you were married.
				40. Hit your husband/wife during an argument.
				41. Lied to your spouse.
				42. Spent six months without any job or permanent home.
				43. Been fired for excessive absenteeism.
				44. Been fired for poor job performance (except absenteeism).
				45. Changed jobs more than 3 times in one year.
				46. Lied to your boss.

Thank you very much for your cooperation.

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