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EARLY ASSESSMENT OF CHILD AND FAMILY
VULNERABILITY IN ALCOHOLIC FAMILIES:
A PROPOSED METHODOLOGY

By

Robert Blum Noll

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ABSTRACT

EARLY ASSESSMENT OF CHILD AND FAMILY VULNERABILITY IN ALCOHOLIC FAMILIES: A PROPOSED METHODOLOGY

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This work develops the rationale and methodology for a longitudinal study of male children, and their families, who are statistically at high-risk for subsequent development of alcoholism. The project will identify specific childhood and familial characteristics that precede the onset of alcoholism. These data will provide crucial insights into the etiology of alcoholism and should be invaluable to mental health professionals.

Formal data collection begins prior to the child's birth and is described through six years. An eclectic, but conceptually guided approach is employed which utilizes a broad range of psychometrics. Parental variables assessed include psychiatric status, drinking history, marital satisfaction, current life stress, etc. Variables assessed in the child include temperament, cognitive development, behavioral problems, etc. Transactions between parents and child are also examined extensively. The overall viewpoint of this work is that alcoholism develops as the result of

transactions between numerous variables--biological,
psychological, social, cultural.

DEDICATION

To Sparky--with his memory a family grows on.

ACKNOWLEDGMENTS

I would like to express my thanks to the members of my committee, Drs. Robert Zucker, Helen Bendict, and Hiram Fitzgerald.

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INTRODUCTION

High-risk longitudinal research concerned with the etiology of the major behavioral disorders has become increasingly more prevalent during the past decade (cf. Garnezy, 1974; Hanson, Gottesman, & Meehl, 1977). While the majority of the work has focused upon schizophrenia, other types of psychiatric disturbances continue to plague society. Alcohol related problems cost the U.S. economy nearly 43 billion dollars in 1975 and are currently considered to be the fourth most serious health problem in the United States (DHEW, 1978; O'Leary & Wilson, 1975). While schizophrenia occurs in somewhat less than 1% of the overall population (Kramer, 1978; Woodruff, Goodwin, & Guze, 1974), prevalence estimates of the number of severe problem drinkers and alcoholics are 4-6%, or 9.3-10 million persons (Alcoholism & Drug Addiction Research Foundation, 1978; DHEW, 1971, 1978; Haglund & Schuckit, 1977). Primary or secondary problems with alcohol are associated with 50% of first admissions to mental hospitals (Haglund & Schuckit, 1977; Ullmann & Krasner, 1975), and evidence exists which suggests that the extent of the problem is underestimated in this population (McLellan, Druley, & Carson, 1978). Approximately

5 to 6 million Americans are considered to be alcoholic (Chafetz, 1967, p. 1014; Haglund and Schuckit, 1977). More than 50% of all fatal traffic accidents involve alcohol. The problem seems to be increasing as in 1944, 5 deaths per 1000 were related to cirrhosis; in 1975, 21 deaths per 1000 were related to cirrhosis (Alcoholism and Drug Addiction Research Foundation, 1978); cirrhosis related deaths have increased 36% from 1960 to 1970. Most researchers currently agree that cirrhosis is the result of excessive alcohol consumption combined with the poor diet that frequently accompanies excessive drinking (Goodwin, 1976b). Clearly the scope of the problem is great; however, our knowledge of alcoholism, especially its earliest precursors, is limited. The earliest longitudinal research to date begins at the age of ten (Zucker, 1976).

Problems of Definition

A critical issue which high-risk research must address is the validity of the psychiatric diagnosis being utilized (Hanson et al., 1977). Typically research on alcoholism and/or problems directly related to excessive consumption of alcohol has employed varied criterion and/or different psychiatric labels for the same phenomenon. Keller (1972) cogently analyzes the criteria necessary for a behavioral-operational definition and concludes that both excessive

drinking and ill effects from the drinking must be present. He states that the notion of alcoholism as a disease is based on an inability to control one's drinking despite the consequences, and defines alcoholism as "a chronic disease manifested by repeated implicative drinking so as to cause injury to the drinker's health or to his social or economic functioning" (p. 316).

Cahalan (1970) also utilizes a similar operational definition, but concludes that the term "alcoholism" is not useful. Rather he prefers the concept of problem drinking along with a concurrent statement of the type of problems that the drinking has caused. While the philosophical and social consequences of the use of the terms "alcoholic" or "problem drinker" are great (c.f. Cahalan, 1970, for a discussion of this issue), the specific operational definitions employed by Cahalan and Keller vary only slightly. Cahalan (1970) includes frequent intoxication, as measured by frequency of drinking and quantity of alcohol consumed, as well as 11 typical problems associated with excessive drinking. These problems include four items associated with the drinking behavior itself, four items connected with interpersonal relations, and three items that could fall into either of the aforementioned classes.

Other researchers vary only slightly among themselves in their criterion of frequent intoxication or heavy drinking and utilize similar problem areas to establish a positive alcoholic diagnosis. Kaij (1972) uses the term alcoholism rather than problem drinker and includes four parameters: amount of drinking, social consequences, medical consequences, and presence of addictive symptoms. Other workers include consequences of alcohol abuse, symptoms of addictive drinking, social problems consequent to drunkenness, and interpersonal problems related to heavy drinking (Feighner, Robins, Guze, Woodruff, Winokur, and Munoz, 1972; Reich, Robins, Woodruff, Taibleson, Rich, and Cunningham, 1975). A minimum of one positive response in three of four categories is generally required for a diagnosis of alcoholism. Finally, Goodwin and his colleagues define an alcoholic as someone who meets their criterion for heavy drinker and has problems in three of the following four groups. Group 1: marital problems or social disapproval of drinking; Group 2: problems with the job from drinking, traffic arrests, or problems with police related to drinking, Group 3; general pathophysiological indicators of excessive alcohol consumption; and Group 4: loss of control or morning drinking (Goodwin, Schulsinger, Hermansen, Guze, and Winokur, 1973). The Goodwin et al. criteria

for heavy drinking and alcoholism are similar to those already mentioned.

The National Council on Alcoholism established a criterion committee to enumerate criteria necessary for a diagnosis of alcoholism (Criterion Committee, 1972). The scheme for diagnosis is similar to the aforementioned systems; however, this work includes three different diagnostic levels, definite, probable, possible, which depend upon the number of clinical manifestations of excessive consumption of alcohol and accompanying problems. The criteria established by the committee for a diagnosis of alcoholism are far more elaborate than any of the aforementioned diagnostic systems.

This study will use the terms "problem drinker" and "alcoholic" interchangeably. An attempt will be made to carefully delineate specific diagnostic criteria used by the studies reviewed, as different diagnostic criteria can clearly cause samples and results to vary significantly. Altering the essential diagnostic criterion can change results far more significantly than the choice of diagnostic labels. Specific sampling techniques and criteria for inclusion of subjects into our study will be extensively discussed in the Methods section.

Rationale for Longitudinal Design in Research
With Statistically High-Risk Children

A myriad of research has retrospectively examined the early life of the alcoholic; these studies attempt to trace the etiology of the disorder. This approach is beset with methodological flaws (cf. Yarrow, Campbell, and Burton, 1970). We are therefore left with a serious gap in the data which consequently diminishes our understanding of the etiology of alcoholism. The present study attempts to begin to fill this critical gap. By selecting a small sample of neonates, identified as high-risk for subsequent development of alcoholism on the basis of parental characteristics which are known to be associated with disproportionately greater numbers of alcoholic offspring, it is hoped that several realistic goals can be achieved.

First, we hope to identify specific childhood characteristics that precede alcoholism. This would permit earlier identification and allow prevention programs greater long term impact (Zucker, 1974).

Secondly, an attempt will be made to quantify the relationship between different predictors and the outcome of alcoholism. That is, by carefully matching high-risk subjects with suitable controls, and also considering factors which render infants high-risk for many other forms of later deviancy, it is hoped that infants can

be identified as specifically being high-risk for alcoholism.

Finally, this high-risk research should begin to answer questions about the etiological roots of alcoholism (see Hanson et al., 1977, for a more complete discussion of the aforementioned goals of high-risk research).

The longitudinal approach offers numerous methodological advantages. First, one can examine the effects of various classes of variables on the parents, the child, and their relationship across developmental stages (Kagan, 1964). Just as the differential effects of depression (Weissman, Paykel, and Klerman, 1972), divorce (Hetherington, 1979), and other life events (see Bronfenbrenner, 1979) have been examined within the context of the family life cycle, the longitudinal method would permit a detailed study of the effects of paternal alcoholism as well as other classes of influence on the developing child who is statistically at risk. Evidence exists (cf. Nylander, 1960) that the effect of parental alcoholism on the child depends upon numerous factors such as personality of both drinking and non-drinking parents, sex of child, age, temperament of child, etc. (see Wilson and Orford, 1978, for a detailed discussion of potentially relevant variables). The longitudinal

approach to the study of the etiology of alcoholism allows the researcher to utilize a transactional model of development (Sameroff, 1975; Sameroff and Chandler, 1975) to follow the growth of the developing child across time, while assessing the effects of numerous classes of influence on the developing organism.

Second, the longitudinal method can offer relief from data bias, as well as providing current information that is systematically and uniformly collected. Data collection can occur before subjects suffer from the ravages of the disorder (cf. Mednick and McNeil, 1968).

Third, the longitudinal approach would allow a temporal sequence to be established without bias, to ascertain whether other difficulties (i.e., impulsivity, depression, alienation) typically associated with problem drinking tended to precede the drinking problem, or if the drinking problems were antecedent to other difficulties (Cahalan, 1970; DHEW, 1971). This approach would hopefully offer insight into the issue of alcoholism as an illness, and/or alcoholism as a symptom of other illnesses (Schuckit, 1972).

While the continuity of data and other advantages already mentioned make high-risk research utilizing a longitudinal design desirable, certain pitfalls central to this method do exist. Achenbach (1978a) cogently discusses problems associated with age, cohort, and time

of assessment, carefully noting inherent limitations of longitudinal designs. The results that Nesselroade and Baltes (1974) obtained utilizing a longitudinal-sequential design clearly demonstrated the limitations which Achenbach discusses. Mednick (1978) also discusses problems of the high-risk method with respect to sampling and the inevitable biased selection of cases. He concludes that the only alternative would be to assemble a birth cohort of 10,000 and study them intensively for an extended period of time, although even this exhaustive project would require replication (cf. Clarke-Stewart, VanderStoep, and Killian, 1979). Due to the exploratory nature of this study, the weaknesses of the longitudinal design as well as its strengths make it an acceptable design.

Conceptual Models of the Etiology of Alcoholism

Much of the research on alcoholism has been completed without overarching theoretical models serving as a conceptual framework. When a specific orientation was utilized, it typically viewed alcohol problems from a monist perspective. For example, problem drinking has been conceptualized as an attribute of personality (cf. Williams, 1976) or the result of nonspecific biological or genetic variables (cf. Goodwin, 1976a). Other workers have viewed problem drinking from the perspective of

sociocultural variables (cf. Cahalan, 1970) or as an attribute of specific situational stressors (cf. Snow, 1975) which lead to alcoholism.

Recently, work has begun to attempt to integrate the above classes of influence into a model which takes a more broad based perspective. Kissin (1977) cogently points out that a single faceted theory of the etiology of alcoholism is clearly no longer a tenable theoretical position. Only a multi-faceted model which attempts to integrate biological, sociocultural, and personality variables as interacting classes of influence can reasonably account for the acquisition of problem drinking behaviors. Two theorists who attempt to develop a model which can account for the acquisition of drinking behaviors and problem drinking per se using a multi-faceted model are Jessor and Zucker.

The Jessor Model

Richard Jessor and his colleagues (1968, 1973) are specifically concerned with the acquisition of deviant behaviors and their development in youth. Problem drinking is one of a host of asocial and antisocial behaviors which Jessor examines under the general rubric of deviant behavior. According to Jessor, behavior is the result of sociocultural and personality variables which operate simultaneously. These two major classes of variables are each divided into subsystems that in turn are further

divided into measurable component elements. For example, Jessor originally divided the personality variable into three substructures: the personal belief structure, the personal control structure, and the perceived opportunity structure. Within the personal belief structure was the individual's general cognitive orientation. Specific variables which Jessor employed to measure this area were locus of control and alienation. While specific component elements within the model have changed as further work has been completed, the basic model structure has remained consistent. When the model is applied developmentally, Jessor emphasizes the reciprocal influence of major variables and their subsystems across time. One major limitation of the Jessor model is the lack of a specific developmental time frame within which various classes of variables may become more or less salient. A second limitation of the model is that typically the percentage of variance which has been accounted for is 10-55%. Finally, the Jessor model is oriented towards general deviant behavior rather than the specific form it may take, such as excessive drinking. Greater specificity is clearly called for.

The Zucker Model

The Zucker (1976, 1979) model of development of drinking behavior places emphasis upon problem drinking

within the general context of antisocial behavior. Originally Zucker postulated that problem drinking had its origins in disturbed or dysfunctional family relationships. Specifically, inadequate satiation of the child's dependency needs as well as disturbed emotional relationships among family members were viewed as critical. The final significant component was the parents' failure to provide appropriate discipline and control for the child. Subsequent work on the model has focused on classes of influence as they impact upon the child from both a cross-sectional and longitudinal perspective. Zucker postulates that four major classes of influence have a major impact upon eventual problem drinking behaviors. Class I influences are social and community factors; Class II influences are from family of origin focusing specifically on child rearing practices and parental personality influences; Class III influences deal primarily with peer group socialization factors; and Class IV influences are intra-individual components such as personality, temperament, and physiological factors that may influence predisposition towards excessive alcohol consumption.

These four classes of influence are examined longitudinally as the salience of each class of variable is postulated to change along with the development of the

organism. As can be seen in Figure 1, Zucker has hypothesized that specific classes of variables may be less relevant during certain developmental time frames, while others are of greater import during the same time frame.

While the Zucker model addresses some of the limitations inherent to the Jessor work, several problems remain. First, the majority of Zucker's data is generally cross-sectional and was obtained on samples of adolescents. Longitudinal data is essential to test the limitations of the model. Second, while the model postulates various classes of influence ebbing and flowing with development, there is a lack of specificity with respect to exact variables which would precisely assess the global effects of the four classes of influence. The dimensions of this problem become exaggerated when a developmental perspective is taken along with longitudinal methodology. Finally, the general classes of influence are exceptionally broad based. From the general overall model perspective this limitation is not serious, but as hypotheses become more specific the classes are so broad that inter-class clusters of variables become important. For example, the fourth class of influence, intra individual, includes personality influences as well as physiological. Some workers would argue that these classes of influence deserve separate categories.

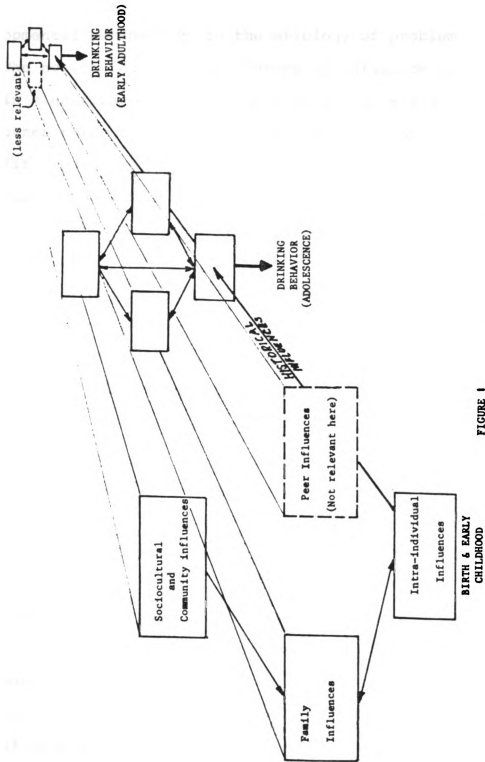


FIGURE 1
A Heuristic Model for Changes in Influencing Structures Affecting
Drinking Behavior over Developmental Time

From Zucker, 1979

While the Zucker model clearly has limitations, its major advantage is the unique application of a developmental perspective to the etiology of problem drinking. The notion that various classes of influence may increase in significance across stages of the life span and at other times lose relevance is common for developmental life span psychologists. This orientation makes the Zucker model easily adaptable to a longitudinal study of children who are statistically a high-risk for subsequent development of alcoholism.

The present study is a pilot, designed to gather data in an area that has not previously been systematically studied. It begins formal data collection prior to the birth of the offspring, utilizing an eclectic, but conceptually guided approach involving a broad range of methods and instruments, in an attempt to discover the exact dimensions that are most salient (see Parke, 1979). Through the use of observations, both formal and informal, as well as numerous standardized psychometric devices, the groundwork will be laid for the eventual study of a larger group of high-risk subjects in a combined cross-sectional-longitudinal design that could possibly have transcontextual validity (Weisz, 1978) for the development of alcoholism. The overall viewpoint of this work is that alcoholism develops as the result

of transactions between numerous variables--biological, psychological, social, cultural. The developing organism is examined within a larger ecological setting (Bronfenbrenner, 1977), attempting to understand the texture of the transactions between the high-risk child and his environment (Baltes, 1979; Bell, 1979; Brazelton, 1978; Sameroff, 1975, 1978). It is expected that direction of effects may vary during different developmental stages, dependent upon present salient issues for both the specific family and the child (Ainsworth, 1979; Field, 1978; Parke, 1979). Our goal is to identify characteristics of the child, the family, or the dynamic interactions between them, which are clearly high-risk markers for subsequent development of alcoholism as early in life as possible, so that mental health professionals can strive towards prevention rather than rehabilitation. Because this work is a pilot study and problem drinking is more prevalent in males (DHEW, 1971, 1974), this study will focus predominantly on the etiology of excessive drinking in men.

REVIEW OF THE LITERATURE

Numerous previous studies have attempted to reconstruct the history of the alcoholic in an attempt to understand the development of the disorder. This work has largely focused on the acquisition of retrospective information about the alcoholic's earlier life, rather than sifting through data which had been collected during earlier critical time periods. Major studies within this area can be subsumed into two general subtypes: 1) retrospective research, and 2) longitudinal research which adds on a retrospective dimension in an attempt to acquire information prior to the onset of the study. It is interesting to note at this time that although many of the major psychological (cf. Blum, 1966; Williams, 1976) and/or biological (cf. Goodwin, 1976, Kissin, 1977) theories pertaining to the etiology of alcoholism give credence to the notion that alcoholism is caused by very early developmental events, none of the previous research in this area has begun early enough to examine the critical questions without encountering the serious methodological flaws inherent to retrospective research. Also, the majority of this work has either lacked a basic

conceptual model or employs a monist model. By examining studies done utilizing the above methods and conscientiously avoiding "enlightened historical selectivity" (Nathan and Lansky, 1978) an attempt will be made to select markers which might be indications that an infant is high-risk for subsequent development of alcoholism.

Personality Theory as a Conceptual Basis

In an extensive clinical study with alcoholics, Blane (1968) attempts to analyze the personality of the alcoholic. This work scrutinizes the personality of the alcoholic and the psychological needs which the drinking helps to satisfy. Blane states that male alcoholics suffer from a conflict between exaggerated dependency needs and the gratification of these intensified needs. The vital element which varies from individual to individual is the method of conflict resolution--how the alcoholic resolves the conflict between dependency needs which needs to be fulfilled and a masculine identity which prevents satiation of these needs. According to Blane, alcohol is the solution to the conflict over dependency wishes, since drinking is typically regarded as masculine activity and also provides feelings of comfort and warmth.

We are left with the question of how alcoholic men develop the exacerbated dependency need which

culminates in the alcoholic experience. Blane (1968) attempts to understand the dynamic personality of the alcoholic, but offers little specific data for understanding the ontogeny of the alcoholic personality. The strong dependency need apparently originates in earlier childhood experiences; but what specific events are responsible? Extrapolations are carried out by some theorists, moving from the adult alcoholic to hypothetical causal agents in earlier life (e.g., White and Watt, 1973). This process is attempted via the acquisition of retrospective information and through deductive logic, although both methods have serious shortcomings. Since the human organism is in its most dependent state as an infant, gradually becoming less and less dependent, it seems obvious that proponents of dependency theory would begin their search for the origin of the exaggerated dependency needs during this earliest period of life. This theoretical orientation to problem drinking places greatest emphasis upon intra-individual influences (Class IV) with secondary implied emphasis upon family of origin influences (Class II). The effects of sociocultural factors (Class I) as well as peer personality and peer socialization (Class III) are not integrated into the dependency hypothesis. While numerous other researchers have examined the personality

of the alcoholic (see Williams, 1976, for an excellent review of this literature) in an attempt to uncover hypothesized underlying personality constructs or conflicts that are unique to the alcoholic population, none have succeeded thus far. Much of this work lacks the conceptual clarity of Blane's clinical research; however, others have completed excellent work on the alcoholic personality, most notably McClelland and his research group. The best of this work is plagued by the same serious methodological problems as Blane's work, therefore it would be pedantic to review this work here. The interested reader is referred to several excellent reviews of this literature (cf. Barry, 1974b; Williams, 1976).

Genetic Studies as a Conceptual Basis

The juxtaposition of Blane's work with Goodwin's (1976a) comprehensive review gives us another perspective into the alcoholic problem, as Goodwin presents evidence which is contrary to the notion of an alcoholic personality type. Alcoholism is viewed as a family disease, as no previous study of male alcoholics had less than 25-50% of the male relatives also alcoholic (Goodwin et al., 1973; Goodwin, Schulsinger, Knop, Mednick, and Guze, 1977; Gregory, 1960; Schuckit and Haglund, 1977; Winokur, Reich, Remmer, and Pitts, 1970).

Why does the affliction with alcoholic addiction seem to run so consistently in families? Further evidence is suggested from one of Goodwin's earlier studies that utilized a Danish sample where subject location and follow-up is easier to achieve (Goodwin et al., 1973). Probands (biological father alcoholic), who were removed from their family during early infancy and raised by families without alcohol problems, were compared to their stepbrothers (biological fathers nonalcoholic). The groups were not different on a large number of dimensions (e.g., SES, educational experience, non-alcohol psychiatric illness), but differed significantly with respect to serious alcohol problems. The control group of adoptees surprisingly had more heavy drinkers, while at the same time contained few drinkers who had serious problems as a result of excessive drinking. A subtle, but very important distinction is made between heavy drinking and excessive drinking that causes other problems for the drinker. The conclusion reached from this study is best summarized by the following passage:

"Sons of alcoholics were no more likely to become alcoholic if they were reared by their alcoholic parent than if they were separated from their alcoholic parent soon after birth and reared by nonrelatives" (Goodwin, 1976, p. 76).

Goodwin's work has been sharply criticized by Tolor and Tamerin (1973). First, the assessment of

psychopathology in the adoptive parents of both groups was based upon information provided by the adopted subjects and was concerned only with gross pathology (seeking treatment). This approach makes it impossible to insure that both groups of parents were equivalent on this crucial dimension. A second major criticism of the work was that the evidence favoring the genetic hypothesis is based solely upon four cases. That is, of the 55 probands, four were hospitalized and definitely diagnosed as alcoholic. While the results were statistically significant, one must consider the practical significance of basing conclusions on four cases. It seems more interesting to wonder about the 51 probands who were not diagnosed as alcoholic. Finally, Goodwin's manner of grouping the data to reflect drinking severity seems highly arbitrary, although it was done in the blind. The slightest alteration of his categories would dramatically change the results of his work. Also, general criticism of the adoption study method can be made on the grounds that Danish adoptees often (approximately 60%) have some knowledge of their biologic parents (Eldred, Rosenthal, Wender, Ketz, Schulsinger, Welner, Jacobsen, 1976). The precise effect of this contact on subsequent development of alcoholism has not been investigated. Clearly, the work of Goodwin requires replication.

Further evidence for the heritability of alcohol problems is advanced by a Swedish study (Kaij, 1960) that compared concordance rates for alcoholism between monozygotic and dyzygotic twins. The identical twins were concordant for alcohol problems in 54% of the cases, while fraternal twins were concordant in 28% of the cases. The twin study method was also utilized in a Finnish study (Partanen, Brunn, and Markkanen, 1966). The main findings of this research were that normal drinking, abstinence, and heavy drinking show some heritable variation, while arrests, signs of addiction, and social complications seem unrelated. The authors differentiate the two groups of variables, the former as actual drinking behaviors and the latter as the social consequences of drinking. These data seem to show that actual drinking behaviors are affected by heritable factors, while the consequences of drinking behavior are not affected. Partanen (1972) concludes on the basis of these data that "innate differences between individuals in their propensities to consume alcohol" (p. 114) clearly exist. It is important to keep this distinction between actual drinking behavior and social consequences for drinking in mind. Although the twin study method has often received criticism (cf. Rosenthal, 1971), it does provide valuable information which can be

viewed as a vital first step in the process of understanding the interplay between genetic and environmental factors (DeFries and Plomin, 1978; Fischbein, 1978).

The final study reviewed which presents evidence for the heritability of alcohol problems utilizes the half-sibling method (Rosenthal, 1970). This study by Schuckit, Goodwin, and Winokur (1972) examined primary alcoholics (i.e. those with no other major psychiatric disturbance) who had a half-sibling. A diagnosis of alcoholism was based upon excessive drinking that had caused serious problems with health or social adjustment. This research focused on the relative influence of having a biological parent who was alcoholic versus being reared by an alcoholic parent. While their sample size was small ($N = 41$), all of their findings indicated that having an alcoholic biologic parent was the most predictive factor of an alcoholic outcome in these offspring. Living with an alcoholic parent did not increase the incidence of alcoholism for those half-siblings who did not have a biological alcoholic parent; nor did living with an alcoholic parent increase the incidence of alcoholism for those half-siblings with a biological alcoholic parent. Schuckit et al. concluded "having an alcoholic parent was the strongest predictor of alcoholism in the half-siblings" (p. 126). Investigations

of adopted and nonadopted sons of alcoholics report similar results (Goodwin, Schulsinger, Moller, Hermansen, Winokur, and Guze, 1974).

The numerous studies reviewed in this section purport that alcoholism is a familial disease with a non-specific genetic component. Utilizing a myriad of complex methods designed to estimate the proportions of variance specifically attributable to genetic factors or environmental factors, these researchers conclude that a genetic component plays a significant causal role in the etiology of alcoholism. It is noteworthy, however, that none of these studies identifies the critical genetic mechanisms or specifies the nature of their undoubtably complex interactions with environmental factors (see Gottesman, 1974, for a discussion of this problem). The genetic studies place emphasis exclusively upon intra-individual differences (Class IV) of a biological nature. The effects of sociocultural (Class I), family of origin (Class II), and peer factors (Class III) are not integrated into this model.

Etiological Theories from the Perspective of Longitudinal Data

Several studies have looked at problem drinking with the specific intent of identification of its precursors (see Zucker, 1976, 1979, for reviews of all

longitudinal studies completed). This work follows the course of development across time. As members of the subject pool subsequently have problems associated with drinking, the data that already exists can be carefully examined to see what commonalities exist between different afflicted individuals. This design (follow-through methodology) avoids the pitfalls already mentioned with retrospective analysis or extrapolation vis-a-vis deductive logic to assumed earlier events, although the longitudinal method does have several basic limitations that have already been mentioned (for an extensive discussion of the strengths as well as limitations of the longitudinal method see pages 7 and 8).

The Oakland Growth Study has yielded some interesting information on the earlier life of the problem drinker. The work of Jones (1968) specifically looks at antecedents of drinking patterns in adult males and possible personality correlates. The age of first contact with subjects was 10 and the last follow-up at 33. The criterion for diagnosis of problem drinker was extensive interview data in conjunction with a medical examination. Part of this study reports on the pre-problem drinkers in junior high school. Jones discovered that male pre-problem drinkers tended to be extroverts who had a negative attitude towards life. Also they were impulsive

in an unpredictable fashion, tending to be dissociative and disorganized. Many of these characteristics remained consistent across time, continuing to manifest themselves when later evaluations were conducted. Within the proposed model we employ, these results focus on intra-individual (Class IV) effects.

Jones' work produced vital information about the early life of the problem drinker which enhances our understanding of the ontological progress of alcohol problems. Additionally, it yielded some information about the family life of the problem drinker (Jones, 1971). These data are considered to be Class II (family of origin) factors of influence. Specifically, those men who developed drinking problems had mothers who tended to be sour and disagreeable, while at the same time they seemed uninterested in their son. These women disliked their position in life and felt unhappy about their status. Jones (1968) concludes that the men with drinking problems have developed an intense independence-dependence conflict, as a result of earlier familial experiences, which is resolved through the use of alcohol. She concludes that the combination of under-control and inability to function in a dependent relationship seems to be one which causes men to be highly susceptible to problems with alcohol. Jones has examined two classes

of influence within our purported model. Her conclusions fit easily into the theoretical framework of the Zucker model as she postulates that interactions between Class II variables (family of origin) and Class IV variables (intra-individual) ultimately cause the male to have problems with dependency relationships which leaves him highly susceptible to future problems with alcohol.

An extensive examination of alcoholism utilizing data obtained vis-à-vis the longitudinal method is found in McCord and McCord (1960). Their work places emphasis upon the family, the individual, and the interaction between them, examining in detail the environment within which the high-risk child develops, prior to the overt manifestation of the alcoholic disorder. First contact was when these subjects were 10 or a bit older, and was maintained for over 20 years. All subjects were males and alcoholism was diagnosed on the basis of public records from hospitals, welfare agencies, and courts. According to the McCords, the primary source of alcoholism in males is a dependency conflict. The conflict is the result of permanently heightened dependency needs, which cannot be satisfied because of the male role confusion of the child. These data are intra-individual factors (Class IV). The aggression and antisocial behavior commonly manifested by the prealcoholic male

(also see Zucker and Barron, 1973) is simply a reaction formation against strongly felt needs to be cared for and nurtured, needs that in turn are experienced as unacceptable (McCord and McCord, 1962). While the heightened dependency needs remain as the primary contributing factor, the male alcoholic also suffers from role confusion. The combination of these two specific elements culminates in alcoholism, rather than some other type of psychopathology.

The work of the McCords is unusually rich in its examination of the earlier family life experiences which seem to cause the alcoholic's conflict. They carefully examine potential effects of parental personality and style of discipline (Class II factors) along with the developing child's personality (Class IV factors). Their data suggest that the inferred heightened dependency needs are caused by inconsistent mothering and intense parental conflict. Other factors which are thought to contribute include maternal escapism and maternal deviant behavior. The picture which emerges from their data is that of a male child who gets inconsistently good care. The vacillations between good care and neglect cause the child to always want more. Additionally, because of the antagonistic maternal attitude towards society, the child never feels completely safe with his

relationship to his mother (i.e., if she escapes from other problems, perhaps she's not completely safe for me).

These investigators believe that the source of the adult alcoholic's role confusion lies in a number of variables which are intertwined with the child's father. These fathers were found to show more active rejection, punitiveness, escapism, and made low demands of their sons. Thus the paternal model available is the one which is ultimately identified with by the child. These boys are not trained by example or by appropriate discipline to accept the responsibilities of an appropriate male role, and fluctuate between roles, never feeling certain of their identity (see Lamb, 1979, for an excellent discussion of these issues). Ultimately, the child develops a confused self-image. The primary factors which seem to combine to cause the alcoholic solution are inconsistent mothering, maternal deviance, paternal antagonism, and parental escapism. These factors combine to cause the exaggerated dependency needs, the masculine role confusion, and the resulting conflict. While these variables contributed to many types of psychopathology, the McCords feel that this specific combination of complex elements results in alcohol related deviance.

The model that the McCords suggest is associated with the following pattern. The family background of the future alcoholic (from 10 onwards) is one of general stress and erratic satisfaction of dependency needs, along with inadequate specification of the male role. The result of this environment is a male who has intensified dependency needs along with conflicts over means of satisfying these needs. This specific constellation of elements leaves the male vulnerable to alcoholism rather than other types of psychopathology. While the specific variables assessed by the McCords differ from those of Jones, these researchers postulate similar models. Both hypothesize that the most critical factors are earlier familial factors (Class II) which interact with the developing child's personality (Class IV). These two classes of influence and the interactions between them are hypothesized to cause a specific personality type to develop which is highly susceptible to future drinking problems.

Etiological Theories from the Perspective
of Cross-Sectional Data

Substantial cross-sectional evidence exists which links male adolescent problem drinking with both concurrent and presumed earlier antisocial behavior and impulsive activity (Costello, Parsons-Manders, and

Schneider, 1978; Demone, 1972; Jessor, Graves, Hanson, and Jessor, 1968; Jessor and Jessor, 1973; Schuckit and Childes, 1978; Williams, 1970; Zucker and Barron, 1973; Zucker and Devoe, 1975). Some of these studies (Demone, 1972; Schuckit and Chiles, 1978; Zucker and Barron, 1973) also found that adolescent males who were already manifesting these types of pathology had disturbed affectional relationships within their family structures. An interesting aspect of Zucker and Barron's data was that the mother's drinking patterns were more predictive of the son's drinking behavior than were the father's. Further data on adolescent behaviors has demonstrated that antisocial and impulsive activity can precede future alcohol abuse (Jessor, Collins, and Jessor, 1972; Robins, 1966). Since antisocial behaviors frequently occur along with alcohol abuse and often even precede the alcohol abuse, perhaps a pattern exists which may be utilized by mental health professionals to intervene prior to the actual alcohol abuse.

It is interesting to note that nearly all of the work on childhood hyperkinesis includes impulsiveness as an essential component in the syndrome (Cantwell, 1978; Goodwin et al., 1975; Lambert et al., 1976; Rosenthal and Allen, 1978; Sandoval, 1978; Werry, 1968), although impulsiveness is a very common feature of many

psychiatric disorders of childhood (Rutter, 1977). On this basis some have argued that the prealcoholic male manifests the hyperactive child syndrome during middle childhood (Cantwell, 1972, 1978; El-Guebaly and Offord, 1977; Goodwin, Schulsinger, Hermansen, Guze, and Winokur, 1975; Morrison and Stewart, 1971). While some researchers argue that hyperactivity has a genetic etiology with an organic basis (Cadoret, 1976; Humphries, Kinsbourne, and Swanson, 1978), others argue against an organic and/or genetic basis (see Dubey, 1976; Grinspoon and Singer, 1973). A second major issue is that hyperkinesis lacks a standardized diagnostic definition (Lambert, Windmiller, Sandoval, and Moore, 1976; Loney, in press; Rosenthal and Allen, 1978). Related to the diagnostic issue, the primary or core symptoms of hyperkinesis vary widely. This variation depends upon the source of the data (Langhorne, Loney, Paternite, and Bechtoldt, 1976), the type of measurement employed (Barkley, 1977; Sandoval, 1978), and the item pool utilized (Lahey, Stempniak, Robinson, and Tyroler, 1979; Loney, Langhorne, and Paternite, 1978). The aforementioned limitations must be carefully considered when links between hyperactivity and alcoholism are discussed. Despite the limitations, it is interesting to note that when 76 hyperactive children were followed up into young

adulthood, impulsiveness and immature personality disturbances remained characteristic (Weiss, Hechtman, Perlman, Hopkins, and Wener, 1979). This work requires replication and further follow-up into the peak period of incidence for onset of alcohol related problems, to ascertain if problem drinking eventually manifests itself subsequent to childhood hyperkinesis.

Summary

The work discussed thus far provides some leads into the possible etiology of alcoholism, but it is particularly weak in areas that concern behavioral manifestations occurring prior to age 10 that are the precursors of alcoholism. The earliest longitudinal studies that deal with the ontogeny of alcoholism have not begun until late childhood, and most begin in late adolescence. A second major limitation with the work cited is that only two major classes of influence are integrated into the theoretical models that are developed. Greater emphasis must be placed upon potential sociocultural classes of influence as well as the potential effects of peers. While some of the work that has been reviewed seems to indicate that the first "sensitive period" in the etiology of alcoholism in males might not occur until the child reaches his second or third birthday (i.e., dependency theory), clearly strong evidence has

been cited that indicates some hereditary predisposition to alcoholism in males does exist (also see Cotton, 1979; Seixas, 1977). If the genetic hypothesis is correct, the precursors for subsequent alcoholism could be present from birth onwards. All previous attempts at conceptualization of the earliest stages of development of the prealcoholic male have been done without actual observations and systematic data collection.

The Problem

The present study is aimed at beginning to fill the critical gap which exists in our understanding of the development of alcoholic disorder. The familial evidence previously discussed, the recurring theme of dependency, and the impulsivity of the alcoholic lead us to the earliest stages of life for answers (also see the Methods section for further discussion of the rationale for data collection beginning prior to birth). This work will serve as a pilot study, attempting to move into new areas to advance our understanding of the alcoholic problem. The aim is to conduct a longitudinal study which begins contact during the eighth month of pregnancy. The primary concern is to acquire extensive amounts of information, using a wide variety of techniques such as formal and informal observations, questionnaires, public records, and experimental

paradigms. It is hoped that if high-risk markers exist, they will be detected through the use of a conceptually guided, broad-based approach. This work will permit perfection of methodology and a narrowing of feasible hypotheses so that eventually a study can be conducted using a larger group across a broader span of time.

Following the model which Zucker proposes, initial focus will be placed upon assessment of factors within the Class II (family) sphere of influence. Assessment will be made of parental psychiatric status placing special emphasis upon appraisal of depressive symptomatology, antisocial behavior, hostility, and current levels of alcohol consumption. Additionally marital satisfaction and current stressful life events will be assessed. This initial phase of the project will also include the collection of extensive demographic data (Class I, sociocultural).

Further data collection during initial phases of the project will be of an exploratory nature. Parental variables that will be surveyed include obstetrical data and current reactions of both parents towards the unborn child. Prenatal influences on both parents will be carefully delineated as they may potentially affect the child (Class IV).

The birth of the child will mark the onset of assessment of intra-individual variables (Class IV). Careful examination of early temperament; mood; attachment phenomena (both as an attribute of the child and as an interactional phenomena); activity level and its potential precursors and possible successors (i.e., impulsive activity); and general developmental status will be made. This initial focus on intra-individual factors (Class IV) will quickly shift as the child matures to include familial factors (Class II) and assessment of interactions between the mother and her infant during early initial situations (i.e. feeding). As the child develops during the first year of life and thereafter, measures in the aforementioned areas will be repeated. This will permit us to establish the beginnings of a map of both generic developmental change as well as presumed central etiological factors which have been suggested by the research on older populations.

Data will be analyzed both cross-sectionally and longitudinally. The cross-sectional data analysis will initially compare high-risk families to control families on specific outcome measures (see Methods section, p. 43 for a discussion). More elaborate cross-sectional statistical procedures will be utilized when samples become sufficiently large. For example, it is anticipated that

cluster analytic techniques can be utilized when the number of subjects approaches two hundred (see Comrey, 1978), although this will not occur for some time.

The longitudinal data analysis will initially compare each new subject's data to the data collected on each earlier subject. Thus, as data are collected on new subjects across time, individual cases can be compared to one another as in a between subjects design (Mahoney, 1978); the independent variable is the presence or absence of an alcoholic father. These procedures will hopefully reveal that certain specific patterns of results are unique to either high-risk or control families. If reliable data collection is achieved when using this design, then reasonable internal validity will result (see Kazdin, 1978). When sample sizes become large enough, the data can be analyzed with path analysis to attempt to assess directions of effects and interactions. Sufficient data to utilize these types of techniques will not be generated for quite some time.

METHOD

Subjects

Rationale

Due to the higher rates of alcoholism among men (DHEW, 1971, 1974), all subjects will be male. Since families will be contacted prior to the birth of the child, those families that have female babies will not be followed after childbirth. While this procedure will make subject acquisition more difficult, it will permit both direct observations of the mother during pregnancy and early observations of the neonate.

The research program will begin prior to the birth of the child for several reasons:

(1) Considerable evidence suggests that both males and females with a biological alcoholic parent have a substantially increased risk of subsequently becoming alcoholic (see Cotton, 1979, for an excellent review of this literature). While the data indicate that alcoholism is often a familial disorder, insufficient data exists to identify specific etiological mechanisms. Recent evidence found that children of alcoholic parents "show significantly elevated levels of acetaldehyde when exposed to moderate doses of alcohol" (Schuckit & Rayes, 1979, p. 55). Perhaps these high-risk children, from birth

onwards, manifest subtle harbingers of future problems (see Schwartz, 1979).

(2) McCord and McCord (1962) found that male alcoholics exhibited more overt seeking of comfort, care, and direct guidance than nondeviant controls. These behaviors were categorized by the McCords as dependency behaviors. Since alcoholic males manifested more of these behaviors they concluded that alcoholics are excessively dependent. An interesting aspect of the McCord's data was that the male alcoholics exhibited fewer overt dependency behaviors than controls during adolescence (also see Blane & Chafetz, 1971; Jones, 1968). Zucker (1968), using the Gough Femininity Scale, found that heavy drinking adolescent males scored higher on tests of overt masculinity, but found no differences on tests of covert masculinity. Alcoholics have been found in general to prefer foods that are smooth, bland, rich, soft, and wet, more often than controls. A preference for these type foods was considered an indication of more intense oral passivity (Wolowitz, 1964, 1968). Finally, alcoholics have been found to be perceptually more field dependent than controls (Witkin, Karp, & Goodenough, 1959). These findings generally support the notion that male problem drinkers tend to have problems with developing means for satisfying dependency needs and they resolve this difficulty by establishing a facade of independence. The origin of the conflict over satisfying dependency needs

could possibly lie in earliest infant attachments (Blane, 1972). Heavy drinking cultures have more oral themes in their folk tales (McClelland, Davis, Wanner, & Kalin, 1966) and male adolescents who have drinking problems have more oral themes in their fantasies than nonproblem drinkers (Zucker & Fillmore, 1968). In addition to the oral and dependency themes, psychodynamic conceptualizations of drug dependence emphasizes the narcissistic nature of the problem (Greenspan, 1977; Wurmser, 1977) and/or the unresolved conflicts between attachment and alienation (Barry, 1974a). Drug abuse, including alcohol, is viewed by many clinicians and researchers as a long standing problem in personality maladjustment (Huba, Wingard, & Bentler, 1979). "An impulsive, uninhibited, violent quality characterizes the normal infant, the intoxicated person and the chronic alcoholic" (Barry, 1974b, p. 92).

(3) The dramatic rise in the number of studies on the neonate and infant during the past ten years (cf. Sameroff, 1978a) has provided a richer and fuller picture of early human development. An ancillary result of this increased research is the availability of a myriad of sophisticated methods (cf. Brazelton, 1973) for examining newborns and their parents. These methods can be applied systematically and reliably to study infants who are at higher-risk for subsequent drinking problems.

(4) An offshoot of improved research methods has been increasingly fine-grained analyses of neonatal events and their subsequent long-term effects. Brackbill (1977) found that anesthetics given to mothers during delivery can affect autonomic functioning of infants for eight months or longer (also see Friedman, Brackbill, Caron, & Caron, 1978). Transient neonatal symptoms (i.e., restlessness, rigidity, apathy) have recently been found to correlate with loneliness and immaturity in 10 to 12 year olds (Mednick, 1977). Dubey (1976) in his excellent review of organic factors in hyperkinesis concludes that "the presence of higher than normal anomaly scores in hyperkinetic children does strongly suggest that a subtle deviation in prenatal development can lead to both minor physical anomalies and behavioral deviance" (p. 360). Some evidence exists indicating that males are less receptive to environmental influences during early infancy and show greater internal stability of behaviors (Yang & Moss, 1978), although Walraven (1974) reported that method of feeding had greater psychobiological significance for males than females. Much of the earlier work in this area has not analyzed male and female data separately.

(5) Sarnoff Mednick and his colleagues (1971) cogently point out the need for good perinatal data on infants who are high-risk for schizophrenia. The complexity of Mednick's findings between difficulties in pregnancy,

psychiatric status of the mother, type abnormality during neonatal examination, and outcome, suggests that similar results might be found with infants at risk for drinking problems. This type of work has never been undertaken.

Four families with male offspring will form the high-risk sample and four families with male offspring will make up a group of normal controls. The choice of normal controls rather than a nonalcoholic psychiatric control group was made to maximize differences between groups (see Keith, Gunderson, Reifman, Buchsbaum, & Mosher, 1976, for an excellent discussion of the issue of appropriate control groups in high-risk research). The large project which will follow this pilot work will include both psychiatric and normal controls to insure that differences are a reflection of the problem with alcohol and not the result of general psychopathology per se. The total number of subjects is being kept very low to facilitate the extensive data collection procedures that will be utilized. Despite the small number of subjects, if all high-risk families differ from the control families on a given outcome, the results will be statistically significant beyond the .05 level, two-tailed test, using the Fisher Exact Test (Finney, Latscha, Bennet, & Hus, 1963).

Probands will be selected on the basis of familial characteristics that render the male neonate at high-risk for alcoholism later in life. There is no paucity of empirical evidence that indicates if the father is

alcoholic, male offspring are more likely to become alcoholic (Cotton, 1979; McCord & McCord, 1960; Goodwin, 1976b). According to Goodwin, no study of male alcoholics has less than 25% of their fathers and brothers alcoholic. Clearly, alcoholism among males seems to run in families. Additionally, later born male offspring are higher-risk for alcoholism than first born children (Blane & Barry, 1973).

A wide variety of sociological, cultural, and psychological factors in addition to the two aforementioned factors have been implicated by investigators as being associated with the development of alcoholism. Such factors as being an American Indian (Baker, 1977; DHEW, 1978), Catholic (DHEW, 1971), maternal resentment of role (McCord & McCord, 1960), paternal antagonism of son (McCord & McCord, 1960; Robins, 1966), absence of adequate supervision over the child (McCord & McCord, 1960; Robins, Bates, & O'Neal, 1962), and intense parental conflict (Ablon, 1976; Hanson & Estes, 1977; Zucker, 1976), to name a few, have been implicated in the etiology of alcoholism. Undoubtedly, alcoholism is a complex problem which has multiple determinants (Zucker, 1979). Extensive examination of the available evidence on the etiology of alcoholism leads us to believe that acquisition of families with alcoholic fathers and older siblings will render the male newborn at sufficiently higher-risk for alcoholism to warrant this research.

Initial Contact

The high-risk families will be contacted via inpatient and outpatient units in the local community (e.g., St. Lawrence Alcoholism Unit and the local National Council on Alcoholism). Personnel on the staff will be asked to identify alcoholic men whose wives are pregnant, and already have other children. These families will be contacted by the agency via letter (Appendix A) requesting permission to have their names given to the project chairman (RAZ). Contact with the families who give permission will be made prior to the eighth month of pregnancy, as the formal data collection process will begin at onset of the eighth month of the pregnancy.

The control group families will be contacted via the same local obstetrical facilities used by the high-risk families. As each high-risk family has a male baby, an attempt will be made to match the high-risk family with an appropriate control. No premature infants will be used in this pilot project, since no known evidence exists which links prematurity with subsequent drinking problems. For inclusion into the study, male infants must weigh more than 2500 grams and be more than 38 weeks gestational age (Lubchenco, 1976). Infants with crown to heel length less than 47 cm. (small for dates) will be included in the project, since this concept has only recently received consideration.

Matching will be done on the basis of the following variables, listed in order of priority (see Jacob, 1975, for a discussion of the rationale): socioeconomic status of the family (Hollingshead & Redlich, 1957); age of father and mother; ethnic background; and ages and sex of older siblings (see Lewis & Kreitzberg, 1979; Weller & Bell, 1965, for a discussion of the potential significance of birth order and spacing effects). Additional control groups might be employed, in an attempt to isolate specific causes for differences between groups (Jacob, 1975); however, this procedure was not employed since, 1) this is a pilot study, and 2) it would limit the extent of data collection. The choice of a control group with no alcoholism or other types of psychopathology was made to maximize possible differences between high-risk and control families.

Potential subject families will be contacted on the phone to insure they are interested in participating in "a developmental study of their prospective child's early years of life". (See Table 1A/B for prospective contact schedule.) Potential subjects will be offered \$25 payment for agreeing to participate in the initial screening interview. If interested, the project chairman (RAZ) will schedule a home visit with both parents present. During this visit, they will be informed of the demands the study will make upon their time. While the time demands are large, it is felt that subjects will be

TABLE 1A

Contact Schedule

I. Screening Process

- A. Initial Contact (who, where, what)
 - 1. Community agency
 - 2. Mailed form
 - 3. Agency Parent Letter (Appendix A)
- B. Initial Contact Screening Interview (payment of \$25 at conclusion of interview)
 - 1. Research committee chairman - RAZ
 - 2. Home visit
 - 3. Screening questionnaires administered:
 - a. Research Participation Informed Consent Form - H & W* (Appendix B)
 - b. Medical Information Release Form - H & W (Appendix C)
 - c. School Achievement & Performance Release Form - H & W (Appendix D)
 - d. Follow-up Information Form - H & W (Appendix E)
 - e. Modified SMAST - H (adopted from Selzer, 1975; Appendix F)
 - f. Background Information - H & W (Appendix G)

II. Prenatal Contacts

- A. First week of eighth month of pregnancy
 - 1. Clinical graduate student - RBN
 - 2. Physician visit
 - 3. Screening questionnaires distributed (returned by mail):
 - a. Manual for Obstetrical Complications (adopted from Littman & Parmalee, 1974; Appendix H)
 - b. Manual for Postnatal Complications Scale (Littman & Parmalee, 1974; Appendix I)
- B. First week of eighth month of pregnancy
 - 1. Undergraduate volunteer - HCP
 - 2. Home visit
 - 3. Questionnaires and structured interview:
 - a. Semi-structured interview with father (Appendix J-1)
 - b. Semi-structured interview with mother (Appendix J-2)
 - c. Wakefield Self-Assessment Depression Inventory - H & W (Snaith et al., 1971)

*H = Husband, W = Wife

TABLE 1A (cont'd.)

- d. Gough ACL - H & W (Gough, 1955; Appendix K)
 - e. Spanier Dyadic Adjustment Scale - H & W (Spanier, 1976)
 - f. History of Pregnancy - W (Appendix L)
 - g. California Q-Sort done immediately after visit - H & W (Block, 1961)
- C. Third week of eighth month of pregnancy
- 1. Research committee Chairman - RAZ
 - 2. Home visit
 - 3. Questionnaires & structured interview
 - a. Antisocial Behavior Checklist - H & W (Appendix M)
 - b. Buss-Durkee Hostility Inventory - H & W (Buss & Durkee, 1957)
 - c. Detailed Drinking History - H & W (Cahalan et al., 1969; Schuckit, 1978; Appendix N)
 - d. Schedule for Affective Disorders & Schizophrenia - H & W (Spitzer & Endicott, 1977)
 - e. California Q-Sort done immediately after visit - H & W (Block, 1961)
- III. Perinatal Contact (male offspring)
- A. Three of four days subsequent to birth
- 1. Certified examiner
 - 2. Home or hospital visit
 - 3. Neonatal Behavioral Assessment Scales - Infant (Brazelton, 1973)
- B. Nine or ten days subsequent to birth
- 1. Certified examiner
 - 2. Home visit
 - 3. Neonatal Behavioral Assessment Scales - Infant (Brazelton, 1973)
- C. One month
- 1. Undergraduate volunteers
 - 2. Home visit
 - 3. Observations and questionnaires
 - a. Feeding Scales - Mother and Infant (Ainsworth & Bell, 1969; Appendix O)
 - b. Neonatal Perception Inventory - H & W (Broussard & Hartner, 1971; Appendix P)
 - c. Social Readjustment Rating Scales - H & W (adopted from Holmes & Rahe, 1967; Appendix Q)
 - d. California Q-Sort done immediately after visit - W & H (if present) (Block, 1961)

TABLE 1A (cont'd.)

IV. Postnatal Contacts through the First Year

- A. Two months
 - 1. Undergraduate volunteers
 - 2. Laboratory visit
 - 3. Psychophysiological measures and observations
 - a. Fitzgerald Feeding Study (Zucker & Fitzgerald, 1977)
 - b. Feeding Scales - Mother and Infant (Ainsworth & Bell, 1969; Appendix O)
- B. Four months
 - 1. Undergraduate volunteers and qualified examiners
 - 2. Home visit
 - 3. Developmental assessment and interview
 - a. Temperament Interview - W (Thomas et al., 1963)
 - b. Bayley Scales of Infant Development - Infant (Bayley, 1969)
- C. Six months
 - 1. Qualified examiner
 - 2. Laboratory visit
 - 3. Fitzgerald Habituation Study (Zucker & Fitzgerald, 1977)
- D. Eight months
 - 1. Undergraduate volunteers
 - 2. Home visit
 - 3. Observations and questionnaires
 - a. Four Scales for Rating Caregiver Behavior - H & W (Ainsworth et al., 1971; Appendix R)
 - b. Modified version of the Worcester Scale of Social Attainment - H & W (Phillips, 1968; Rudie & McGaughran, 1961; to be developed)

V. Contacts: One Year to Three Years

- A. Fifteen months
 - 1. Undergraduate volunteers
 - 2. Home visit
 - 3. Home Observation for Measurement of the Environment Inventory - Mother & Infant (HOME; Caldwell et al., 1966)
 - 4. California Q-Sort done immediately after visit - W (Block, 1961)

TABLE 1A (cont'd.)

- B. Eighteen months
 - 1. Undergraduate volunteers
 - 2. Laboratory visit
 - 3. Strange Situation Procedure - Mother & Infant (SSP; Ainsworth & Wittig, 1969)
- C. Twenty-four months
 - 1. Qualified examiners, undergraduate volunteers
 - 2. Home visit
 - 3. Developmental assessment, questionnaires & interview
 - a. Bayley Scales of Infant Development - Infant (Bayley, 1969)
 - b. Social Readjustment Rating Scales - H & W (2nd administration) (adopted from Holmes & Rahe, 1967; Appendix Q)
 - c. Temperament Interview - W (2nd administration) (Thomas et al., 1963)
 - d. Detailed Drinking History - H & W (2nd administration) (Cahalan et al., 1969; Schuckit, 1978; Appendix N)
- D. Thirty months
 - 1. Clinical graduate student - RBN
 - 2. Home visit
 - 3. Unobtrusive measure: dinner-time audio tape recordings
 - a. Structural Analysis of Social Behavior Model (SASB; Benjamin, 1974)
 - b. Family Interaction Coding System (FICS; Patterson et al., 1969)
- E. Thirty-six months
 - 1. Undergraduate volunteer
 - 2. Home visit
 - 3. Home Observation for Measurement of the Environment Inventory - Mother & Infant (2nd administration) (HOME; Caldwell et al., 1966)
 - 4. California Q-Sort done immediately after visit - H & W (Block, 1961)
- F. Forty-two months
 - 1. Child clinical graduate student
 - 2. Home visit
 - 3. Assessment of child's attitudes and knowledge of alcoholic beverages (Jahoda & Cramond, 1972)
 - a. Recognition of smells
 - b. Drunkenness story

TABLE 1A (cont'd.)

VI. Contacts: Three Years to Six Years

A. Forty-eight months

1. Undergraduate volunteers and qualified examiners
2. Laboratory visit
3. Questionnaires, observations, developmental assessment, and structured interview
 - a. Schedule for Affective Disorders and Schizophrenia - H & W (2nd administration) (SADS; Spitzer & Endicott, 1977)
 - b. Social Readjustment Rating Scales - H & W (3rd administration) (adopted from Holmes & Rahe, 1967; Appendix Q)
 - c. Werry-Weiss-Peters Home Activity Rating Scale - H & W (HARS; Werry, 1968)
 - d. Detailed Drinking History - H & W (3rd administration) (Cahalan et al., 1969; Schuckit, 1978; Appendix N)
 - e. Modified version of the Worchester Scale of Social Attainment - H & W (2nd administration) (Phillips, 1968; Rudie & McGaughan, 1961; to be developed)
 - f. Revised Yale Developmental Inventory (YDI)
 - g. Open-field activity assessment (adopted from Routh et al., 1974)
 - h. California Q-Sort done immediately after visit by SADS interviewer - H & W (Block, 1961)

B. Sixty months

1. Undergraduate volunteer/child clinical graduate student
2. Home visit
3. Questionnaires, interview, child assessment
 - a. Child Behavior Checklist - H & W (CBCL; Achenbach, 1978; Appendix T)
 - b. Temperament Interview - W (3rd administration) (Thomas et al., 1963)
 - c. Assessment of child's attitudes and knowledge of alcoholic beverages (Jahoda & Cramond, 1972)
 1. Recognition of smells
 2. Judgment of photographs
 3. Perceived likes and dislikes
 4. Concept task
 5. Drunkenness film
 - d. California Q-Sort done immediately after visit - H & W (Block, 1961)

TABLE 1B

Estimated Time Requirements
for Research Participants

I. Screening Process

A. Initial contact

Total time: 1/4 hour

B. Initial Contact Screening Interview

Total session time: 1-1/2 hours

father: 1-1/2 hours (1/2 hour interview
& 1 hour forms)

mother: 1-1/2 hours (1/2 hour interview
& 1 hour forms)

II. Prenatal Contacts

A. First week of eighth month of pregnancy

Total session time: 2 hours

father: 2 hours (1 hour interview +
1 hour questionnaires)

mother: 2 hours (1 hour interview +
1 hour questionnaires)

B. Third week of eighth month of pregnancy

Total session time: 2 hours

father: 2 hours (1 hour interview +
1 hour questionnaires)

mother: 2 hours (1 hour interview +
1 hour questionnaires)

III. Perinatal Contacts

A. Three or four days subsequent to birth

Total session time: 1/2 hour

neonate: 1/2 hour (1/2 hour behavior
assessment)

B. Nine or ten days subsequent to birth

Total session time: 1/2 hour

neonate: 1/2 hour (1/2 hour behavior
assessment)

C. One month subsequent to birth

Total session time: 2 hours

father: 1/2 hour (1/2 hour questionnaires)

mother: 2 hours (1-1/2 hours observations +
1/2 hour questionnaires)

neonate: 1-1/2 hours (1-1/2 hours observa-
tions)

TABLE 1B (cont'd.)

IV. Postnatal Contacts Through the First Year

- A. Two months subsequent to birth
 - Total session time: 1-1/2 hours
 - mother: 1-1/2 hours (1-1/2 hours observations)
 - infant: 1-1/2 hours (1-1/2 hours observations)
- B. Four months subsequent to birth
 - Total session time: 1-1/4 hours
 - mother: 1-1/4 hours (1-1/4 hour interview)
 - infant: 1/2 hour (1/2 hour developmental assessment)
- C. Six months subsequent to birth
 - Total session time: 1 hour
 - mother: 1 hour
 - infant: 1 hour (1 hour psychophysiological assessment)
- D. Eight months subsequent to birth
 - Total session time: 2-1/2 hours
 - father: 2-1/2 hours (2 hours observation + 1/2 hour questionnaires)
 - mother: 2-1/2 hours (2 hours observation + 1/2 hour questionnaires)
 - infant: 2 hours (2 hours observation)
- E. Eleven months subsequent to birth
 - Total session time: 2-1/2 hours
 - father: 2-1/2 hours (2 hours observation + 1/2 hour questionnaires)
 - mother: 2-1/2 hours (2 hours observation + 1/2 hour questionnaires)
 - infant: 2 hours (2 hours observation)

V. Contacts: One Year to Three Years

- A. Fifteen months
 - Total session time: 1 hour
 - mother: 1 hour (observations and interview)
 - infant: 1 hour (observations)
- B. Eighteen months
 - Total session time: 3/4 hour
 - mother: 3/4 hour (3/4 hour observations)
 - infant: 3/4 hour (3/4 hour observations)

TABLE 1B (cont'd.)

C. Twenty-four months

Total session time: 1-3/4 hours

father: 1/2 hour (1/2 hour questionnaires)

mother: 1-3/4 hours (1-1/4 hour interview +
30 minutes questionnaires)toddler: 3/4 hour (3/4 hour developmental
assessment)

D. Thirty months

Total session time: 1/4 hour

father: 1/4 hour (1/4 hour interview)

mother: 1/4 hour (1/4 hour interview)

E. Thirty-six months

Total session time: 1 hour

mother: 1 hour (observations and interview)

toddler: 1 hour (observations)

VI. Contacts: Three Years to Six Years

A. Forty-two months

Total session time: 1 hour

toddler: 1 hour (1 hour developmental
assessment)

B. Forty-eight months

Total session time: 2 hours

father: 2 hours (1 hour interview +
1 hour questionnaires)mother: 2 hours (1 hour interview +
1 hour questionnaires)preschooler: 2 hours (1-1/2 hours developmental
assessment + 1/2 hour observations)

C. Sixty months

Total session time: 1-3/4 hours

father: 1/2 hour (1/2 hour questionnaires)

mother: 1-3/4 hours (1-1/4 hours interview +
30 minutes questionnaires)child: 1-1/2 hour (1-1/2 hour develop-
mental assessment)

willing to participate since 1) most of the data will be obtained in the home, requiring no change of routine, and 2) significant payments, as incentives, will be offered (\$100 per year, to be paid subsequent to each year's participation).

At no time during the study will subjects be informed of the specific nature of the problem which the study will investigate. The "cover" will emphasize that the study is primarily interested in child health and development as it relates to family functioning.

The only member of the project who will know whether the family is high risk or control is the project chairman (RAZ). Two project coordinators (RBN & HCP) will know the purpose of the study, but will not be informed subjects are high-risk or control. All other project workers will not know the specific purpose of the study, beyond the aforementioned cover story.

Selection and Screening

During the initial screening interview both parents will be asked to sign consent and information release forms (Appendices B, C, D, E). Fathers and mothers will be asked to complete a modified Short Michigan Alcoholism Screening Test (SMAST; Seltzer, 1971, 1975; Appendix F) and both parents will complete a Background Information Questionnaire (Appendix G). Families will be given \$25 for participating in the screening process.

The SMAST will be used as the initial alcoholism screening inventory rather than other available instruments (cf. Costello & Baillargeon, 1978; MacAndrew, 1965) for several reasons. First, a questionnaire concerning drinking problems is less threatening than an interview. Second, the SMAST has been used more extensively than any other alcoholism screening device and is known to be a reliable and valid instrument. Alternative screening devices have not consistently differentiated alcoholic males from nonalcoholic males (Schwartz & Graham, 1979). Third, the SMAST's coverage of problems resulting from excessive drinking is more broad-based than other alcoholism screening instruments. Social consequences, presence of addictive symptoms, and interpersonal problems are all well covered by the SMAST. Medical problems from excessive drinking are not covered by the SMAST; however, pathophysiological indications of alcohol abuse are often the last manifestations of problem drinking, occur only in a minority of alcoholics, and are not utilized diagnostically as often as behavioral and social symptoms (Barry, 1974a; Jankowski & Drum, 1977). The SMAST has been modified slightly to ascertain if other drugs, in addition to alcohol, are used excessively. Questions regarding other drugs, drawn from a national survey of drug use and abuse (O'Donnell, Voss, Clayton, Slatin, & Room, 1976) have been worded so that in addition to finding if polydrug use is occurring, we will know whether use is

more excessive than 90% of the U.S. population or 99% of the U.S. population. Since self-reports of alcoholic's drinking behaviors generally coincide with the reports of collateral informants (Cotton, 1979; Guze, Tunson, Steward, & Picken, 1963; Maisto, Sobell, & Sobell, 1979), the information from the SMAST should be valid. More complete diagnostic information on drinking behavior and its consequences will be obtained later in the data collection process.

Minimal risk is anticipated for any of the families participating in the study. We anticipate the repeated visits by sensitive and mature college students will tend to both have a therapeutic effect and mediate differences between groups. Data will have all personal identification removed immediately after collection; coding will be utilized. Codes will be locked in a separate filing cabinet in another office from the raw data.

Procedure

General

Undergraduate students will be utilized to gather most of the empirical data for the study (see Table 2). With one exception (HCP), they will be blind as to the nature of the study, and will only know that the project is concerned with children and their families. They will not be informed that the families belong to different groups. Data collection will be accomplished in the blind when possible. This procedure will prevent research

TABLE 2

Volunteer Requirements

	<u>Assessment devices trained to administer</u>	<u># of visits per family</u>	<u>Total visitation commitment per volunteer</u>
One volunteer (HCP) female	Structured pregnancy interview Wakefield Self-assessment Depression Inventory Gough ACL Spanier Dyadic Adjustment Scale History of Pregnancy	1	8
Two qualified exam- iners - N.P.*	Neonatal Behavioral Assessment Scales	2	8
Two volunteers (AL/LS) female	Feeding Scales Neonatal Perception Inventory Social Readjustment Rating Scales	2	8
One qualified exam- iner - N.P.	Bayley Scales of Infant Development	1	8
Two volunteers N.P.	Thomas et al. Temperament Interview Four Scales for Rating Caregiver Behavior Work Satisfaction Questionnaire	3	12

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 *N.P. - No sex preference

TABLE 2 (cont. 'd)

	<u>Assessment devices trained to administer</u>	<u># of visits per family</u>	<u>Total visitation commitment per volunteer</u>
Two volunteers N.P.	Score structured interview with parents Score temperament protocols (4 months)	0	0
Two volunteers N.P.	Home Observation for Measure- ment of the Environment Inventory (15 months) Score video tapes Strange Situation Procedure	1	4
One qualified examiner N.P.	Bayley Scales of Infant Development	1	8
Two volunteers N.P.	Thomas et al. Temperament Interview (2 years) Social Readjustment Rating Scales Score Temperament protocols (2 years)	1	4
Two graduate student volunteers N.P.	Score audio tapes of dinner-time interactions (SASB & FICS)	0	0
Two volunteers N.P.	Home Observation for Measurement of the Environment Inventory (3 years)	1	4

TABLE 2 (cont'd.)

	<u>Assessment devices trained to administer</u>	<u># of visits per family</u>	<u>Total visitation commitment per volunteer</u>
One graduate student volunteer N.P.	Assessment of child's attitude and knowledge of alcoholic beverages (3-1/2 years)	1	8
One volunteer N.P.	Social Readjustment Rating Scales Werry-Weiss-Peters Home Activity Rating Scale Detailed Drinking History Modified version of the Worches-ter Scale of Social Attainment	0	0
One qualified examiner N.P.	Revised Yale Developmental Inventory	0	0
Two volunteers N.P.	Score Open-field activity assessment	0	0
Two volunteers N.P.	Child Behavior Checklist Thomas et al. Temperament Interview (5 years) Score temperament protocols (5 years)	1	4
One graduate student volunteer N.P.	Assessment of child's attitudes and knowledge of alcoholic beverages (5 years)	1	8

assistants from "guessing" whether the family is high-risk or control. The use of undergraduates will permit the collection of "blind" data as well as permitting additional data to be gathered without added expenditures.

Following the initial contact-screening interview, families agreeing to participate in the study will have the father's SMAST scored. Scores for problem drinking males must be 7 or more; scores for control males must be two or less. Additionally, no control males and their families will be included in the study if their SMAST indicates that any other drug has been used more excessively than 90% of the U.S. population. Mother's scores on the SMAST will not be utilized for either inclusion or exclusion from the project. It is especially crucial to utilize careful and succinct diagnostic criterion for psychiatric categories in high-risk research (Hansen et al., 1977). To insure that high-risk families have alcoholic fathers, the criterion for diagnosis of alcoholism developed by Goodwin et al. (1973) will be utilized (see Table 3). Inspection of SMAST results will permit initial screening according to Goodwin's criterion until a detailed drinking history is obtained.

Since this project is designed as a pilot study, using a broad-based eclectic approach, much data will be collected in numerous areas. Some "predictions" can be made a priori based upon previous research and clinical data. Many of the instruments utilized in this project

TABLE 3

Criteria for Drinking Categories

Moderate drinker: Neither a teetotaler nor heavy drinker

Heavy drinker: For at least 1 year, drank daily & had 6 or more drinks at least 2 or 3 times a month; or drank 6 or more drinks at least once a week for more than 1 year, but reported no problems

Problem drinker: a. Meets criteria for heavy drinker
b. Had problems from drinking but insufficient in number to meet alcoholism criteria

Alcoholic: a. Meets criteria for heavy drinker
b. Must have had alcohol problems in at least 3 of following 4 groups:
Group 1: Social disapproval of drinking by friends, parents, marital problem from drinking
Group 2: Job trouble from drinking, traffic arrests from drinking, other police trouble from drinking
Group 3: Frequent blackouts, tremor, withdrawal hallucinations, withdrawal convulsions, delirium tremens
Group 4: Loss of control, morning drinking

From Goodwin et al., 1973

will be explorative, to either generate new questions or simply provide a framework for a more substantial follow-up research program. All formal predictions are listed in Table 4, as well as being included in the Methods section. Any informal expected differences of a more exploratory nature are listed in Table 5, and will also be discussed in the text of the Methods section. The data collection process is more rigorous and elaborate during early developmental phases, as the patterns of behavior in early infancy, by both infant and parents, typically lack the homeostatis which evolves after the first year of life (Cytryn, 1976; Sander, 1976).

Prenatal Contacts

Obstetricians. Obstetricians of families who agree to participate and meet SMAST criterion will be contacted during the first week of the eighth month of pregnancy (see Table 1A/B). The physicians will be told that the family has agreed to participate in a study; no mention of alcohol will be made. The Manual for Obstetrical Complications (Littman & Parmalee, 1974; Appendix H) and the Manual for Postnatal Complications Scale (Littman & Parmalee, 1974; Appendix I) will be given to the physicians to be filled out at the appropriate times and returned to the project via mail. No known evidence to date exists which indicates to us that as neonates, alcoholic males had obstetrical complications or postnatal complications; however, these data have not been carefully

TABLE 4

Formal Predictions

<u>Instrument</u>	<u>Assessment Focus</u>	<u>Predictions</u>
Spanier Dyadic Adjustment Scales	marital satisfaction	greater satisfaction reported in control marriages
Schedule for Affective Disorders and Schizophrenia	psychiatric diagnosis	more fathers of high-risk infants diagnosed as personality disorder, antisocial, on Axis II of DSM III
Antisocial Behavior Checklist	psychiatric diagnosis	more self-reported anti-social behavior from fathers of high-risk infants
Buss-Durkee Hostility Inventory	personality of parents	more self-reported hostility by fathers of high-risk infants than fathers of control infants
Buss-Durkee Hostility Inventory	personality of parents	more self-reported hostility by mothers of high-risk infants than mothers of control infants
SASB Model	marital satisfaction	more communication between parents of high-risk boys in quadrant III (hostile power/hostile comply) than parents of control boys

TABLE 4 (cont'd.)

<u>Instrument</u>	<u>Assessment Focus</u>	<u>Predictions</u>
Schedule for Affective Disorders and Schizophrenia (2nd admin- istration)	psychiatric diagnosis	more fathers of high-risk toddlers diagnosed as personality disorder, antisocial, on Axis II of DSM III

TABLE 5

Anticipated Directions of Effect

<u>Instrument</u>	<u>Assessment Focus</u>	<u>Expected Differences</u>
History of Pregnancy	obstetrical complications	mothers of high-risk infants will self-report more problems of greater severity
Manual for Obstetrical Complications	obstetrical complications	mothers of high-risk infants will have more problems of greater severity as reported by their physicians
Neonatal Perception Inventory	mother's perception of infant	mothers of high-risk infants will perceive their sons as average; mothers of control infants will perceive their sons as better than average
Neonatal Perception Inventory	father's perception of infant	fathers of high-risk infants will perceive their sons as worse than average
Temperament Interview	infant's temperament (4 months)	high-risk infants will manifest less persistence and more distractability than control infants
Four Scales for Rating Caregiver Behavior	child rearing practices	parent's of high-risk infants will neglect and ignore their sons more often than parents of control infants

TABLE 5 (cont'd.)

<u>Instrument</u>	<u>Assessment Focus</u>	<u>Expected Differences</u>
Home Observation of the Environment Inventory	child rearing practices (15 months)	mothers of high-risk infants will be both less responsive to the child's communications and less involved with their child than control mothers
Strange Situation Procedure	attachment	high-risk infants will be less securely attached than control infants
Temperament Interview	child's temperament (2 years)	high-risk toddlers will manifest less persistence, more distractibility, and higher activity levels than control toddlers
Family Interaction Coding System	family interactions	more deviant behavior, less prosocial interaction behavior, and less compliance behavior by children in high-risk families
Home Observation of the Environment Inventory	child rearing practices (3 years)	high-risk toddlers will score lower on pride, affection, and thoughtfulness than controls
Recognition of Smells	child's knowledge of alcohol (3-1/2 years)	high-risk children recognize smell of beer and/or whiskey more often than controls (of children able to recognize smells)

TABLE 5 (cont'd.)

<u>Instrument</u>	<u>Assessment Focus</u>	<u>Expected Differences</u>
Drunkenness Film	child's knowledge of alcohol	high-risk children quicker to identify drunken behavior and cause of the behavior than controls
Werry-Weiss-Peters Home Activity Rating Scale	activity level of the child	high-risk boys will have higher activity scores than control boys
Open-field Activity Assessment	activity level of the child	high-risk preschoolers will have higher activity level scores (observational and actometers) than controls during restricted play
Child Behavior Checklist	childhood psychopathology	high-risk boys will score higher on the aggressive factor
Temperament Interview	child's temperament (5 years)	high-risk boys will manifest less persistence, more distractability, and higher activity levels than control boys
Recognition of Smells	child's knowledge of alcohol	high-risk children recognize smell of beer and/or whiskey more often than controls (of children able to recognize smells)

TABLE 5 (cont'd.)

<u>Instrument</u>	<u>Assessment Focus</u>	<u>Expected Differences</u>
Drunkenness Film	children's knowledge of alcohol	high-risk children quicker to identify drunken behavior and cause of the behavior than controls

gathered by any study known to us to date. While these instruments are being used in an exploratory sense, we expect that the wives of alcoholics will have more obstetrical and postnatal complications in general. Further discussion of this prediction will occur along with the discussion of the effects of stress on pregnancy. These instruments were selected because they were more thorough than previous questionnaires (cf. Mednick et al., 1971; Shereshefsky & Yarrow, 1973). They present clinical examples of each specific scoring category to enhance inter-physician scoring reliability, and scores on the Obstetrical Complications Scale have been found to be good predictors of continued risk for infants with neonatal difficulties (Field, Hallock, Ting, Dempsey, Dabiri, & Shusman, 1978). Additionally, the results are easily quantifiable and the Manual for Obstetrical Complications includes Apgar Scores (Apgar & James, 1962) at 1 and 5 minutes.

First home visit. During the first week of the eighth month of pregnancy, a home visit will be made (see Table 1A/B). While one parent is participating in a semi-structured interview with an undergraduate volunteer (HCP; Appendices J-1, 2, 3), the other parent will complete the Wakefield Self-assessment Depression Inventory (Snaith, Ahmed, Mehta, & Hamilton, 1971); the Gough Adjective Checklist (Gough, 1955; Appendix K); the Spanier Dyadic Adjustment Scale (Spanier, 1976); and the

History of Pregnancy (wives only; Appendix L). Both parents will alternatively be interviewed and fill out questionnaires. At the conclusion of the visit, the undergraduate volunteer will complete a Q-Sort personality description (Block, 1961) for each parent.

The Wakefield Self-assessment Depression Inventory is adapted from the Self-rating Depression Scale (Zung, 1965). It is briefer, more easily completed, is currently used more predominantly than other similar self-rating depression scales (cf. Lewis, Gottesman, & Gutstein, 1979), and is a valid measure of depression. Finally, the Wakefield attempts to clearly delineate feelings of depression from depressive illness per se. We expect no differences between the wives of alcoholics and controls on self-assessment of depression. A substantial literature has looked at wives of alcoholics (cf. Ablon, 1976; Jackson, 1962) and does not report excessive depressive symptomatology. Some evidence exists linking depression with alcoholism in males (cf. Barry, 1974a, b; Winokur & Clayton, 1968); however, Freed (1978) in his excellent review of alcoholism and mood noted that mixed results have been predominantly reported between self-rated depression and alcoholism (also see Noel & Lisman, submitted for publication, 1979).

The Gough Adjective Checklist will also be utilized to compare alcoholics and their wives to the control subjects. The rationale for the use of the Gough as well

as specific predictions are elaborated in Pierson (1979). The Spanier Dyadic Adjustment Scale represents a significant improvement over earlier measures of marital adjustment. While some recent measures of marital and family systems offer excellent clinical applicability (Olson, Sprenkle, & Russell, 1979), the reliability (content and criterion) and validity of the scales makes them more useful in the present context (Spanier, 1976). A substantial literature indicates that conflict and tension hallmarks the alcoholic marriage (cf. Ablon, 1976; El-Guebary & Offord, 1977; Fox, 1962; Hanson & Estes, 1977; Jackson, 1962; Jacob, Favorini, Meisal, & Anderson, 1978; Levine, 1955; McCord & McCord, 1960, 1962; Wilson & Orford, 1978). It is interesting to note that recent studies on marital discord indicate that the effects are more long lasting in male than female children (Hetherington, 1979). Along with the marital dissatisfaction, some studies report poorer sexual adjustment between partners of an alcoholic marriage (Hanson & Estes, 1977; Jackson, 1962; Levine, 1955), although contradictory data on sexual adjustment does exist (Barry, 1974a). It is predicted that:

1. The control families will have higher scores than alcoholic families on the Spanier Dyadic Adjustment Scales, indicating greater marital adjustment and satisfaction.

The History of Pregnancy was specifically designed for use in this study and represents a major improvement

over previous instruments that were designed to obtain these type data (cf. Leifer, 1977). In addition to a radically changed format from previous instruments which makes administration much simpler, this questionnaire combines both frequency and severity of symptoms. Since it is common for self-reported physical problems to differ from the physician's account due to a multitude of social, situational, and psychological factors (cf. Lazarus, 1976; Mechanic, 1970), the two sources of data on the medical history of mother's pregnancy (the physician's and the mother's) will both be examined. Although the role of stress in female reproductive problems has received scant attention (see Reichlin, Abplanalp, Labrum, Schwartz, Sommer, & Taymor, 1979), some evidence links emotional adjustment (McDonald & Christakos, 1963; McDonald & Parham, 1964), anxiety (Davids & DeVault, 1962; Gorsuch & Key, 1974; Grimm, 1961; McDonald, 1968), and life stress (Gorsuch & Key, 1974) with obstetric complications.

Wives of problem drinking males tend to be more anxious (Orford, 1976). They should also be beset by both the effects of a husband with drinking problems and marital conflict. None of the data which supports the aforementioned ideas have been obtained when wives of alcoholics were pregnant, and/or when husbands were presumably in earlier stages of the disorder. Insofar as differences occur, it is expected that mothers of high-risk infants will self-report more obstetrical complications of greater severity.

The semi-structured interview (Appendices J-1, 2, 3) are being utilized to explore attitudes and feelings that couples have toward the pregnancy, the baby, and one another. It examines the social support system for the family and how this system has helped or hindered during the pregnancy. We are trying to understand if couples anticipate any changes will occur and what the baby means for the parents, i.e., the wantedness of the birth (David & Baldwin, 1979). This interview is included as a systematic attempt to gather other detailed information about the parents, their attitudes toward the baby, and how the pregnancy has affected each parent's feelings about themselves and their spouse.

The interview schedule is similar for both parents. The father's consists of twenty-six questions. The schedule for the mother is identical to the father's, but has an additional eight questions concerned with various aspects of the pregnancy. Nearly all questions for both parents are followed by an optional probe designed to insure that the specific information desired is obtained.

Thirty-five 7-point rating scales have been developed to score the data obtained from the interviews. Each point on the scales is specifically defined to facilitate scoring and make inter-rater reliability easier to obtain. Some of the scales are designed to be used with one specific question and its probes, while others which

obtain more general information are scored by examining responses to several interview questions.

Four undergraduate volunteers will be trained to rate the interviews. Procedures that are elaborated in Bandura (1959) will be followed to insure that independent ratings are made and an assessment of inter-rater reliability can be made (see also Jones, Reid, & Patterson, 1975). Briefly, the volunteers will be divided into pairs of one male and one female. Each pair will only rate either mother's interviews or father's interviews. Reliabilities of interview ratings can be estimated by using the Pearson product-moment correlations (r). Ratings will be made from the actual tape recordings.

Second home visit. A second home visit will be made during the third week of the eighth month of the pregnancy by the project's chief investigator (RAZ; see Table 1A/B). This visit will follow the same format as the initial home visit, in that one parent will be interviewed while the other parent completes the following questionnaires: the Antisocial Behavior Checklist (Appendix M); Buss-Durkee Hostility Interview (Buss & Durkee, 1957); and the Detailed Drinking History (adopted from Cahalan, Cisin, & Crossley, 1969; Schuckit, 1978; Appendix N). At the conclusion of the visit, a Q-sort personality description (Block, 1961) will be completed for each parent.

The interview will be based upon the semi-structured format of the Schedule for Affective Disorders and Schizophrenia (SADS; Spitzer & Endicott, 1977). The SADS was selected rather than the MMPI (Dahlstrom & Welsh, 1972) because the interview format offered excellent flexibility as well as high reliability and good validity. Also, while instruments like the MMPI yield an elaborate profile, the SADS interview will yield a psychiatric diagnosis in accordance with DSM-III (Note 1). The psychiatric diagnosis is essential in establishing comparability of this study and its subject population with that of other investigators.

Considerable evidence exists which links problem drinking in both adolescence (cf. Barry, 1976; Demone, 1972; Jessor, Graves, Hansen, & Jessor, 1968; Loper, Kammeier, & Hoffman, 1973; Robins, 1966; Zucker & Barron, 1973) and adulthood (Costello, Lawlis, Manders, & Celistino, 1978; DHEW, 1971; Schuckit, 1973; Williams, 1976; Wilson & Orford, 1978; Winokur et al., 1970) with anti-social behavior. Indeed Schuckit (1973) specifically attempts to clarify the distinction between alcoholism as a primary illness and alcohol problems as part of the psychiatric syndrome of sociopathy. On this basis, it is expected that all fathers of high-risk infants will receive a diagnosis of alcohol dependence on Axis I of DSM-III. Additionally, it is anticipated that:

2. Fathers of high-risk infants will receive a diagnosis of personality disorder, antisocial, on Axis II of DSM-III more often than fathers of control infants.

All parents will be given the Antisocial Behavior Checklist developed for this project. To date, no questionnaire has been developed which deals with adult antisocial behavior, rather past efforts have been based upon interview data and loosely delineated typologies of antisocial activity (cf. Guze, Goodwin, & Crane, 1969). Specific items selected for use were culled from self-report checklists of antisocial behavior in adolescents (Barron, 1970; Kulik, Stein, & Sarbin, 1968; Zucker, 1966) and from clinical descriptions of antisocial personalities (Cleckley, 1976; DSM-III; Woodruff, Goodwin, & Guze, 1974). Evidence exists that self-reports of antisocial behavior can provide valid data with both adolescent (Kulik et al., 1968) and adult populations (Widom, 1977). It is predicted that:

3. Fathers of high-risk infants will score higher on the Antisocial Behavior Checklist than fathers of control infants or any female group.

In addition to the antisocial tendencies typically manifested by male problem drinkers, some data indicate that these men are more aggressive than non-problem drinking males (Barry, 1974a, 1976; DHEW, 1971; Kulik et al., 1968; Williams, 1976; Wilson & Orford, 1978) and

that their aggression increases with excessive consumption of alcohol (Barry, 1974a; Orford, 1976). These data would tend to support the notion that alcohol is consumed by male problem drinkers for the increased feelings of power that inebriation evokes for them (McClelland, 1972). While a consensus agree on the general aggressive-ness manifested by problem drinkers, specific behaviors and/or psychometric scores used to earmark the aggressive-ness vary from study to study. Indeed, some work does not even utilize the term aggression, but rather prefers the term hostility (cf. Orford, 1976; Noel & Lisman, submitted for publication). In general, however, the term aggression is predominantly used rather than hostility, since the latter term also implies both enduring negative feelings and a specific target (see Buss, 1961).

In addition to the aggression and/or hostility formed among problem drinking males, the wives of alcoholics have been characterized as being more hostile, rather than aggressive (cf. Ablon, 1976; Fox, 1962; Jackson, 1962). Typically these women have been assessed when their husband's drinking problem was so severe it required treatment. The Buss-Durkee Hostility Inventory is a self-rating scale of hostility that provides a Total Hostility score as well as subscale scores measuring Irritability, Assault, Indirect Hostility, Resentment, and Verbal Hostility. It has been used to assess hostility in violent versus non-violent male alcohol abusers and has proven to

be a valid measure with this population (Renson, Adams, & Tinklenberg, 1978). It is predicted that:

4. Fathers of high-risk infants will report more hostility on the Buss-Durkee than control fathers.
5. Mothers of high-risk infants will report more hostility on the Buss-Durkee than control mothers.

A Detailed Drinking History questionnaire adopted from Cahalan et al. (1969) and Schuckit (1978) will be given to both parents. This, rather than the SMAST, will serve as the determinative instrument to establish drinking history. This instrument has been extensively utilized and provides data on quantity, frequency, and variability of consumption of alcoholic beverages. Additionally, it provides information on consequences of alcohol consumption. Research on the addictions has typically lacked this type of concise information (Nathan & Lansky, 1978). By providing a clear picture of each subject's drinking patterns, in addition to a psychiatric diagnosis and extensive demographic data, this work will avoid a common methodological problem typical of clinical diagnosis, that is, the use of broad, ill-defined diagnostic categories (Garfield, 1978). Final inclusion into this project will be based upon the data obtained from both the SMAST and the Detailed Drinking History. Fathers of potential high-risk infants must meet the criteria of Goodwin et al. (1973; Table 3) for alcoholic. Control family males and their wives must

not meet the Goodwin et al. (1973) criteria for problem drinker or alcoholic, that is, they must be either heavy or moderate drinkers, or abstainers. Data will be obtained for mothers of potential high-risk infants, but these data will not effect inclusion into the study.

If the father has met our diagnostic criterion for alcoholism and the infant is a male, the family will be accepted into the project. At the conclusion of each year with the project, the family will be given payment of \$100. The large payment subsequent to participation as well as regularly scheduled contacts will hopefully minimize or eliminate dropouts (see Wilson, 1978, for a discussion of this issue).

Perinatal Contacts

First 10 days of life. All infants will be assessed with the Neonatal Behavioral Assessment Scales (NBAS; Brazelton, 1973) on the third or fourth day after birth and again on the ninth or tenth day after birth (Als, Tronick, Lester, & Brazelton, 1977). This will permit a tentative analysis of the "recovery curves" for all of the babies, that is, an assessment of the physiological stress due to birth and the infant's capacity to reorganize.

The NBAS will be utilized since it assesses much of the infant's repertoire of organizational and functional abilities (Als, 1978; Self & Horowitz, 1974); it is generally reliable (Sameroff, 1978b); and it has been utilized with numerous samples of infants. While alternative assessment instruments of neonatal behavior are

available (cf. Graham, 1956), including a modified NBAS that is completed by mothers (Field, Dempsey, Hollock, & Schuman, 1978), we feel that the standardized use of the NBAS with a certified examiner is necessary (see Sameroff, 1978b, for a discussion of the rationale for use of a certified examiner).

Numerous methods of data analysis for the NBAS have been utilized such as item-by-item analysis (cf. Brazelton, 1978), factor analysis (cf. Osofsky & O'Connell, 1977), and a priori scoring dimensions (cf. Adamson, Als, Tronick, & Brazelton, 1975). Each of these methods has advantages and disadvantages (see Sameroff, Krafchuk, & Bakow, 1978, for an excellent discussion of item grouping). Since this work is a pilot study, a careful item-by-item analysis will be completed, although post hoc item-by-item data analysis has serious statistical limitations (Nunnally, 1978). The a priori scoring profile developed by Adamson et al. (1975; Als et al., 1977) will be utilized. Neonate's scores on the a priori clusters have been found to correlate with subsequent Bayley Score (Field et al., 1978; Sostek & Anders, 1977), Carey Temperament Score (Sostek & Anders, 1977), and were found to be good predictors of continued risk in neonates who had early medical difficulties (Field et al., 1978). The rationale for the development of these specific a priori clusters is based upon the extensive clinical experience of Brazelton and his colleagues, and will also

afford several statistical and design advantages (Brazelton, 1978). The profile will be utilized with a 5-point scale to increase variability (see Sameroff et al., 1978), rather than the 3-point scales. Finally, the overall developmental status of the infant as measured by the NBAS will be examined. Some evidence exists which links conflict and tension in the marriage with poorer developmental status of the neonate subsequent to birth (Pederson, 1971). While a significant number of studies have been cited which indicate that wives of alcoholics are more anxious and their marriages are characteristically less harmonious, none of these data have been obtained while these women were pregnant. It is possible that wives of alcoholics are significantly less anxious when pregnant and the acrimony generally present in their marriage could dissipate considerably. Although there is no clear reason to expect differences between high-risk infants and controls, insofar as they occur it is expected that the overall developmental status of the newborn, as measured by the NBAS, will be lower for the high-risk infants.

The NBAS is not being utilized strictly as a predictor of future behavior, as it is generally a disappointing predictor of future developmental events (Emde, 1978; Sameroff, 1978a). However, much of the work with the NBAS has been done with neonates who are not at high-risk for subsequent severe psychopathology such as alcoholism; some

exceptions exist (see Appendix of Sameroff, 1978a). Although we are not utilizing the NBAS strictly as a predictor, the work of Fish (1957, 1973) predicting subsequent schizophrenic outcomes based upon the infant's status at one month, would suggest that the NBAS could be useful in predicting alcohol outcomes. Rutter (1972) reviews a substantial literature looking for continuities or discontinuities between child and adult psychiatric disorders and concludes that "psychopathy is the one disorder which has its roots most firmly set in childhood" (p. 17). The connections between psychopathy and problem drinking have been discussed and are well documented. Nevertheless, the NBAS is being primarily utilized as a small part of a complex methodological package which is designed to attempt to empirically assess and mark the dynamic system existing between the child and its parents which eventually leads to alcoholism.

One month. Four weeks after the birth of the infant, an undergraduate volunteer will make a home visit (see Table 1A/B). The purpose of this visit is to empirically assess the mother-infant interaction during the feeding situation (Ainsworth & Bell, 1969; Appendix O), and to have both parents complete the Neonatal Perception Inventory (NPI; Broussard & Hartner, 1971; Appendix P) and the Social Readjustment Rating Scales (adopted from Holmes & Rahe, 1967; Appendix Q) at the end of the observation period. If the father is not present, copies will

be left for him along with a stamped, addressed envelope and instructions to fill out the questionnaires without consultation from family members. Phone contact will be utilized if there is any problem about understanding these materials. At the conclusion of the visit, a Q-sort personality description (Block, 1961) will be completed for the mother and father (if he was present).

The feeding scales developed by Ainsworth and Bell (1969) will be utilized to empirically assess the quality of the feeding situation. These scales identify four salient dimensions of maternal behavior during the feeding situation and rate each dimension on a 9-point scale. While these scales have not received extensive use, all of the scales have significantly differentiated mothers of babies who were subsequently identified as securely attached from those identified later as anxiously attached, utilizing a random sample of "normal" mother-infant dyads (Ainsworth, 1979). According to Ainsworth (1979), maternal behavior in the feeding situation seems to remain remarkably stable from occasion to occasion. Additionally, Cohen and Beckwith (1979) report that caregiver behaviors generally remain consistent from one month to two years (also see Caldwell & Bradley, 1979). This visit and a second observation of the feeding situation utilizing the scales four weeks later will be completed.

The undergraduate female volunteers have been trained to use the Ainsworth and Bell feeding scales. They simultaneously but independently observed feedings of male infants in daycare and in private homes; afterwards their scores were compared. Some of the feedings observed were from the bottle; others were breast feedings. No significant differences were found between scaled scores obtained at daycare or in homes, or between caregivers who bottle fed their babies or those who breast fed their babies. Reliability data for the last ten practice sessions (Table 6) show that inter-rater reliability was excellent for total scores from scales I, II, and IV. Scale III was not included in the analysis since it will not be utilized by the project. It pertains to the infant's food preferences and would not be relevant at four weeks. Although inter-rater reliability for scale II was admittedly low (.55), the percent agreement within two was 100%. Problems with scale II arose because it was often difficult to ascertain when the baby was finished eating, as well as who had determined the end of the feeding. An infant might stop eating if something else interesting caught his attention or because he was full. Caregivers seemed to also have difficulty reading these signals as they typically would continue feeding. The obtained inter-rater reliability figures thus indicate that the dimensions of maternal behavior assessed by these observations can reliably be made (also see Jones et al., 1975).

TABLE 6

Inter-rater Reliability-Ainsworth Feeding Scales

<u>Scales*</u>	<u>r</u>	<u>\bar{x}</u>	<u>s.d.</u>	<u>% agree- ment with- in 1**</u>	<u>% agree- ment with- in 2+</u>
I. Synchronization of care- giver's interventions with baby's rhythms	.864	6.65	1.93	80	100
II. Determination of amount of food and end of feeding	.55	4.8	1.4	60	100
IV. Caregiver's synchroniza- tion of rate of feeding to baby's pace	.937	4.8	1.95	100	100
OVERALL (combined scores)	.91	5.43	1.94	80	100

* 9-point scales

Total # of observations with ratings within 1

** computed by:

Total # of observations

Total # of observations with ratings within 2

+ computed by:

Total # of observations

The Neonatal Perception Inventory (NPI) has been used to measure the primipara's perception of her infant at one month compared to her perception of an average infant on six behaviors. Evidence suggests that when the primipara's perception of her infant, compared to the "normal" child, is average or below average, the infant is at high-risk for general psychopathology and developmental problems (Broussard, 1976; Broussard & Hartner, 1970). Although our sample is exclusively multiparas, we have no reason to expect the aforementioned relationship between perception of child and later problems will vary.

While there is a paucity of empirical evidence on the attitudes of parents towards boys who subsequently become alcoholic, some data exist which indicate that these mothers alternate between active affection and rejection during middle childhood and adolescence (Jones, 1971; McCord & McCord, 1960). Insofar as differences occur we expect that mothers of high-risk infants will perceive their infant sons as average compared to their concept of a normal baby, while control mothers will perceive their infant sons as better than average. If this is the maternal perception, the mother may be freer to fluctuate between affection and rejection from this central position. A shortage of empirical evidence also exists concerning paternal perception of the infant and no normative male data

exists utilizing the NPI. What little evidence there is suggests that fathers of sons who subsequently become alcoholic were actively rejecting during middle childhood and adolescence (McCord & McCord, 1960; Robins, 1966; Zucker, 1976). It is quite reasonable to suppose that if a father actively rejects the son, his perception of the son would be that the boy is not as good as other infants, although the picture conceivably could be quite different at an earlier age. Our data will begin to show how early this paternal attitude starts to develop. If any differences are found, we expect fathers of high-risk infants to perceive their infant sons as normal or below average compared to their concept of a normal infant.

The Social Readjustment Rating Scale (SRRS) has been used extensively during the past ten years (see Rabkin & Struening, 1976, for an extensive review of this literature). Although alternative instruments have been developed which attempt to include the individual's subjective evaluation of life events (cf. Fairback & Hough, 1979; Fontana, Hughes, Marcus, & Dowds, 1979; Sarason, Johnson, & Siegel, 1978) or the lack of positive life events (Kanner, Kafry, & Pines, 1978), none of these offer significant improvements. Some evidence exists which links life stress during the second and third trimester with medical abnormalities during pregnancy (Gorsuch & Key, 1974), especially if the mother displays

low levels of "psychological assets" (Nuckolls, Cassel, & Kaplan, 1972). One exploratory question is whether the parents of high-risk infants score higher on the SRRS during the previous 12 months: if so, what effect does this have on both the pregnancy and the status of the neonate?

The Manual for Obstetrical Complications will be returned by the physicians four weeks after the delivery of the infant. Insofar as differences occur, it is expected that physicians of mothers of high-risk infants will report more obstetric complications of greater severity (see page 73 for the rationale).

The Postnatal Complication Scoring Sheet will also be returned by the physicians four weeks after the delivery of the neonate. These data can be conveniently converted into a quantitative scale score for ease of comparison. It is hoped that the plethora of data on the parents, the neonate, and the interactions between these dynamic subsystems, can ultimately be organized to develop a cumulative risk scoring system for subsequent problems with alcohol when the number of families that have been followed becomes sufficiently large.

Several researchers discuss the development of a risk scoring system to assess the potential for future deviancy, but their data base is less extensive and has not been focused upon any specific pathological outcome (cf. Field et al., 1978; Parmalee, Kopp, & Sigman, 1976).

Postnatal Contacts Through the First Year

Two months. Eight weeks after the infant's birth, the mother and child will participate in a session at Michigan State University in the psychophysiology lab (see Table 1A/B). If necessary, subjects will be picked up at home and driven to the laboratory. The specific details and rationale for the session are discussed at length in Zucker and Fitzgerald (1977). Briefly, infant's and their mother's physiological reactions will be monitored during the infant's feeding. Some evidence exists which suggests that the method of feeding, breast or bottle, causes different psychobiological responses for male infants and their mothers (Walraven, 1974). The purpose of this study is to monitor physiological responses during feeding interactions in an attempt to ascertain if these responses vary systematically between control dyads and high-risk dyads.

The laboratory feeding situation will also be assessed, using the Ainsworth and Bell (1969) feeding scales. Numerous professionals from many diverse areas of psychology warn of the need to consider the effects of the specific setting on subjects (cf. Bronfenbrenner, 1977; Petronovich, 1979), although it is seldom done. This replication of the feeding assessment scales will permit some consideration of the effects of the laboratory and the home setting upon the data (Bronfenbrenner, 1977). We expect maternal behavior

towards the infant during the feeding in the laboratory for all mothers will be less efficacious, although numerous uncontrolled process variables such as the dyad's development into the period of "reciprocal exchange" (Sanders, 1969, 1976) could mitigate this expectation.

Four months. Sixteen weeks after the infant's birth, a home visit will be made by a qualified examiner who is trained to administer the Bayley Scales of Infant Development (Bayley, 1969; see Table 1A/B), and an undergraduate volunteer. The volunteer will be trained to utilize the structured interview format developed by Thomas, Chess, Birch, Hertzog, & Korn (1963) for use with the New York Longitudinal Study (NYLS). This structured interview will be conducted with the mother only and will provide information on how the infant responds behaviorally to a variety of daily situations that are likely to reveal the child's temperament characteristics. The temperament variables of interest are activity level, rhythmicity of biological functions, approach-withdrawal, adaptability, intensity, mood, persistence, sensory threshold, and distractibility; these variables are discussed at length in Thomas et al. (1963; Thomas, Chess, & Birch, 1968). The interview will be tape recorded. The recording will be scored in the blind by two different undergraduate volunteers who have been trained to score the

interview in accordance with NYLS procedures. Scores will be averaged when differences exist. Inter-rater reliability can be checked on each tape and validity should be insured via training on the original NYLS protocols. The interview is scheduled to coincide with the timing of the original NYLS data collection.

Several other measures of early temperament have been developed that utilize a questionnaire format that is less subjective and easier to replicate (cf. Bates, Freeland, & Lounsbury, 1979; Carey, 1970; Carey & McDevitt, 1978; Plomin, 1976; Plomin & Rowe, 1977); however, the NYLS structured interview format offers several distinct advantages. First, data from this project can be compared to the NYLS data. No other longitudinal data on temperament exists to date. Second, the temperament characteristics utilized by the NYLS have been used extensively by other research projects (cf. Garside, Birch, Scott, Chambers, Kolvin, Tweedle, & Barber, 1975) and the NYLS temperament characteristics are known to have both concurrent (Thomas et al., 1968) and predictive validity (Chess & Thomas, 1977; Graham, Rutter, & George, 1973; McDevitt & Carey, 1979), we are aware that the issue of external validity of parent reports of temperament remains an unresolved issue (cf. Bates, Freeland, & Lounsbury, 1979). Third, the interview format will provide information that is much richer, with more specific details, than is true of a questionnaire.

A plethora of studies on alcoholics and adolescent heavy drinkers agree that these men are impulsive (see literature review). Studies of prealcoholic males consistently find that the preproblem drinking males manifest an ability to delay gratification from the onset of data collection--10 years of age (Jones, 1968; McCord & McCord, 1960, 1962; Robins et al., 1966). The impulsiveness which is characteristic of these males could be the result of parental treatment which alters or enhances this aspect of temperament (cf. Cameron, 1977; Chess & Thomas, 1977). Preproblem drinking males could tend towards impulsivity from very early periods of development onwards, or this aspect of temperament might manifest itself only later (Zucker, 1979). Collection of temperament data at four months will provide new and important information. One factor analytic study that examined the structure of the NYLS temperament comparing it to Buss and Plomin's (1975) theory of temperament, found that the characteristics of persistence and distractability combined to load heavily on an overall impulsiveness factor (Rowe & Plomin, 1977). If differences exist, we anticipate that high-risk infants will manifest less persistence and more distractability than will control infants.

The Bayley Scales will be administered in the subject's home without the primary caregiver present. They will be administered by a qualified graduate student

or professional from the local community. If more than one examiner is utilized, they will be randomly assigned to the families. The examiner will not know the purpose of the study beyond the standard explanation given to the research families themselves.

The Bayley Scales will be administered to explore any standard developmental marker differences that may exist between the high-risk infants and controls; it is not being used as a predictor of future functioning (Bayley, 1970). They were selected because normative data is available, the scales have excellent reliability (Anastasi, 1976), and the scales are considered a valid measure of cognitive abilities in infants (Bayley, 1970). The results on the Bayley Scales can also be examined with respect to measures that have already been made. Studies of infant development have recently begun looking at patterns between the NBAS, obstetric complications, prenatal complications, and early temperament to ascertain if correlations consistently emerge (cf. Birns, Barten, & Bridger, 1969; Field et al., 1978; Sostek & Anders, 1977). Examination of the correlations between different measures at different ages will be done on a post hoc basis.

Six months. Twenty-four weeks after birth, the infant and his mother will again visit the Michigan State University psychophysiology laboratory (see Table 1A/B). If necessary, subjects will be picked up

at home and driven to the laboratory. The specific details and rationale for the session was discussed at length in Zucker and Fitzgerald (1977). Briefly, infants will be examined to ascertain if differences in habituation or conditionability exist between high-risk and control infants. Also, a spectrum analysis of cry segments will be made to determine if the cry of high-risk babies is different from the control babies. Lester (1976) found that infants who were malnourished had a cry pattern that was markedly different from well-nourished babies. He hypothesized that analysis of infant crying patterns was a potentially useful method to utilize when assessing possible CNS damage in an infant (also see Zeskind & Lester, 1978). Additionally, Lounsbury (1978) found that infants who were classified as difficult utilizing the Infant Characteristics Questionnaire (Bates et al., 1979) had cries that were measurably different on sound spectographs. No similar data exist for infants who are high-risk for subsequent alcoholic difficulties.

Eight months. Thirty-six weeks after the birth of the infant, an undergraduate volunteer will make a home visit (see Table 1A/B). The purpose of this visit is to empirically assess the quality of care that the parents are providing the infant using Ainsworth, Bell, and Stayton's (1971) Four Scales for Rating Caregiver Behavior (Appendix R). Also, at the end of the

observation period the father will be given the Work Satisfaction Questionnaire (adopted from Lawler, Renwick, and Marcus, 1977; Appendix S).

The Four Scales identify four salient dimensions of caregiver behavior and rate each on a 9-point scale. The four scales are: Sensitivity-Insensitivity to the Baby's Communications, Acceptance-Rejection, Cooperation-Interference, and Accessibility-Ignoring/Neglecting. While these scales have not received extensive use, all of the scales have significantly differentiated mothers of babies who were subsequently identified as securely attached from those identified as anxiously attached, utilizing a random sample of "normal" mother-infant dyads (Ainsworth, 1979). In addition, some evidence exists which indicates that babies who are anxiously attached are at higher risk for subsequent child abuse (Ainsworth, 1977), or that these children have already been abused (George & Main, 1979).

Two undergraduate female volunteers will be trained to use the Ainsworth et al. (1971) caregiver scales. During training they will simultaneously but independently observe male infants and their caregivers in the home for two hour time segments. After each observation period, the volunteers will compare their ratings for both the mother and the father. Practice observation visits will continue until inter-rater reliability reaches .9 (see Jones et al., 1975).

A crucial issue which typically is ignored when observation scales are being used is the scheduled time of visit. We would expect to find systematic differences, dependent upon time of day when ratings are made. For example, the late morning when only the parents and infant are home should be vastly different from the late afternoon when the entire family is present and dinner is being prepared. The problem which is being addressed here is the ecological validity of the observations. In an attempt to systematically deal with this issue, all home visits to rate the caregivers will be made on weekends whenever possible, preferably Saturday morning. When the time for the visit is being arranged with the parents, we will insure that the visit occurs at a time when the infant is generally awake and both parents are present.

These scales are being utilized in an exploratory fashion. Insofar as differences occur, we expect the parents of high-risk infants to neglect and ignore their infants more often than controls. This expectation is based upon the results obtained by several studies that found parents of prealcoholic boys, at least in middle childhood and adolescence, tended to be more neglectful (McCord & McCord, 1960; Robins et al., 1966; Jones, 1971). How early this pattern of neglectfulness begins to emerge is not known.

The Work Satisfaction Questionnaire is used to assess attitudes towards work and job satisfaction. It

will be utilized to compare the attitudes of alcoholic and control males. This instrument offers the advantages of scoring ease and normative data, although the data base that has been compiled is based upon a selective sample of Psychology Today readers (Renwick, Lawler, & Psychology Today Staff, 1978). The profound effects of problem drinking among employees are well documented (DHEW, 1974, 1978), although this literature does not explicitly discuss the job satisfaction of problem drinkers. Also, while a significant literature attests to the dissatisfaction found in the family of alcoholic males, no reference is made to attendant issues at work. Since work is a major element in the life of most American males, information on the alcoholic male's attitude towards his job will be valuable. This instrument is being used in an exploratory fashion.

Eleven months. Forty-eight weeks after the birth of the infant, an undergraduate volunteer will make a home visit (see Table 1A/B). The purpose of this visit is to empirically assess the quality of care that the parents are providing the infant, again using the Ainsworth et al. (1971) Four Scales for Rating Caregiver Behavior (Appendix R). At the end of the observation period, both parents will complete a modified version of the Worcester Scale of Social Attainment (Phillips, 1968; Rudie & McGaughran, 1961). This has not been developed to date.

The Four Scales will be utilized on a second occasion to increase the reliability of the observational data. Ratings for the families on each of the four scales will be the average of the two scores across the two observation sessions. The specific procedures delineated for the Four Scales at eight months will be carefully followed.

The Worchester Scale of Social Attainment (WSSA; Phillips, 1968) is being utilized to assess general social competence, or maturity (Levine & Zigler, 1973), in all parents. Early work with populations of problem drinkers demonstrated that an important distinction could be made between essential (i.e. process) and reactive alcoholics (cf. Knight, 1937). Essential alcoholism typically has a more insidious onset, a chronic course, and much greater resistance to remedial efforts. Reactive alcoholism typically begins subsequent to adverse life experiences or stressors, tends to be less chronic, and is more amenable to rehabilitation efforts. The essential-reactive dichotomy in alcoholism is in many ways similar to the process-reactive subtypes of schizophrenic disorders (Sugerman, Reilly, & Albahary, 1965). Current work on the process-reactive dimension in both alcoholism and schizophrenia has begun to focus on the social competence dimension, in an attempt to subsume pathology specific conceptualizations under one more powerful variable (Levine & Zigler, 1973; Lewine, Watt, & Fryer, 1978; Wagener & Hartsough, 1974).

In addition to the WSSA, items will be utilized from the Essential-Reactive scale developed by Rudie and McGaughran (1961), items will be included where they do not overlap the Worchester measure. The Rudie and McGaughran items will assess the process-reactive dimension in problem drinkers. The instrument being developed will permit a broad based assessment of general social competence (see Zigler & Trickett, 1978). Since previous research on social competence has indicated that items associated with high competence in one ethnic group are sometimes associated with low competence in another ethnic group (Costello, 1978), any ethnic background differences which were not matched during initial screening will be carefully monitored.

Fifteen months. Fifteen months after the birth of the infant, an undergraduate volunteer will make a home visit (see Table 1A/B). The purpose of this visit is to assess the home environment utilizing the Home Observation of the Environment Inventory (HOME) (Caldwell, Heider, & Kaplan, 1966). Specific items included in the instrument vary according to the child's age; birth to 3, or 3 to 6. The former version of the HOME is designed to empirically assess six aspects of cognitive, social, and emotional support that are provided for the child in the home. The six categories are: (1) responsiveness of the mother, (2) avoidance of restriction and punishment, (3) organization of environment, (4) provision

of appropriate play materials, (5) maternal involvement with child, and (6) opportunities for variety in daily stimulation. The HOME has excellent reliability (see Bradley, Caldwell, & Elardo, 1979), and validity data for several different populations has been obtained (see Hollenbeck, 1978; Stevenson & Lamb, 1979). A complete discussion of the HOME's development and all studies completed with the instrument is currently available (Caldwell & Bradley, 1979). After reviewing a considerable literature, these authors conclude that "an extensive array of reported research has established a strong link between the quality of environmental stimulation available to a child early in life and the child's subsequent developmental progress" (p. 61). The HOME attempts to measure the quality of environmental stimulation available to the child. At the conclusion of the visit, the undergraduate volunteer will complete a Q-sort personality description (Block, 1961) for the interviewed parent(s).

Two undergraduate volunteers will be trained to utilize the HOME inventory as per its accompanying instruction manual (Caldwell, 1970). The HOME inventory will be used in an exploratory fashion. In addition to information on the quality and quantity of the physical environment, the HOME inventory will provide additional data on the mother-child interactions that will supplement the data obtained utilizing the Four Scales for Rating

Caregiver Behavior. If differences occur between high-risk and control families, we expect mothers of high-risk infants to be both less responsive to the child's communications and less involved with the child. Some evidence exists which suggests that mothers of prealcoholic males manifest similar characteristics during the boy's middle childhood and adolescence (Jones, 1971; McCord & McCord, 1960; Robins et al., 1966).

Eighteen months. Eighteen months after the infant's birth, the mother and child will participate in a session at Michigan State University in the psychology building (see Table 1A/B). If necessary, subjects will be picked up at home and driven to the university. The purpose of the visit is to assess the quality of attachment between the infant and his mother utilizing the Strange Situation Procedure (SSP; Ainsworth & Wittig, 1969; Sroufe & Waters, 1977). While several studies have utilized the SSP when the child was one year (cf. Ainsworth & Bell, 1970), others have assessed the mother-infant dyad at eighteen months (cf. Waters, 1978; Matas, Arend, & Sroufe, 1978). According to attachment theory (Ainsworth, 1969; Bowlby, 1969), the infant's attachment-exploration balance should remain at optimal levels for successful assessment of the quality of infant-mother attachment throughout the second year of life. Also, when the level of analysis of specific behavioral category data is taken into account, assessment of attachment quality

shows remarkable stable patterns from one year to 18 months (Waters, 1978).

Although attachment theory has come under some criticism (cf. Kagan, 1979; Kagan, Kearsley & Zelazo, 1978; Maccoby & Masters, 1970; Solomon & Decarie, 1976), the stability of ratings of the quality of infant-mother attachment across time (Waters, 1978) supports the usefulness of the laboratory paradigm and the notion that mother-infant attachments show continuity with development. Ratings of infant-mother attachment in the laboratory paradigm correlate significantly with similar, independently obtained ratings of infant-mother attachment in day-care (Blanchard & Main, 1979). Thus, the laboratory procedure has some ecological validity. Independent observations of mother-infant interactions during free-play indicated that mothers of infants rated in the Strange Situation as securely attached were more sensitive, accepting, and expressive of affect than were mothers of infants who were rated as insecurely attached (Main, Tomasini, & Tolan, 1979).

Easterbrooks and Lamb (1979) have examined relationships between infant-peer social interactions and the quality of mother-infant attachments. They found that the quality of the mother-infant attachment affected other social experiences of the infant and suggested that future social competence could be related to the quality of the mother-infant attachment (also see Matas

et al., 1978). Further evidence validating the construct of attachment has shown that securely attached infants show more positive affective sharing in both the SSP and in free play afterwards (Waters, Wippman, & Stroufe, 1979). Waters et al. (1979) demonstrated that the construct of attachment (measured at 15 months) has clear cross-situational, cross-behavioral, and cross-age predictive validity for the infant's general social competence at age 3.5 years. Securely attached infants (15 months) have been independently described by teachers at 5 years of age as being highly resilient and flexible. Less securely attached infants (15 months) were described at 5 years of age by the same teachers as being less resilient and either under or over controlled (Stroufe, 1979). Finally, some evidence suggests that infants develop primary attachments to more than one caregiver, i.e., the father (Lamb, 1977). It is interesting to note that infants who were reared in the Israeli kibbutzim and spent only the dinner hour with their natural mother, still preferred their real mother to their metapelet when confronted by a stranger (Fox, 1975). Ainsworth (1978) carefully delineates characteristics of mother-infant pairs who are not securely attached and juxtaposes these data with work done on abused children. The groups show many striking similarities. The definitive study on attachment phenomenon has yet to be done; the concept and theory remain useful. Indeed, Kagan's

(1977) statement "there is something special about the mother-infant relationship" (p. 36) still remains relevant and not totally understood.

The Strange Situation paradigm to assess attachment presents the mother-infant dyad with a microcosm of everyday events which theoretically should evoke attachment behaviors. The infant-mother dyad is first left in a room that features numerous toys for the child to play with, but is a novel setting for the child. Seven episodes follow that are designed to evoke attachment behaviors in the infant. A summary of the procedures is present in Table 7.

The SSP will be videotaped for subsequent data analysis. A detailed description of the three types of analysis which have been utilized is presented in Waters (1978; also see Ainsworth, Blehar, Waters, & Wall, 1978). Briefly, the videotapes can be scored for frequency per 10 second interval of crying, and also three forms of exploratory behavior: locomotor, manipulatory, and visual. The second type of analysis is based upon detailed codings of behaviors across the eight episodes, with special emphasis on the infant's reunion behavior. The codings are then developed into a series of 7-point ratings on five classes of behavior. The behavioral variables scored are proximity and contact seeking; contact maintaining; contact resisting; proximity and interaction avoiding; and distance interactions. Scores

TABLE 7

Summary of Strange Situation Procedure

Episode	Persons Present	Time	Events and Procedures
1.....	M,B	Variable (approx. 1 min.)	M and B are introduced into S/S room by E. If necessary, M interests B in toys before being seated. M does not initiate interaction but is responsive to bids from B
2.....	M,B	3 min	M remains seated and is responsive to bids for interaction but does not initiate
3.....	M,B,S	3 min	S enters and is seated; sits silently for 1 min; talks to M for 1 min; engages B in interaction and/or toy play for 1 min
4.....	B,S	3 min (less if B extremely distressed)	M leaves room, S allows B to play alone but remains responsive to interactive bids. If B is crying, S offers contact and tries to comfort. If B refuses or resists, S does not persist. Terminate episode after 1 min hard crying or on M's request
5.....	M,B	3 min	M calls B from outside door and steps inside, pausing at doorway to greet B and to reach and offer contact. If necessary, B is held and comforted then reintroduced in toys; otherwise, M is seated and remains responsive to bids from B but does not initiate
6.....	B	3 min (less if B extremely distressed)	M leaves room; B remains alone. Terminate episode if 1 min hard crying ensues or on M's request

Note: M = mother; B = baby; S = stranger

TABLE 7 (cont'd.)

Episode	Persons Present	Time	Events and Procedures
7.....	B,S	3 min (less if B extremely distressed)	S returns and is seated. If B is crying or begins to cry without pause, S offers contact and tries to comfort. If B cannot be comforted and crying continues (or on M's request), terminate episode
8.....	M,B	3 min	M calls B from outside door and steps inside, pausing at doorway to greet B and to reach and offer contact. If necessary, B is held and comforted and then reinterested in toys; otherwise M is seated and remains responsive to bids from B but does not initiate if B is content in toy play

From Waters, 1978

on these five scales reflect an attempt to integrate aspects of the actual behavior as well as intensity, duration, and strength of behavior into a single score on that dimension.

The third type of data analysis is to classify the infants on the basis of the overall patterning of their strange situation behavior as reflected in their frequency and scaled scores. Infants are categorized as securely attached (approximately 65% of past samples); anxiously attached and avoidant (approximately 20% of past samples) and anxiously attached and ambivalent (approximately 15% of past samples). The classification criterion are elaborated in Table 8.

Two undergraduate volunteers will be trained to rate the SSP. Researchers who have employed the Ainsworth scoring system typically report inter-rater reliability of .85 or better (Ainsworth, 1979; Matas et al., 1978; Waters, 1978). Additionally, videotapes of 18 month old infants are available (Waters, 1978) and will be utilized to insure criterion validity.

While an extensive literature deals with familial characteristics where one parent is an alcoholic (cf. Ablon, 1976), none specifically discusses attachments between offspring and parents. In addition to this difficulty, there is a lack of data on prealcoholic males prior to the age of ten. Barry (1974b) discusses the personality of the alcoholic and concludes that the central conflict

TABLE 8

Summary of Strange Situation Classifications

Classification Criteria (from Reunion Episodes 5 & 8)						
Classification	Descriptor	Proximity Seeking	Contact Maintaining	Proximity Avoiding	Contact Resisting	Crying
A	"Avoidant"	Low	Low	High	Low	Low (preseparation), high or low (separation), low (reunion)
B	"Secure"	High	High (if distressed)	Low	Low	Low (preseparation, high or low (separation), low (reunion)
C	"Ambivalent"	High	High (often pre-separation)	Low	High	Occasionally (pre-separation), high (separation), moderate to high (reunion)

From Waters, 1978

characteristic of the alcoholic male is ambivalent feelings between attachment and alienation. Blane (1974) states that these contradictory feelings probably have their origin in the earliest stages of development. Some evidence, both clinical and empirical, suggests that excessive use of alcohol relates highly to feelings of alienation (see Blane & Hewitt, 1977, for a review of this literature). Insofar as differences occur, we expect the high-risk infants to be less securely attached than control infants.

Twenty-four months. Two years after the infant's birth, a home visit will be made, by a qualified examiner who is trained to administer the Bayley Scales of Infant Development (Bayley, 1969) and also by an undergraduate volunteer (see Table 1A/B). During the readministration of the Bayley Scales, both parents will recomplete the Social Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967; Appendix Q), the Detailed Drinking History (adopted from Cahalan et al., 1969; Schuckit, 1978; Appendix N), and the mother will participate in a structured interview designed to assess the child's temperament again (Thomas et al., 1963).

The rationale for selection of the Bayley Scales to assess the developmental status of the infant has already been discussed. Although scores obtained during the first 3 years on the Bayley Scales do not correlate with later intelligence test scores (Bayley, 1970),

this reassessment (see Table 1A/B) of the child with the Bayley will again provide valid data on the child's current level of cognitive abilities. Scores obtained at 2 years can be compared to scores obtained when the child was tested at 4 months. Although scores across this developmental epoch typically do not correlate, these data generally pertain to normal samples and results for high-risk children could possibly be vastly different (cf. Fish, 1959).

The SRRS will also be regiven to both parents in an attempt to ascertain if parents of high-risk children have experienced more life stress than parents of controls during the previous 24 months. One exploratory question is whether parents of high-risk children score higher on the SRRS; if so, what effect might this have on the child? Some evidence suggests that high life stress can have a debilitating effect on the quality of the infant-mother attachment in poorer families (Stroufe, 1979).

The undergraduate volunteer for this assessment will, as before, be trained to utilize the structured interview format developed by Thomas et al. (1963) for use with the New York Longitudinal Study (NYLS). If differences are found here, we anticipate that high-risk children will be described as manifesting less persistence and more distractability than control children. In addition, reviews of hyperactivity in preschool children (Laufer & Denhoff, 1957; Schleifer, Weiss, Cohen, Elman,

Cvejic, & Kruger, 1975; Werry, 1968) discuss high activity level as a prominent feature of the syndrome during this developmental epoch. Given the potential link between alcoholism and hyperactivity (see literature review), if differences in activity level occur we expect parents of high-risk toddlers to report higher activity levels in their sons than parents of control toddlers.

The Detailed Drinking History is being readministered to both parents. A comparison of current responses with those made two years earlier will begin to provide vital longitudinal drinking information that will serve to chart the developmental course of problem drinking. While numerous researchers and clinicians attempt to deal with issues relevant to a diagnosis of alcoholism at a single point in time (see literature review), there is a paucity of work that attempts to deal with developmental aspects of problem drinking (see Zucker, 1979, for an exception).

Thirty months. Two and one half years after the birth of the child, arrangements will be made with the family to have a video recorder placed in the dining room of their home (see Table 1A/B). The recorder will be in a small case along with a timing device that will be set to automatically activate the recorder ten (10) minutes prior to the typical onset of dinner. The recorder will remain on for forty (40) minutes each evening before automatically shutting off. These

recordings will be made for six (6) consecutive evenings. Since family members will not be required to operate the recorder, it is hoped that the reactive effects of having the recorder in the home can be minimized (Jacob, 1979).

Three of the recorded dinner-time interactions will be randomly selected for analysis with the Family Interaction Coding System (FICS; Patterson, Ray, Shaw, & Cobb, 1969) and the remaining three dinner-time interaction tapes will be analyzed with the Structural Analysis of Social Behavior Model (SASB; Benjamin, 1974; McLemore & Benjamin, 1979). The SASB model represents an extensive elaboration of Leary's (1957) interpersonal circle.

While the circumplex of social behavior variables that Leary constructed was based upon the two orthogonal axes of love-hate and dominance-submission, the SASB model has slightly modified these original orthogonal axes.

Briefly, the SASB model is based upon a horizontal axis labeled affiliation and a vertical axis labeled interdependence; these axes are orthogonal in the SASB model. The model examines interpersonal behaviors by focusing on the behavior of the other (top surface, Table 9), the behavior of the self (middle surface Table 9) in response to the behavior of the other, and what happens when the behaviors of others (top surface) are turned inwards--represented by the introject of other to self (lower surface Table 9). On each of the three surfaces the horizontal axis is labeled affiliation and the vertical

TABLE 9
Simplified Version of the Chart of Social Behavior

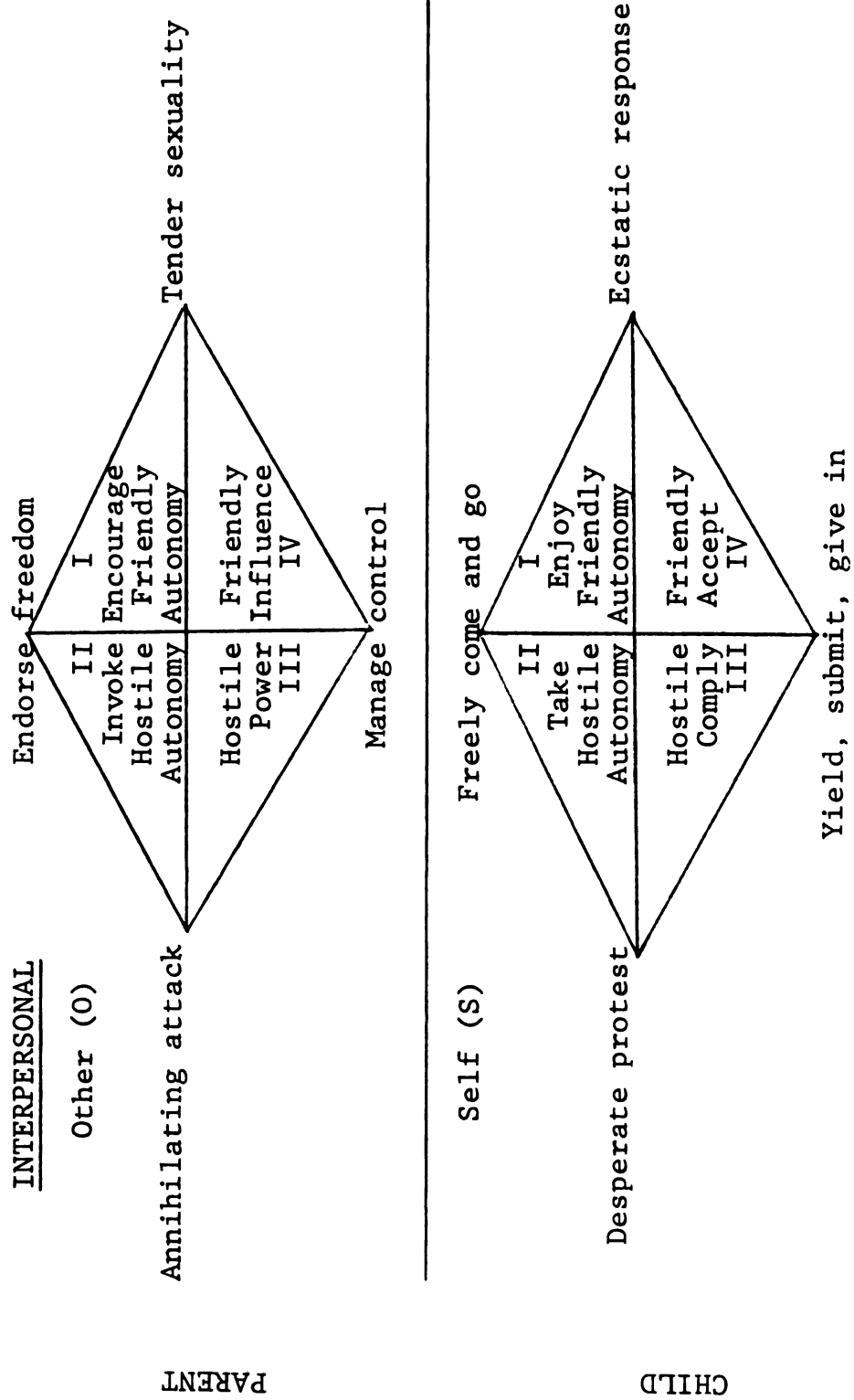
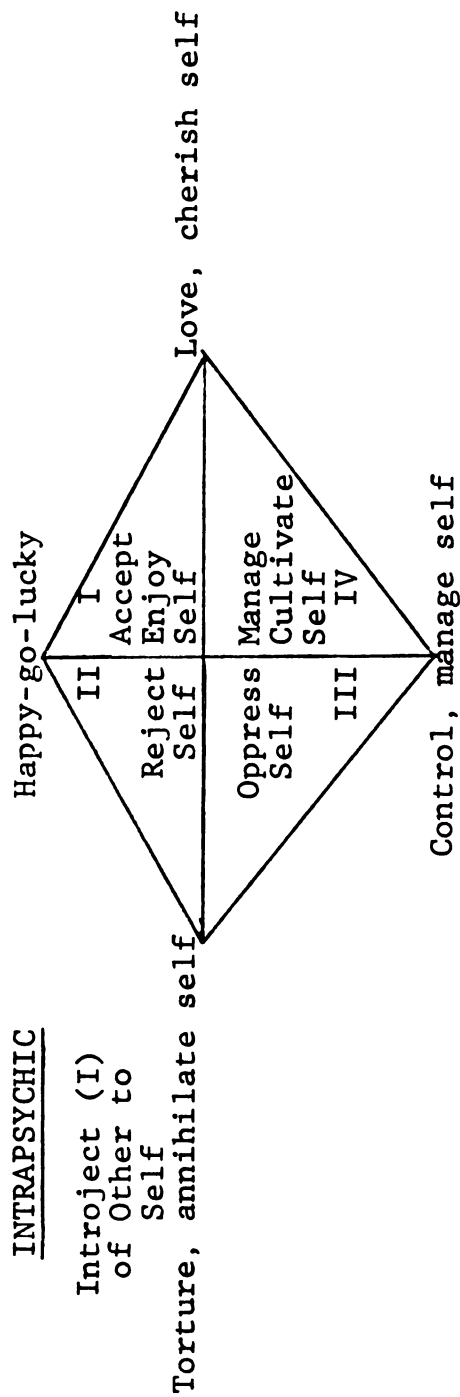


TABLE 9 (cont'd.)



From Benjamin, 1979

axis is labeled interdependence. The specific behaviors that mark the extremes on each axis vary, dependent upon the specific surface being examined. Complimentary behaviors are defined as behaviors that tend to draw out each other and are located at corresponding quadrants on the upper two surfaces. Antidotal behaviors are defined as behaviors that are opposite to the compliment (see Benjamin, 1974, 1977a, 1979 for a more elaborate description of the SASB model).

The SASB model is an explicit attempt to develop a conceptual schema that can reliably differentiate healthy interpersonal situations from pathological interactions (Benjamin, 1979). In his extensive review of the literature on family interactions, Jacob (1975) concluded that few consistent differences have been found between pathological and normal family interactions, although a more recent review concluded that disturbed and normal families do differ on several dimensions (Doane, 1978). Both Jacob and Doane cite the lack of methodological sophistication as a major problem. The SASB model is an attempt to remedy this problem.

The proposed structure of the SASB model has been tested on both normal and psychiatric populations. The data were analyzed by the techniques of factor analysis, circumplex analysis, and autocorrelation, and the model was substantially supported (Benjamin, 1974, 1977b). Assessment of the internal consistency of the SASB model

with normal subjects yielded a coefficient alpha of greater than .90 (Benjamin, 1974; Freedman, 1977).

Benjamin (1974) found that psychiatric samples have lower internal consistency than normal samples and suggested that the low internal consistency is an actual reflection of psychopathology. Finally, the SASB model has been utilized clinically and has received further validation (Benjamin, 1977a).

The SASB model has been used by Benjamin to classify transactions in therapy utilizing videotapes of the interview (Benjamin, 1979). Benjamin found that the complexity of the interactions in terms of disguised and/or covert communications required the use of "an individual who has highly developed skill in perceiving interpersonal nuances" (Benjamin, 1979, p. 12). In other words, a few training sessions will not suffice with undergraduate volunteers. Two upper level graduate students in clinical psychology will first become familiar with the model by reading reprints (Benjamin, 1974, 1977a, 1979). Second, following the classification procedures outlined in Benjamin (1979), they will be provided with dinner hour tapes from families who are not involved with the project. Practice scoring will be done on these tapes, first attempting to classify communications into the appropriate quadrant of the SASB model and then onto the exact track within the quadrant. (The clinical graduate student volunteers will be given the same information as

undergraduate volunteers about the nature of the project.) Benjamin (1974) briefly reported a pilot study where two experienced psychiatric nurses scored videotapes of therapy sessions and obtained a product-moment correlation of .92 in terms of agreement on quadrant classifications.

The data analysis will permit a structural analysis of the husband-wife dyad and each parent-child dyad based upon the SASB model. A substantial literature has been reviewed which indicated that conflict and tension are the hallmarks of the alcoholic marriage (see literature review). It is predicted that:

6. Communications between parents of high-risk sons will be more often coded into quadrant III (hostile power/hostile comply) than communications of parents of control sons.

It will also be extremely interesting to examine the series of communications between the parent(s) and other children.

The Family Interaction Coding System (FICS) is designed to rapidly record sequential action-reaction behavior categories within the framework of specified time blocks. The system is designed to record the child's behavior, responses to the behavior, and ensuing responses by utilizing 35 specific behavior categories (see Table 10). In addition to the 35 behavior codes, data obtained with the FICS can be condensed into six summary categories: parent positive, negative, or command, and

TABLE 10

FICS Items Listed by Child Behavior Categories and Consequence Categories

Child behavior category			Consequence category		
Deviant	Nondeviant	Prosocial	Positive	Negative	Command
Demand attention	Command	Approval	Approve	Threatening	Command
Violation of standing command	Command negative (terminating)	Attention	Attention	command	Command
Destructive-ness	Command prime*	Compliance	Comply	Command negative (terminating)	prime* Dependencey Independent activity
High rate	Disapprove	Laugh	Indulgence	Cry	Leave
Humiliate	Independent activity	Nonverbal interaction	Laugh	Violation of standing command	No response
Noncompliance	Indulge	Physical positive	Nonverbal interaction	Disapprove	Self-stimulate
Physical negative	Leave	Touch	Physical positive	Destructiveness	High rate
Smart talk	No response		Receive	Humiliate	
Tease	Receive		Talk	Ignore	
Tantrum	Talk		Touch	Noncompliance	
Whine				Negativism	
Yell				Physical negative	
Threatening command				Smart talk	
Ignore				Tease	
Negativism				Whine	
				Yell	
				Demand attention	

*A command for which compliance would be impossible to determine. Refers to commands for future action, or very general commands (adopted from Johnson et al., 1973).

child deviant, nondeviant, or prosocial. The FICS was originally designed to measure interaction patterns in the home of families with an aggressive child, but has also been utilized to assess the rate of deviant child behavior found in "normal" homes (Johnson, Wahl, Martin, & Johansson, 1973).

Procedures specified by Patterson et al. (1969) will be carefully followed when training undergraduate raters. Hopefully training tapes will be available from the Oregon Project for use with the Patterson training manual. Undergraduate volunteers will simultaneously, but independently practice rating the training tapes until interrater agreement exceeds .85. Split-half reliability for the FICS reported by Johnson and his colleagues (1972) was .84 for total deviant behavior, .87 for positive consequences, .90 for negative consequences, and .88 for command consequences.

Insofar as differences occur between the high-risk family interactions and those of the control families, we expect more deviant behavior, less prosocial interaction behavior, and less compliance behavior by children in the high-risk families. The rationale for these expectations has been previously discussed (see literature review).

Thirty-six months. Three years after the birth of the child, an undergraduate volunteer will make a home visit (see Table 1A/B). The purpose of the visit is to

reassess the home environment using the Home Observation of the Environment Inventory (HOME) (Caldwell & Bradley, 1979). Since this metric has already been used in this project (see Table 1A, fifteen months pregnant) the rationale for the use of this instrument and specific training procedures will not be discussed again. At the conclusion of the visit, the undergraduate volunteer will complete a Q-sort personality description (Block, 1961) for the interviewed parent(s).

The HOME inventory is designed to empirically assess various aspects of cognitive, social, and emotional support that are available to the child in the home. Specific items included in the instrument vary according to child's age; birth to 3, or 3 to 6. The later version of the HOME will be used for the current assessment. Items are classified within the following eight subscales: (1) toys, games, and materials; (2) language stimulation; (3) physical environment; (4) pride, affection, and warmth; (5) stimulation of academic behavior; (6) modeling social maturity; (7) variety of stimulation; and (8) physical punishment.

The HOME inventory is again being used in an exploratory fashion. If differences occur between high-risk and control families we expect high-risk toddlers to score lower on pride, affection, and warmth. The pride, affection, and warmth factors contain items which signify overall parental respect and courtesy towards

the child. Although data in this area have not been obtained when the child was a toddler, some evidence suggests that parents of prealcoholic males do not typically manifest respect and courtesy towards the child during the boy's middle childhood or adolescence (see Zucker, 1976, 1979, for a review of this literature). More often, fathers of prealcoholic males are described as rejecting or cruel (McCord & McCord, 1960; Robins et al., 1966), and mothers are described as extremely ambivalent or negligent (Jones, 1971; McCord & McCord, 1960). Similarly, if differences occur on the physical punishment factor, we expect high-risk toddlers to receive more physical punishment than controls. Support for this anticipated difference can be found in the literature just cited and in the family alcoholism literature (see literature review).

Forty-two months. Three and one half years after the birth of the child, a short home visit will be made by an advanced graduate student in child clinical psychology (see Table 1A/B). The purpose of this visit is to assess the development of the child's attitudes and knowledge of alcoholic beverages. Although little empirical work has been done in this area, Jahoda and Cramond (1972) utilized a Piagetian framework to begin to trace the development of the child's attitudes regarding alcohol and drinking behavior. The bulk of their work pertains to 6, 8, and 10 year old children;

however, some of their methods are clearly relevant for younger children, as they report data on a small 4 year old sample. Recent work (Hood & Bloom, 1979) strongly suggests that pre-school children possess greater cognitive conceptual competence than classic Piagetian theory would predict (also see Brainerd, 1979; Gelman, 1979).

Children will be assessed on their ability to both recognize the smell of alcoholic drinks and their knowledge that excessive drinking of alcohol lends to drunkenness. The Recognition of Smells procedures developed by Jahoda and Cramond (1972) will be carefully followed. Briefly, children will be given nine bottles of liquid to smell, including whiskey and beer. Children will be first asked which substances they have smelled before and then asked to tell something about each identified as familiar. Inquiry about familiar smells will focus on the child's knowledge of who uses it, when, for what purpose, where, and does the child like/dislike it.

Subsequent to completion of the Recognition of Smells test, the child will be shown three video tapes (Drunkenness Film Task). The first tape will be the story of a boy who goes to a toy store with his father who purchases a toy for him (the happy boy). The second tape will be the story of a man who goes into a bar, drinks excessively, and departs the bar quite drunk (the drunken

man). The third tape will be about a man who goes into a gymnasium, works out with weights, and eventually becomes exhausted (the exhausted man). Each story will be 60-seconds and will be broken into four 15-second segments labeled A, B, C, and D (see Table 11). All stories will be shown to the children in the following sequence: D, CD, BCD, ABCD. That is, the child will first observe the final 15-seconds of a story, then the final 30-seconds and so on. After each story segment is shown to the child, the tape will be stopped and an inquiry will be made. This will occur four times for each of the three stories. The child will be asked what they perceive is happening in the preceding film section, what the film character was doing just before we see him, and how does the film character feel. After all four segments of the drunken man are shown, the child will be asked if they have ever seen anyone like that, where, etc.?

The purpose of the Drunkenness Film task is to ascertain if the child knows that excessive consumption of alcohol can lead to intoxication and drunken behaviors. The story of the happy boy is included to orient the child towards the task demands: figuring out a character's internal state and what events may have led up to the character's current status. The exhausted man story is included to present the child with an innocuous story of a man subsequent to the drunken man story.

TABLE 11

Details of Video Tape Sequences

Story 1: Happy boy

- A Boy entering toy shop with father;
- B Boy in shop choosing toy;
- C Boy receiving toy from clerk, with happy expression on his face;
- D Father and son departing shop, hand in hand, boy smiling profusely.

Story 2: Drunken man

- A Man entering a bar;
- B Man in bar drinking whiskey with a glass of beer in his other hand;
- C Close shot of man drinking whiskey and staggering away from the bar;
- D Man staggering out the barroom door and staggering down the sidewalk.

Story 3: Exhausted man

- A Man entering a gymnasium;
- B Man in a weight room lifting weights;
- C Close shot of man putting weights down and walking listlessly out of the weight room;
- D Man listlessly entering the locker room, collapsing onto a bench, and looking exhausted.

Adopted from Jahoda & Cramond, 1972

An advanced child clinical graduate student will conduct the Recognition of Smells test and the Drunkenness Film test. Jahoda and Cramond (1972) reported that two examiners were used to give the aforementioned tasks. One was an experienced child psychologist, the other was "a part-time assistant experienced with children, but without psychological qualifications" (p. 3). Despite intensive training with appropriate procedures, the assistant was less adept at acquiring information from the children. That is, children tested by the assistant had more entries labeled "no reply" and also consistently made more "socially acceptable" responses. While cognitive testing is often considered easy or straightforward, this point of view can yield results that are biased (see Santostefano, 1978, p. 411). The use of advanced child clinical graduate students will hopefully ameliorate this problem.

With the exception of the Jahoda and Cramond work, no systematic research has examined the development of children's attitudes and knowledge relating to alcohol with children under five years of age. Their data, obtained by testing a small additional sample of "nursery school children", showed that 66% of the four year olds who could correctly identify smells (a minimum of three recognized) could correctly identify the smell of beer and/or whiskey. No clinical or empirical research has been completed which scrutinizes the development of the young

child's knowledge and attitudes towards alcoholic beverages which one of the child's parents is an alcoholic. The Smells Test with this sample will begin to fill this gap in our knowledge. Any expected differences between high-risk children and controls are highly speculative. We expect that of the group of children able to correctly identify smells (a minimum of three), the high-risk boys will be able to also correctly identify the smell of beer and/or whiskey more often than controls. This expectation is based upon the notion that alcoholic beverages will be present and more openly used in the high-risk homes. These children might be able to correctly identify the smell of beer and/or whiskey because these smells could be more familiar.

Jahoda and Cramond tested a small sample ($n = 14$) of nursery school children (age 4) with the Drunkenness Film Task. Three of the children correctly recognized the man's drunken state after segment D; three more after segment CD; and six after segment BCD. Insofar as differences occur, we expect high-risk children will correctly identify the man's drunken state and its cause earlier in the testing sequence than controls. In response to the question, where have you seen men like that, we expect that high-risk boys will respond more often with "home". These expectations are based upon the notion that the high-risk children will have more live experiences with both excessive consumption of

alcohol and drunkenness. The limitations discussed in the preceding paragraph, vis à vis lack of data in this area, are relevant to our expectations on the Drunkenness Film Test.

Forty-eight months. Four years after the birth of the child both parents and the child will participate in a session at Michigan State University in the psychology building (see Table 1A/B). If necessary, subjects will be picked up at home and driven to the university. While the parents are alternating between participating in a semi-structured interview with the project's chief investigator (RAZ) and completing questionnaires, the child will first be assessed by a qualified examiner utilizing the Revised Yale Developmental Inventory (YDI) and will subsequently participate in a structured laboratory assessment of open-field activity. These procedures will require two to three hours to complete. At the conclusion of the visit, the project's chief investigator will complete a Q-sort personality description (Block, 1961) for each parent.

The parent's interview will be based upon the semi-structured format of the Schedule for Affective Disorders and Schizophrenia (SADS; Spitzer & Endicott, 1977). The SADS has already been utilized with both parents (see Table 1A/B, eight months pregnant), therefore the rationale for both the use of this procedure and the predicted results will not be discussed again. It is

predicted that:

7. Fathers of high-risk toddlers will receive a diagnosis of personality disorder, antisocial, on Axis II of DSM-III more often than fathers of control infants.

During the time one parent is participating in the interview, the other parent will complete the following questionnaires: Social Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967; Appendix Q); Werry-Weiss-Peters Home Activity Rating Scales (HARS; Werry, 1968); the Detailed Drinking History (Cahalan et al., 1969; Schuckit, 1978; Appendix N); and a modified version of the Worchester Scale of Social Attainment (Phillips, 1968).

The SRRS will be given to both parents in an attempt to ascertain if parents of high-risk toddlers have experienced more life stress than parents of controls during the previous 24 months. One exploratory question is whether parents of high-risk toddlers score higher on the SRRS; if so, what effect might this have on the child?

The HARS was originally designed for completion by mental health professionals during an interview of the parents of a child with suspected hyperactivity. Several researchers took items from the original interview and developed a self-administered questionnaire version (cf. Knights & Hinton, 1969) that parents can complete. Although the HARS is the most widely used parent rating scale of hyperactivity (see Sandoval, 1977), it is plagued

by reliability and validity problems that are typical of instruments developed to assess hyperactivity (see literature review). This project will attempt to minimize these problems by utilizing more than one rater when possible, by using different metrics of behavior, by assessing behavior across a variety of settings, and by assessing behavior across the child's development. Items on the HARS evaluate the child's behavior across several settings with a wide variety of specific behaviors enumerated. The HARS has shown itself to be drug sensitive with hyperactive preschoolers (Knights & Hinton, 1969). The HARS has 31 items designed to assess the activity level of the child in 7 areas: meals, television, home work, play, sleep, behavior away from home, and school behavior. Since items in the areas of home work (5) and school behavior (4) are not appropriate with 4 year olds, they will be deleted. The 22 item shortened version of the HARS has been utilized by other researchers for use with younger children (cf. Routh, Schroeder, & O'Tuama, 1974). Scores on the 22 item HARS can range from 0 to 44, higher numbers indicating higher activity ratings. In view of the possible links which which exist between hyperactivity in childhood and future alcohol problems (see literature review), if differences occur, it is expected that high-risk toddlers will be given higher mean activity scores than control toddlers.

The Detailed Drinking History will be readministered to both parents. The rationale for use of this specific

metric and reasons for readministration of this instrument have already been discussed (see Table 1A/B, third week of eighth month of pregnancy and twenty-four months).

The modified version of the Worchester Scale of Social Attainment (Phillips, 1968; Rudie & McGaughan, 1961) will be readministered to both parents. A comparison of current responses with those made three years earlier will begin to provide longitudinal information on changes in the general competence of both alcoholic and control families. Some longitudinal assessment of competence has been completed with schizophrenic populations (Lewine et al., 1978), but this type of work has not yet begun with alcoholic populations.

While the parents are completing questionnaires and the SADS interview, the child will participate first in a developmental assessment with the Yale Developmental Inventory, and second in two 15-minute play sessions. The YDI will be given to the children prior to the play sessions for several reasons. Although items on the YDI are typically more compelling for children than items on other similar instruments, toys are generally more attractive to children at this age. When a child is allowed to first engage in free-play with toys, it is difficult to obtain cooperation on the YDI. Second, the children will probably be quite anxious when they arrive at a novel place and their parents leave them with a stranger. Providing the child cognitive structured

tasks will help them to adjust to the novel setting. Third, since the children will be most anxious when they initially arrive and separate from their parents, this would not be the optimal time to observe their free-play. Typically play is most easily distorted by anxiety and a sample of the child's play at this time might not be representative¹.

The YDI will be administered to the child by a qualified examiner. This inventory is a clinically oriented assessment tool that can be used with children aged 4 weeks through 6 years. The inventory examines the development of the child in five major areas: 1) gross motor, 2) fine motor, 3) adaptive, 4) language, and 5) personal-social. The result of the examination of the child with the YDI is a developmental age for the child in each of the five aforementioned areas and an overall developmental age of the child.

The YDI is primarily the Gesell Institute of Child Development Inventory (Gesell & Amatruda, 1958) along with selected items from the Merrill-Palmer, Stanford-Binet, Bayley, and the Hetzer-Wolf Baby Scales from the Vienna Test. The YDI was originally developed as a more extensive and comprehensive developmental inventory, taking items from other scales to increase the scope and depth of the assessment capacity of the instrument. The Denver

¹The author is indebted to Helen Benedict for the preceding discussion.

Developmental Screening Test (Frankenburg & Dodds, 1967) was developed primarily from items in the YDI, although the original rationale for item selection (i.e., ease of administration and lack of elaborate equipment) has made the Denver Developmental Screening Test a less than optimal measure of a child's development (see Garrity & Servos, 1978). Several other screening devices of child development are available, such as the A-M-L Scale (Brownbridge & VanVleet, 1969), the Teacher Rating Scale (Grossman & Levy, 1974), and the Minnesota Child Development Inventory (Ireton & Thwing, 1972), but again none offers the scope and depth of the YDI.

Although administration of the YDI requires strict adherence to specific guidelines for each test item, the specific order of item presentation is left to the discretion of the examiner. This permits a flexible approach by the examiner so that the child's interest in the test can be optimized. This approach is in sharp contrast to other developmental inventories that require strict adherence to order of presentation as well as method of item presentation. The paucity of reliability and validity data on the YDI reflect this flexible approach; however, the flexibility generally permits a more complete assessment. Although the YDI is commonly used clinically and not as a research instrument, some empirical work has been done with the YDI (cf. Provence & Lipton, 1962).

The YDI will be administered without the primary caregiver present. The YDI will permit exploration of any standard developmental marker differences that may exist between the high-risk toddlers and controls, not as a predictor of future functioning. The YDI is being utilized in an exploratory fashion.

Subsequent to completion of the YDI, the child will participate in two consecutive 15-minute play sessions; activity level will be monitored via ankle and wrist actometers strapped to the child's preferred ankle and wrist. The purpose of these sessions is to ascertain if high-risk preschoolers show higher levels of activity than control preschoolers.

While numerous studies have been completed that utilize observational techniques to study activity levels in children (Cunningham & Barkley, 1979; Loney, in press; Sandoval, 1977), very few empirical studies of activity level in preschoolers have been done. The majority of the studies of activity level in children have been concerned with hyperactivity. Since preschoolers are less often referred for this problem and typically display high activity levels (Schleifer et al., 1975), the dearth of studies is understandable.

Many observational studies of hyperactive children utilizing a plethora of multidimensional rating scales have been completed. This work has primarily shown that hyperactive children and normal children demonstrate

similar levels of activity in unstructured or free-play situations. Behavioral differences in activity level only manifest themselves under conditions of external restraint, where activity is limited by task demand or requests to inhibit movement (Loney, in press; Sandoval, 1977). The few studies of activity level in preschoolers have similar findings. Scheifer et al. (1975) assessed activity level in preschoolers (average age 4) in free-play and in a structured nursery period. No differences were found between hyperactive and normal children on any of their measures of activity level during free-play; however, during structured nursery play hyperactive children displayed higher activity levels on all of their measures. Routh et al. (1974) assessed open-field activity level in normal children, examining the phenomenon from a developmental perspective, utilizing 140 children from 3 years to 9 years of age. The primary finding was that mean levels of open-field activity steadily decreased with age in both a free-play and a restricted play situation. These authors suggest that developmental view of activity level for both normal and pathological children is appropriate.

The procedure that Routh and his colleagues (1974) have developed will be used in the present study. Briefly, children will be left alone in a large playroom that will be divided into four approximately equal segments. In each quadrant will be a table with a collection of

identical toys. Children will first be left in the room with free-play instructions and after 15-minutes they will be instructed to stay in one quadrant and play with one toy. Between the 15-minute segments the child will be taken for a walk while the room is straightened.

During the sessions, tallies will be made of toy and quadrant changes. Routh et al. (1974) report inter-rater reliabilities (product-moment correlations) of .87 or higher. Raters will be two undergraduate volunteers who will be trained by simultaneously, but independently observing male 4 year olds in a local daycare until inter-rater reliabilities of .9 for tally totals are obtained. Since the tally procedures are rather straight forward, no difficulties are anticipated.

The possible connections between high activity level, hyperactivity, and future drinking problems has been discussed (see literature review). If any differences occur we expect high-risk preschoolers to have higher open-field activity than controls during the restricted play segment. Additionally, if differences occur on the actometers, we expect high-risk children to have higher actometer scores during the restricted play segment than controls.

Sixty months. Within one month of the child's fifth birthday a home visit will be made by an advanced graduate student in child clinical psychology and an undergraduate volunteer (see Table 1A/B). The purpose

of this visit is to have both parents complete the Child Behavior Checklist (CBCL; Achenbach, 1978b; Achenbach & Edelrock, 1979; Appendix T) and the mother participate in the Thomas et al. (1963) temperament interview. While the parents are completing these tasks, the graduate student will assess the child's attitudes and knowledge of alcoholic beverages. If the father is not present during this visit, one CBCL will be left for him to complete, along with instructions for him to complete the questionnaire on his own.

The CBCL consists of 118 behavior problem items and 20 social competence items that have been adapted for their optimal use by parent report. The responses to the CBCL are scored for social competence and behavior problems utilizing the appropriate Child Behavior Profile. Separate editions of the Child Behavior Profile have been developed and standardized for each sex at ages 4-5, 6-11, and 12-16. Standardization and normative data for both age and sex of the child has repeatedly demonstrated that the same behavioral problems can vary in their empirical and clinical significance (Achenbach & Edelbrock, 1978; DeHorn, Lachar, & Gdowki, 1979). That is, nocturnal enuresis has vastly different implications/consequences for a 4 year old boy than for a 16 year old female.

The pattern of scores on the CBCL permits analysis of the child's behavior problems with respect to profile

types. These types are unique to each age/sex group and are based upon score patterns per se, not elevations (Edelbrock & Achenbach, 1978). All behavior problems are dichotomized between the two general factors of internalizing and externalizing. This dichotomy has proven to be highly robust with numerous instruments by different types of raters and in different situations (Achenbach, 1978b). The profiles that have been obtained with the CBCL are the result of factor analysis that has been systematically applied to completed checklists. The norms that have been obtained are clinical norms rather than norms for "normal" children. By utilizing a sample of clinic referred children to develop norms, maximal differentiation between profiles has been obtained (Edelbrock & Achenbach, 1978).

Preliminary investigation of the stability and reliability of the CBCL has indicated that the instrument is satisfactory. Follow-up stability, across all sex/age groups for six months has been .71-.73; for eighteen months it has been .59 (Edelbrock & Achenbach, 1978; Achenbach & Edelbrock, 1979). Follow-up stability has been even better when the continuity of profile types are assessed. For all age/sex groups six month profile type stability was .89; for eighteen months the profile pattern stability was .76 (Edelbrock & Achenbach, 1978). The test-retest reliability of the CBCL across all age/sex groups has been above .80 (Achenbach & Edelbrock, 1979).

Finally, parents have been given the CBCL independently and asked to complete the checklist. Interparent agreement for all boys has been .79 (Achenbach & Edelbrock, 1979), although these data were not obtained from families with an alcoholic parent. The juxtaposition of the high interparent agreement on this instrument and the high value generally given to parent reports of child behavior problems, i.e., "parents are typically the most important source of data on child behavior problems" (Achenbach & Edelbrock, 1978, p. 1289, 1290), indicates that the CBCL will provide a rich picture of any behavior problems the child may have. This extensive work is in striking contrast to many of the earlier instruments that have been employed in this area (see Barkley, 1977; Sandoval, 1977).

Although numerous studies of children of alcoholics have been conducted (cf. Fox, 1962; Jacob et al., 1978; Haberman, 1966; Hindman, 1975; Wilson & Orford, 1978), this work suffers from several serious methodological shortcomings. Blane and Hewitt (1977) cogently point out many of the methodological limitations in this literature and caution against reaching any conclusions. For example, extensive use of anecdotal data, sampling difficulties, lack of clear diagnostic criteria for alcoholism, no controls or controls that have not been screened to exclude alcoholics, and poor measures are but a few of the problems. In addition, no study specifies the age/sex of children of alcoholics along with a

specific catalog of problems of these offspring. In addition no attempt has been made to juxtapose these difficulties along with the duration and time of onset of the parent's alcohol related difficulties. Unfortunately then, from a developmental perspective little can be distilled from this earlier work. Despite these methodological shortcomings, impulsivity and hyperactivity (see literature review) are often cited as possible precursors that exist in the male child who subsequently becomes alcoholic. Insofar as differences exist, it is expected that parents of boys who are at high-risk will score higher on the aggressive scale of the CBCL. Items that make up the aggressive factor for 4 and 5 year old males include both hyperactivity and impulsivity.

The undergraduate volunteer will be trained to utilize the structured interview format developed by Thomas et al. (1963) for use with the New York Longitudinal Study (NYLS). The rationale for use of the NYLS structured interview format, the method of rating the interviews, and the justification for expected differences in persistence, distractability, and activity level has already been discussed (see Table 1A/B, four months and twenty-four months). If differences exist, we anticipate that high-risk children will be described at this age as manifesting less persistence, more distractability, and higher activity level than will control children.

The assessment of the child's attitudes and knowledge of alcohol will be based upon the already reviewed work

(see Table 1A/B, forty-two months) of Jahoda and Cramond (1972). The assessment will require one hour and will occur simultaneously with the parental procedures just discussed. The following procedures will be utilized:

Recognition of Smells
Judgement of Photographs
Perceived Likes and Dislikes
Concept Task
Drunkenness Film

Following is a brief description of the experimental paradigms.

The Recognition of Smells and Drunkenness Film test have already been described (see Table 1A/B, forty-two months). The Judgement of Photographs task is designed to ascertain what attitudes children have towards drinking behavior in male and female adults. Children will be shown photographs of adults engaged in various activities such as eating an apple, drinking beer, drinking from a shot glass, reading a book, etc. Specific methodological issues relevant to the design of this task are discussed in Jahoda and Cramond (1972) and necessary procedures will be carefully followed. Children will be seated at a table with a happy face, a neutral face, and a sad face clearly drawn on sheets of paper that are taped onto the table top. The examiner will explain to the child that they will be shown a series of photographs. Pictures they like are to be placed onto the happy face, pictures they dislike are to be placed onto the sad face, and so on. This type of sorting procedure has been employed with

even younger children (aged 4) as a reliable sociometric measure (Asher, Singleton, Tinsley, & Hymel, 1979), and should be easily understood by five year olds.

The Perceived Likes and Dislikes task will employ the same scaling procedures utilized in the Judgement of Photographs. The children will be seated at a table with the various faces (happy, sad, neutral) taped onto the table top. They will be given a small male child doll and will be told to respond to the task as they think the little boy doll might really respond. Children will be read a list of 24 activities such as doing the cooking, repairing the car, drinking beer, drinking whiskey, going to school, etc. Children will be told that a list of activities is going to be read to them. They will be instructed to tell the examiner which ones the little boy doll would like to do, which ones he wouldn't like to do, and so on. Subsequent to completion of this trial, children will be given an adult female doll and the task will be repeated. The female doll will be referred to as a woman, someone like your mother. This will be followed by giving the child an adult male doll, a man, someone like your father, and a third replication of the task will be accomplished. Specific lists of activities and design issues are discussed in Jahoda and Cramond (1972). Procedures delineated by these workers will be carefully followed.

The Concept Task is designed to ascertain whether the child has developed the category "alcoholic beverages" as a logical class which includes various alcoholic drinks that the child has knowledge of. That is, while a child can identify various drinks individually, is the child aware of the concept of "alcoholic beverage" as an overarching category. Children as young as 3 are able to successfully place various objects into classes or categories which they can verbally identify (Santostefano, 1978).

Although Jahoda and Cramond (1972) have developed an assessment procedure to test the child's knowledge of the concept "alcoholic beverage," it is felt that their design presents the child with an over-simplified task that limits the child's responses more than necessary. While the specific procedures have not been developed at this time, the assessment of the child's ability to accomplish the conceptual differentiation task will be a modification of the Object Sort Test II (Goldstein & Scheerer, 1941). We plan to alter the display of materials in the standardized test to include various beverages, both alcoholic and non-alcoholic. If the child does not spontaneously group beverages on the alcoholic/non-alcoholic dimension, specific inquiry will be developed to assess the child's ability to discriminate on that dimension. While the precise inquiry has not been produced to date, inquiry procedures developed by Santostefano

(1978) for use with the Object Sort Test II will be used as a prototype for our specific inquiry.

No clinical or empirical research has been completed which scrutinizes the development of the young child's knowledge and attitudes towards alcoholic beverages where one of the child's parents is an alcoholic. The aforementioned procedures will begin to explore this general area. Any expected differences we postulate between high-risk and control children are highly speculative, especially on the Judgement of Photographs; Perceived Likes and Dislikes; and the Concept Task. We expect that of the group of children able to correctly identify smells (a minimum of three), the high-risk boys will be able to also correctly identify the smell of beer and/or whiskey more often than controls. We anticipate that high-risk boys will also do better on the Drunkenness Test. Postulated differences on the Judgement of Photographs and Perceived Likes and Dislikes will not be made as individual differences in families of alcoholics will significantly influence these data. As Jahoda and Cramond point out, results of the Concept Task are subject to the child's general cognitive development in the area of equivalence range (i.e. their ability to categorize and conceptualize information), in addition to their specific experiences with alcoholic beverages. Therefore no predictions will be made. At the conclusion of the visit, the undergraduate volunteer will complete a Q-sort

personality description (Block, 1961) for the mother and the father, if he was present.

APPENDICES

APPENDIX A

AGENCY PARENT LETTER

APPENDIX A

AGENCY PARENT LETTER

(Agency letterhead)

Dear Mr. and Mrs.

Dr. Robert Zucker and Dr. Hiram Fitzgerald of Michigan State University are conducting a long term scientific study concerning the relationship of the environment to child health and development as it occurs in the family. Although the major emphasis of their work is on the development of very young children (or early school age children for the 5-year-old sample) over a period of several years, information also is to be collected from other children in the family and from yourselves as parents in order to understand the context in which child health and development occurs.

This letter is to inquire whether we may give your name to Drs. Zucker and Fitzgerald so that they or a member of their staff may contact you to discuss your participation in their study. Your family has been selected out of (agency name) records, along with a large number of other families from this and other Lansing area health facilities so as to provide a representative group of families from many different backgrounds. As is true of all work of this kind, once a potential family has been selected, it is especially important for the family to participate if the study is to be valid. I would like to add that in no way can any individual or family be identified once the information is collected. Strict confidence and anonymity are guaranteed by removing all names and identifying material from records that are kept.

Should you agree to consider participating in this work, we will forward your name to the project staff. What will happen next is that they will contact you and arrange an interview to discuss study participation in greater detail. The interview would take place in your own home at a time convenient to you. Families will be compensated in a small way (\$25.00) for taking part in the interview. If you are accepted in the project, \$100 payment will be made to you at the conclusion of each year you participate in the study. The material to be collected then concerns behavioral, physiological, and pediatric information about children's development and parent-child relations.

APPENDIX A (cont'd.)

If you wish to consider participating in this work please sign the attached form so that we may inform the study workers so that they may call and schedule a visit. This visit does not obligate you in any way should you decide not to participate. Also, although I hope you will decide otherwise, please indicate on the attached form if you do not wish to be contacted.

Finally, if you have any questions about this letter, Ms. (person employed at agency) of our staff will try to answer them. She can be reached at (phone number) on (days of week) between (times).

Sincerely,

Appropriate agency member

P.S. A stamped self-addressed envelope is provided for your convenience.

APPENDIX A (cont'd.)

(agency letterhead)

Please check one of the following:

_____ yes, we give the (agency name) permission to
release our names to Drs. Zucker and Fitzgerald
so that they may contact us to provide more
detail about their experiment.

_____ no, we do not want our names released nor do
we wish to participate in the project conducted
by Drs. Zucker and Fitzgerald.

Father's signature

Father's name (please print)

Mother's signature

Mother's name (please print)

Date: _____

PLEASE RETURN THIS FORM IN THE SELF-ADDRESSED, STAMPED
ENVELOPE.

Thank you.

APPENDIX B

RESEARCH PARTICIPATION INFORMED CONSENT FORM

APPENDIX B

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

RESEARCH PARTICIPATION INFORMED CONSENT FORM

We have freely consented to take part in a long-term scientific study of human development being conducted by Dr. Robert A. Zucker and Dr. Hiram E. Fitzgerald (Professors of Psychology) and their staff.

The study has been explained to us and we understand the explanation that has been given and what our participation will involve and what our child's participation will involve.

We understand that we will receive additional explanations of specific studies during the five-year research project period.

We understand that we are free to discontinue our participation in the study at any time without penalty.

We understand that the results of the study will be treated in strict confidence and that we and our child will remain anonymous. Within these restrictions, results of the study will be made available to us periodically throughout the course of the project and for a minimum of three years after the project has concluded. Also within the restrictions noted above, we understand that general results of the research will appear in professional journals and will be presented at scientific meetings.

We understand that we will be paid \$25 for participation in the initial screening interviews.

We understand that once we are accepted into the study we will receive an annual honorarium of \$100 for the participation of our family in the project, to be paid at the end of the first year and yearly thereafter.

We understand that our participation in the study does not guarantee any beneficial results to us or to the members of our family.

Signed:

Mother

Date

APPENDIX B (cont'd.)

Father

Date

Child (when appropriate)

DateWitness

Date

APPENDIX C

MEDICAL INFORMATION RELEASE FORM

APPENDIX C

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

MEDICAL INFORMATION RELEASE FORM

Dear Dr.

I have freely consented to take part in a long-term study of human development being conducted by Dr. Robert A. Zucker and Dr. Hiram E. Fitzgerald (Professors of Psychology at Michigan State University).

I understand that the project requires access to medical records concerning obstetric, pediatric, and other medical information concerning myself and my child. I hereby authorize you to release this information to them.

I understand that all information released will be held in strict professional confidence, and that I and my child will remain anonymous in the reporting of any findings from the study.

Thank you for your cooperation.

Sincerely,

Signature

Date

Parent's name (please print)

Child's name (please print)

Witness: signature

APPENDIX D

SCHOOL ACHIEVEMENT AND PERFORMANCE RELEASE FORM

APPENDIX D

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

SCHOOL ACHIEVEMENT AND PERFORMANCE RELEASE FORM

Dear

Our family has recently consented to take part in a long-term study of human development being conducted by Dr. Robert A. Zucker and Dr. Hiram E. Fitzgerald (Professors of Psychology) at Michigan State University.

We understand that their project requires access to school achievement and school performance records concerning our child. We hereby authorize release of this information to them.

We understand that all information released to them will be held in strict professional confidence and that we or our child will remain anonymous in the reporting of any findings. We further understand that they will contact you personally to secure appropriate permissions and to inform you as to the purpose of their research.

Sincerely,

Mother's signature

Mother's name (please print)

Father's signature

Father's name (please print)

Child's full name (please print)

Date: _____

Witness: _____

Date

APPENDIX E

FOLLOW-UP INFORMATION FORM

APPENDIX E

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

FOLLOW-UP INFORMATION FORM

The study you and your child are participating in is part of a larger project on human development and family relations. Our work is routinely reported in professional journals and scientific meetings and we like to have the parents of our research participants aware of the kind of work we are doing. Thus, if you would like to receive follow-up information on the results of the specific studies your child participates in, check the appropriate box below and provide a mailing address that will be good (to your knowledge) for the next twelve to twenty-four months.

Please send periodic summaries of the findings of the studies in which I and/or my child were participants.

Mailing address: (please print)

Name _____

Address _____

City or Town _____

State _____ Zip _____

Today's Date _____

APPENDIX F

MODIFIED SMAST

APPENDIX F

Dr. _____

FY Study SNAST

MICHIGAN STATE UNIVERSITY - Department of Psychology
East Lansing, MI. 48824

Following are some questions about your use of alcohol and other drugs.
Please answer them by circling either YES or NO.

1. Do you feel you are a normal drinker? (By normal we mean you drink less than or as much as most other people.)

YES NO

2. Does your wife, husband, a parent or other near relative ever worry or complain about your drinking?

YES NO

3. Do you ever feel guilty about your drinking?

YES NO

4. Have you used marijuana (including also hash) more than 1000 times in your life?

YES NO

5. Have you used marijuana (including also hash) more than 100 times in your life?

YES NO

6. Do friends or relatives think you are a normal drinker?

YES NO

7. Are you able to stop drinking when you want to?

YES NO

8. Have you used stimulant drugs (like speed, benzedrine (bennies), dexedrine) more than 10 times in your life?

YES NO

9. Have you ever attended a meeting of Alcoholics Anonymous?

YES NO

10. Have you used sedative (depressant) drugs (like downers, amytal, valium, qualludes, reds) more than 10 times in your life?

YES NO

11. Has drinking ever created problems between you and your wife, husband, a parent, or other near relative?

YES NO

APPENDIX F (cont'd.)

12. Have you ever gotten into trouble at work because of drinking?
- YES NO
13. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?
- YES NO
14. Have you ever gone to anyone for help about your drinking?
- YES NO
15. Have you used opiate drugs (like heroin, methadone, darvon) more than 10 times in your life?
- YES NO
16. Have you ever been in a hospital because of drinking?
- YES NO
17. Have you ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcoholic beverages?
- YES NO
18. Have you ever used cocaine?
- YES NO
19. Have you ever been arrested, even for a few hours, because of drunken behavior?
- YES NO

APPENDIX G

BACKGROUND INFORMATION QUESTIONNAIRE

APPENDIX G

MICHIGAN STATE UNIVERSITY - Department of Psychology
East Lansing, MI 48824

FY Study P6 (DEMO)

Background Information *

We would like to ask you a few questions about yourself. The questions ask about your life during the time you were growing up, as well as now. Please answer all of them as completely as possible. (PLEASE PRINT)

1. What is your full name?

FIRST MIDDLE LAST

2. What is your date of birth?

MONTH DAY YEAR

3. Where did you live most of the time until you were 18?

CITY OR TOWN (COUNTY) STATE COUNTRY (IF, NON - U.S.)
if rural

4. Until you were 18, about how many times did your family move? (CIRCLE ONE)

1 2 3 4 5 6 7 or more

5a. Are both of your natural parents still living together? CIRCLE ONE
YES (If YES, go to question 6) NO (if NO, go to question 5b)

5b. Your natural parents are no longer living together because: (CIRCLE ONE)

1. mother died
2. father died
3. both parents died
4. parents divorced or separated
5. parents never lived together
6. other (please explain) _____

6a. What adults did you live with most of the time from birth to 18? (CIRCLE ONE)

1. mother and father
2. mother, but no adult male
3. father, but no adult female
4. mother and step-father
5. father and step-mother
6. other (please explain) _____

6b. Who was the main wage earner in your family during the time you were

*Copyright, 1980 by Robert A. Zucker, Ph.D. and Robert B. Noll.

APPENDIX G (cont'd.)

growing up (check one)

- (a) your father _____
 (b) your mother _____
 (c) someone else _____
 (their relationship to you)
 what was _____

FOR YOUR FATHER

- 7a. What was the occupation of your father (or the adult male) who lived with you most of the time until you were 18? (Give job title; what kind of work he did; and what kind of business or industry it was)
- _____
- _____

- 7b. What was the highest grade of school he completed (CIRCLE THE HIGHEST GRADE COMPLETED)

None	0								
Elementary	1	2	3	4	5	6	7	8	
High School	9	10	11	12					
College	1	2	3	4					Degree? _____
Graduate school	5	6	7	8+					Degree? _____

FOR YOUR MOTHER

- 8a. What was the occupation of your mother (or the adult female) who lived with you most of the time until you were 18? (Give job title; what kind of work she did; and what kind of business or industry it was)
- _____
- _____

- 8b. What was the highest grade of school she completed? (CIRCLE THE HIGHEST GRADE COMPLETED)

None	0								
Elementary	1	2	3	4	5	6	7	8	
High school	9	10	11	12					
College	1	2	3	4					Degree? _____
Graduate school	5	6	7	8+					Degree? _____

- 9a. Until you were 18, what religion was practiced in your home most of the time? (CIRCLE ONE)

1. Protestant
 2. Roman Catholic
 3. Jewish
 4. None, no religion
 5. Other (please explain) _____

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APPENDIX G (cont'd.)

9b. What denomination? (Please try to specify fully)

9c. Until you were 18, how often did you attend religious services? (CIRCLE ONE)

1. more than once a week
2. about once a week
3. 2 - 3 times a month
4. less than once a month
5. never

10a. What is your religious preference now? (CIRCLE ONE)

1. Protestant
2. Roman Catholic
3. Jewish
4. None, no religion
5. Other (please explain) _____

10b. What denomination? (Please try to specify fully)

10c. About how often did you attend religious services in the last year? (CIRCLE ONE)

1. more than once a week
2. about once a week
3. 2-3 times a month
4. less than once a month
5. never

11. What was the highest grade of school you completed? CIRCLE THE HIGHEST GRADE COMPLETED)

None	0								
Elementary	1	2	3	4	5	6	7	8	
High school	9	10	11	12					
College	1	2	3	4					Degree? _____
Graduate school	5	6	7	8+					Degree? _____

12a. What is your present occupation? (Give job title; what kind of work you do; and what kind of business or industry it is)

APPENDIX G (cont'd.)

12b. Approximately what is your present annual family income? (CIRCLE ONE)

1. under \$4,000
2. \$4,001 - \$ 7,000
3. \$ 7,001 - \$10,000
4. \$10,001 - \$13,000
5. \$13,001 - \$16,000
6. \$16,001 - \$20,000
7. \$20,001 - \$30,000
8. over \$30,000

13. How many times have you been married? (CIRCLE ONE)

1 2 3 4+

14. List the children you have had from your present marriage or any previous marriages. Please list all children, starting with the oldest, and include birthdate, sex, and if the child lives with you now.

	NAME	BIRTHDATE (month & year)	SEX	LIVING WITH YOU NOW	AND LIVING WITH YOU NOW (check one)
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____

Please circle the names of the children you listed above who are from your present marriage.

THANK YOU FOR FILLING OUT THIS QUESTIONNAIRE.

APPENDIX H

MSU Family Study

Robert A. Zucker, Ph.D. and Hiram Fitzgerald, Ph.D.

Principal Investigators

MANUAL FOR OBSTETRICAL COMPLICATIONS*

*Adopted from UCLA Infant Studies Project; Manual authored by Bruce Littman, M.D. & Arthur H. Parmelee, M.D. (also see p. 9).

APPENDIX H (cont'd.)

The following manual and scoring form were developed for use in assessing the occurrence of any complicating factors in the maternal medical history. The scoring form lists 41 separate items and is based on the Prechtl system of optimal scoring, i.e., each category is felt to be associated with increased risk of infant mortality and therefore would likely have an effect on development if the infant survived.

Each item is scored after consulting the manual. At the conclusion of the scoring the optimal responses are summed. Since there will be occasional items where information is not available, the final percentage raw score is used, i.e., the number of optimal responses divided by the number of items completed. We have converted raw scores to a standard mean score of 100 and a standard deviation of 20. It must be remembered that higher scores are more optimal ones.

Reference performances by a group of premature infants are shown in the back of this booklet and allow for comparison to a representative population.

APPENDIX H (cont'd.)

OCS SCORING SHEET

Infant's Name _____
 Hospital _____
 Birth Date _____ Sex M ____ F ____
 E.D.C. _____
 Date Form Completed _____
 Mother's Name _____

<u>ITEM</u>	<u>Optimal Response</u>			
1. Gestational Age	>37 Weeks	<input type="checkbox"/>	<37 Weeks	<input type="checkbox"/>
2. Birth Weight	2500 gms	<input type="checkbox"/>	< 2500 gms	<input type="checkbox"/>
3. Marital Status	Married	<input type="checkbox"/>	Other	<input type="checkbox"/>
4. Maternal Age	18 - 30	<input type="checkbox"/>	Other	<input type="checkbox"/>
5. Previous Abortions	2 or less	<input type="checkbox"/>	3 or more	<input type="checkbox"/>
6. Previous Premature Births	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
7. Previous Stillbirths	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
8. Prolonged Unwanted Sterility	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
9. Length of Time Since Last Pregnancy	> 12 mos.	<input type="checkbox"/>	< 12 mos	<input type="checkbox"/>
10. Parity	6 or less	<input type="checkbox"/>	7 or more	<input type="checkbox"/>
11. Pelvis	No Disproportion	<input type="checkbox"/>	Dispronortion	<input type="checkbox"/>
12. Rh Antagonism or Other Blood Group Incompatibility	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
13. Bleeding During Pregnancy	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
14. Infections or Other Acute Medical Problems During Pregnancy	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>

APPENDIX H (cont'd.)

15. Drugs Given to Mother During Pregnancy	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
16. Maternal Chronic Diseases	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
17. Chronic Drug Abuse	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
18. Blood Pressure During Pregnancy	< 140/90	<input type="checkbox"/>	> 140/90	<input type="checkbox"/>
19. Albuminuria	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
20. Hyperemesis	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
21. Hemoglobin Level at End of Pregnancy	10 or more	<input type="checkbox"/>	< 10	<input type="checkbox"/>
22. Twins or Multiple Birth	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
23. Membranes Ruptured Prior to Delivery	0-12 hours	<input type="checkbox"/>	> 12 hours	<input type="checkbox"/>
24. Delivery	Spontaneous	<input type="checkbox"/>	Other	<input type="checkbox"/>
25. Forceps	None or Elective, Low Forceps	<input type="checkbox"/>	Other	<input type="checkbox"/>
26. Duration, First Stage	3-20 hours	<input type="checkbox"/>	< 3 or > 20 hrs.	<input type="checkbox"/>
27. Duration, Second Stage	10-120 mins.	<input type="checkbox"/>	< 10 or > 120 mins.	<input type="checkbox"/>
28. Induced Labor	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
29. Drugs During Labor and Delivery	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
30. Amniotic Fluid	Clear	<input type="checkbox"/>	Other	<input type="checkbox"/>
31. Fetal Presentation - Delivery	Vertex	<input type="checkbox"/>	Other	<input type="checkbox"/>
32. Fetal Heart Rate During Labor	100-160/Min.	<input type="checkbox"/>	< 100 or > 160 (per min.)	<input type="checkbox"/>
33. Nuchal or Knotted Cord	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
34. Cord Prolapse	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
35. Placental Infarction	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
36. Placenta Previa or Abruption	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
37. Onset of Stable Respiration Within 6 minutes	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

APPENDIX H (cont'd.)

38. Resuscitation Required	No <input type="checkbox"/>	Yes <input type="checkbox"/>
39. Prenatal Care During First Half of Pregnancy	Yes <input type="checkbox"/>	No <input type="checkbox"/>
40. Apgar Score - One minute	7-10 <input type="checkbox"/>	0-6 <input type="checkbox"/>
41. Apgar Score - Five minutes	7-10 <input type="checkbox"/>	0-6 <input type="checkbox"/>

- a. Total (Raw Score)
- b. Number of Items Recorded
- c. % Raw Score (a/b)
- c. Converted % Raw Score

CONVERSION TABLE

100	160	71	63
99	146	70	63
98	146	69	60
97	135	68	57
96	131	67	54
95	131	66	54
94	122	65	54
93	121	<65	50
92	115		
91	112		
90	112		
89	104		
88	103		
87	98		
86	98		
85	98		
84	93		
83	92		
82	89		
81	87		
80	87		
79	81		
78	80		
77	78		
76	76		
75	74		
74	73		
73	71		
72	66		

APPENDIX H (cont'd.)

<u>ITEM</u>	<u>COMMENT</u>
1. Gestational Age	<p>Gestational age refers to post-menstrual age, i.e., age at birth in weeks from the beginning of mother's last menstrual period.</p> <p>Normal Response: >37 Weeks</p>
2. Birth Weight	<p>Normal Response: >2500 grams</p>
3. Marital Status	<p>This pertains to the mother's status at the time of delivery and would involve legal and common law.</p> <p>Normal Response: Married</p>
4. Maternal Age	<p>Normal Response: 18-30 Years</p>
5. Previous Abortions	<p>Abortion is defined as pregnancy termination before gestational age of 20 weeks or birthweight less than 500 grams.</p> <p>Normal Response: None</p>
6. Previous Premature Births	<p>Prematurity is a gestational age of less than 37 weeks.</p> <p>Normal Response: None</p>
7. Previous Stillbirths	<p>A stillbirth is an infant born dead who is greater than 20 weeks gestational age and 500 grams birthweight.</p> <p>Normal Response: None</p>
8. Prolonged Unwanted Sterility	<p>This item refers to those situations where a conception has been unsuccessful for more than 2 years.</p> <p>Normal Response: None</p>
9. Length of Time Since Last Pregnancy	<p>This is the period from the end of the prior pregnancy to the birth of this infant.</p> <p>Normal Response: >12 months</p>

10. Parity
This is delivery of a viable infant of more than 20 weeks gestational age and 500 grams birthweight.
Normal Response: 6 or less
11. Pelvis
This pertains to whether cephalopelvic disproportion is felt to be present by the medical staff.
Normal Response: None
12. Rh or Other Blood Group Incompatibility
This item refers to only maternal-fetal incompatibilities of whatever type, i.e., Rh, ABO, etc.
Normal Response: None
13. Bleeding During Pregnancy
Bleeding here may cover the spectrum of minimal spotting to hemorrhage and may occur at any time.
Normal Response: None
14. Infections or Other Acute Medical Problems During Pregnancy
All medical problems of whatever severity are given affirmative responses here as long as they are acute.
Normal Response: None
15. Drugs Given to Mother During Pregnancy
This refers to drugs used on an acute basis during pregnancy. It excludes vitamins, iron and those involved in drug abuse.
Normal Response: None
16. Maternal Chronic Diseases
Usually covered here are those illnesses beginning prior to conception and continuing through the pregnancy such as diabetes, hypertension, etc. Drug abuse is excluded.
Normal Response: None
17. Chronic Drug Abuse
All drugs used illegally are referred to here. This may include approved medications used in an abusive fashion, e.g., amphetamines. Involved here are alcohol, LSD, marijuana, etc.
Normal Response: None

APPENDIX H (cont'd.)

- | | |
|--|---|
| 18. Blood Pressure During Pregnancy | <p>Hypertension occurring even once is scored abnormally.</p> <p>Normal Response: <140/90</p> |
| 19. Albuminuria | <p>One occurrence during pregnancy is sufficient. Only those greater than 2+ are noted here.</p> <p>Normal Response: None</p> |
| 20. Hyperemesis | <p>Only excessive vomiting requiring hospitalization is scored affirmatively.</p> <p>Normal Response: None</p> |
| 21. Hemoglobin at End of Pregnancy | <p>This is the value found prior to delivery.</p> <p>Normal Response: 10 or greater</p> |
| 22. Twins or Multiple Birth | <p>Normal Response: None</p> |
| 23. Membranes Ruptured Prior to Delivery | <p>Membrane rupture may be spontaneous or artificial. Only length of time is pertinent.</p> <p>Normal Response: 12 hours or less</p> |
| 24. Delivery | <p>Spontaneous delivery is a vaginal birth with no more than low forceps being used. Vacuum extraction, induction, C-section receive non-optimal responses.</p> <p>Normal Response: Spontaneous</p> |
| 25. Forceps | <p>Normal Response: Low forceps (none, or elective)</p> |
| 26. Duration, First Stage | <p>First stage labor is that from onset of labor until complete cervical dilatation.</p> <p>Normal Response: 3-20 hours</p> |
| 27. Duration, Second Stage | <p>Second stage labor is that from complete cervical dilatation until birth of infant.</p> <p>Normal Response: 10-120 minutes</p> |

APPENDIX H (cont'd.)

- | | |
|--|--|
| 28. Induced Labor | <p>Not to be used during first or second stage of labor.</p> <p>Normal Response: None</p> |
| 29. Drugs During Labor and Delivery | <p>Only oxygen and local perineal anesthetics may receive optimal responses. All others including all anesthetics, analgesics, hypnotics do not.</p> <p>Normal Response: Nothing more than Oxygen or perineal anesthetic.</p> |
| 30. Amniotic Fluid | Normal Response: Clear |
| 31. Fetal Presentation-Delivery | Normal Response: Vertex |
| 32. Fetal Heart Rate During Labor (First & Second Stage) | <p>This may be detected by monitor or trans-abdominal auscultation at any time during labor. The occurrence of any acceleration or any deceleration for whatever length of time is scored non-optimally.</p> <p>Normal Response: 100-160</p> |
| 33. Nuchal or Knotted Cord | Normal Response: None |
| 34. Cord Prolapse | Normal Response: None |
| 35. Placental Infarction | Normal Response: None |
| 36. Placenta Previa or Abruptio | Normal Response: None |
| 37. Onset of Stable Independent Respiration Within 6 Minutes | Stable independent respiration is the maintenance of pulmonary function without artificial assistance. |
| 38. Resuscitation Required | <p>Resuscitation here refers to the use of any artificial means to support respiration such as face mask with positive pressure or endotracheal intubation. It excludes use of the bulb syringe or other means of oropharyngeal suctioning.</p> <p>Normal Response: None</p> |

APPENDIX H (cont'd.)

- | | |
|---|-----------------------|
| 39. Prenatal Care During First
Half of Pregnancy | Normal Response: Yes |
| 40. Apgar Score - 1 Minute | Normal Response: 7-10 |
| 41. Apgar Score - 5 Minute | Normal Response: 7-10 |

Note: Manual reproduced from Littman, Bruce & Parmelee, Arthur H.
Manual for Obstetrical Complications. UCLA Infant Studies Project,
Dept. of Pediatrics and Mental Retardation Center. Univ. of
Calif., Los Angeles, October, 1974.

APPENDIX I

MANUAL FOR POSTNATAL COMPLICATIONS SCALE

APPENDIX I

MSU Family Study

Robert A. Zucker, Ph.D. and Hiram Fitzgerald, Ph.D.

Principal Investigators

MANUAL FOR POSTNATAL COMPLICATIONS SCALE*

*Adopted with permission from UCLA Infant Studies Project;
Manual authored by Bruce Littman, M.D. & Arthur H.
Parmelee, M.D. (also see p. 7).

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APPENDIX I (cont'd.)

Recognizing the need for a clear and finite list of events to provide an assessment of an infant's postnatal course, the following form was developed (called Postnatal Complication Scale or PCS). It purposely avoids any attempt to isolate single occurrences. Likewise it is restricted to ten items thereby, also avoiding an extensive list of possible factors. In so doing it relies on the occurrence of certain clusters of events often seen postnatally in newborn infants.

The technique involved is that of optimal scoring initially employed by Prechtl. Items used are those that reflect increased risk of mortality for the infant and therefore with survival would presume to be significant factors in his later development.

This system is a self weighting one. As a result the severity of the events will be reflected in how deviant the score is, i.e., how far from optimal are the sequence of factors arising postnatally.

The form has been piloted and used on population of term and premature infants. We have chosen to convert raw scores to another scale derived from work on pilot infants. In so doing the means were adjusted to 100 and the standard deviations to 20. Representative scores may be found at the back of this booklet. It must be stressed that higher scores represent more optimal courses, e.g., 160 vs. 104, etc.

Scoring is accomplished by reference to the manual itself and then completing each of the individual items. The span of time covered by this form is from birth to one month of age regardless of time from conception. After the raw score is totaled it may then be converted to its corrected form and appropriate comparisons made by use of the tables available in the back.

APPENDIX I (cont'd.)

POSTNATAL COMPLICATION SCORING SHEET

Infant's Name _____ Sex M ___ F ___
 Hospital _____
 Birth Date _____
 EDC _____
 Date Form Completed _____

ITEM

- | | | | | |
|---|-----|--------------------------|-----|--------------------------|
| 1. Respiratory Distress | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 2. Positive or Suspected Infection | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 3. Ventilatory Assistance | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 4. Noninfectious Illness or Anomaly | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 5. Metabolic Disturbance | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 6. Convulsion | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 7. Hyperbilirubinemia or Exchange Transfusion | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 8. Temperature Disturbance | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 9. Feeding Within 48 Hours | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| 10. Surgery | No | <input type="checkbox"/> | Yes | <input type="checkbox"/> |

TOTAL
(Raw Score) ☐

CONVERSION TABLE

<u>Raw Score</u>		<u>Converted Score</u>		<u>Converted Score</u>
10	-	160		<input type="checkbox"/>
9	-	104		
8	-	87		
7	-	81		
6	-	77		
5	-	72		
4	-	67		
3	-	55		
2	-	55		
1	-	50		
0	-	-		

APPENDIX I (cont'd.)

<u>ITEM</u>	<u>COMMENT</u>
1. Respiratory Distress	<p>The occurrence of respiratory distress in any form would elicit a positive response in this item. Distress is defined as at least one or more of the following: (1) grunting, (2) retractions, (3) respiratory rate greater than 60, or (4) nasal flaring. The distress in any form must be present for more than an hour.</p> <p>Normal Response: No respiratory distress</p>
2. Positive or suspected infection	<p>This refers to the occurrence of any infectious illness affecting any part of the body. The site may be as superficial as the skin or as widespread as sepsis. Similarly the degree may be from very mild to very serious. The term suspected refers to the point that the infection need not be proven by culture techniques but merely suspected by the physician. Thus treatment of suspected sepsis would be scored affirmatively.</p> <p>Normal Response: No infection</p>
3. Ventilatory Assistance	<p>This item is intended to define further complications of respiratory distress. It entails the use of any of the following methods in the support of respiration: (1) intermittent positive pressure breathing, (2) continuous positive pressure breathing (3) continuous positive airway pressure, or (4) negative chest wall pressure. These methods may be administered by mask or endotracheal intubation.</p> <p>Normal Response: No ventilatory assistance</p>

APPENDIX I (cont'd.)

4. Noninfectious Illness or Anomaly

In an attempt to describe all other major illnesses or congenital anomalies that might be brought to bear upon the infant, this item is scored affirmatively if that should occur. It specifically excludes any type of infection. Anomaly refers to any structural abnormality whether congenital or acquired. Minor skin anomalies are not included. Some examples are: (1) CNS-hemorrhage hydrocephalus, (2) GU-hypospadias, ambiguous genitalia, (3) GI-umbilical hernia, intestinal obstruction, (4) CV-PDA, other CHD, shock (BP less than 30), tachycardia (AP greater than 180) bradycardia (AP less than 100).

Normal Response: No illnesses or anomalies.

5. Metabolic Disturbance

Metabolic disturbances are those problems usually diagnosed by examinations of bodily fluids. Inborn errors of metabolism are also covered in this item. The most common disturbances with their physiologic limits are defined below:

Hypoglycemia	Prematures	20 mg%
	Terms	30 mg%
Hypocalcemia	Prematures	7 meq/l
	Terms	8 meq/l
Hypomagnesemia	All	1.27 meq/l
Hypermagnesemia	All	1.75 meq/l
Acid-Base	All	pH 7.3
		pH 7.45
Sodium	All	130 meq/l
		150 meq/l
Potassium	All	3.0 meq/l
		5.5 meq/l

Normal Response: No metabolic disturbance.

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APPENDIX I (cont'd.)

6. Convulsion

Here a convulsion is defined as any clonic, tonic, or repetitive activity of a tremorous nature felt to be a seizure by the medical staff. Because of the frequent non-convulsive seizure-like activity so often seen by nursery personnel in order for a positive response to be scored the activity must be witnessed by a physician.

Normal Response: No convulsion

7. Hyperbilirubinemia or Exchange Transfusion

A bilirubin level greater than 14 mg% is defined as hyperbilirubinemia. Although exchange transfusion may be used for other purposes such as hemolytic disease of the newborn or other causes of hyperbilirubinemia.

Normal Response: No hyperbilirubinemia or exchange transfusion.

8. Temperature Disturbance

A disturbance is defined as any temperature outside the zone of 36-37.5 degrees Centigrade. Because of the common occurrence of hypothermic temperatures in the delivery room after birth, a positive response refers only to those situations arising at least one hour postnatally.

Normal Response: No temperature disturbance

9. Feeding Within 48 Hours

This item is intended to be an assessment of the infant's general state of health around the time of birth. If feedings are begun normally but then discontinued at a later date the item is still scored optimally.

Normal Response: The beginning of feeding within 48 hours of birth

APPENDIX I (cont'd.)

10. Surgery

Surgery refers to (1) any procedure done under general anesthesia by a surgeon and would include all endoscopic techniques, (2) any procedure requiring incision through the skin. However certain things are not to be included here and spinal taps, circumcisions, cutdowns, subdural taps, ventricular taps and other non-anesthetic radiologic studies are not to be given positive responses.

Normal Response: No surgery

APPENDIX I (cont'd.)

EXAMPLES

1. Jay S. B.D. 7/1 EDC 7/7 PCS Completed 8/5

This term male was born uneventfully and placed in the regular nursery. Feedings were begun at 6 hours of age and though initially being dextrose and water they were advanced to formula at 12 hours. Other than a single temperature dip to 35.9 C at 18 hours of age there was no difficulties and he was discharged at 72 hours of age.

PCS Score 9 (1 off for temperature disturbance)
Converted Score 104

2. Cindy Y. B.D. 6/5 EDC 7/22 PCS Completed 7/6

This premature infant was delivered without complication at 33 weeks gestational age. Shortly after birth she began having respiratory distress which ultimately persisted but resolved over the next 4 days. During that period she had repeated blood sampling which showed normal electrolytes but a recurring acidosis with pH's in the 7.25-7.29 range. As the distress resolved a temperature drop to 35 C alerted the attending physician and with sepsis suspected antibiotics were begun; cultures later proved negative. Feedings were begun at 96 hours of age and 10 days later she was sent home.

PCS Score 5 (1 off for each of the following)

- a. Temperature
- b. Respiratory Distress
- c. Acidosis
- d. Feeding Delay
- e. Suspected Infection

Converted Score 77

Note: Manual reproduced with permission from Littman, Bruce & Parmelee, Arthur H. Manual for Postnatal Complications Scale. UCLA Infant Studies Project, Dept. of Pediatrics and Mental Retardation Center. Univ. of Calif., Los Angeles, Copyright, 1974.

APPENDIX J-1

SEMI-STRUCTURED PREGNANCY INTERVIEW WITH HUSBAND

APPENDIX J-1

SEMI-STRUCTURED PREGNANCY INTERVIEW WITH HUSBAND*

S# _____

FY Study - Preg. Int.

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

Pregnancy Interview

Introduce yourself to the family and insure that they understand you are from the MSU family study. After you feel comfortable and have met the father and mother, give the mother the History of Pregnancy, ACL, Spanier, and Wakefield to fill out. Make certain she understands the instructions for all of them (you can go over each set of instructions for each instrument, if you feel it is necessary).

You should interview the father first, while the mother is working on her questionnaires. Try to find separate rooms or different areas of the home for them to work.

I. HUSBAND'S INTERVIEW

1. When a woman is pregnant things can go really well, or problems can arise. Some husbands enjoy the experience immensely, while others find the pregnancy very disturbing. Changes often occur that seem terrific, or changes occur that are really bothersome.
 - a. What are your feelings about the pregnancy right now?
Probe: Positive-negative feelings.
 - b. How did you feel about your wife's pregnancy for the first few months of the pregnancy?
Probe: Positive-negative feelings.
 - c. Overall, how have you felt about the pregnancy; that is, what has been your predominant attitude towards your wife's being pregnant?
 - d. In what ways has your wife changed since she became pregnant?
Probe: Specific examples of changed behavior or emotional responses and how he feels about each change.
 - e. In what ways have the other children changed since your wife became pregnant?
Probe: Specific examples of changed behavior or emotional responses, which kids, and how he feels about each change.
 - f. How do you think you have changed since your wife became pregnant?
Probe: Specific examples of changed behaviors or emotional responses, and how he feels about each change.

*Copyright, 1980 by Robert A. Zucker, Ph.D. and Robert B. Noll.

APPENDIX J-1 (cont'd.)

2. Some couples find that a pregnancy can cause some distrust between them and they feel more distant from each other, while others feel more trusting and that the pregnancy brings them closer together.
 - a. Do you feel closer to your wife since she became pregnant or more distant?
 - b. In what ways has this changed during the course of the pregnancy (i.e., ability to talk)?
3. Some men find that having their wife pregnant causes them to feel really good about themselves while others worry about such things as doctor bills or possible delivery complications and they feel down much of the time.
 - a. How do you feel about yourself now, that is, your present feelings of well-being or self-esteem?
Probe: Positive feelings and/or negative feelings.
 - b. In what ways has this changed since your wife became pregnant?
 - c. In what ways have your feelings about yourself changed during the course of the pregnancy?
Probe: Specific examples of changed behavior or emotional responses and how he feels about each change.
 - d. In what ways has your health changed since your wife became pregnant?
Probe: Specific maladies, severity, and remedies used (i.e., doctor visit, over-the-counter drugs).
4. Another change that often occurs during a pregnancy is that men find that they feel differently towards their wife. Some enjoy their wives immensely when they are pregnant, while others find them intolerable.
 - a. How do you feel about your wife now?
 - b. How did you feel about your wife when you found out she was first pregnant?
 - c. In what ways did your feelings towards your wife seem to change from before she was pregnant to afterwards?
Probe: Specific examples of changed behavior or emotional responses and how he feels about each change.
 - d. In what ways has the pregnancy changed your sex life?
Probe: Quantity, quality, and changes in desire of husband or wife.

APPENDIX J-2 (cont'd.)

- d. In what ways have your feelings towards the new baby changed during the pregnancy?
Probe: Specific examples of changed feelings and how she feels about each one.
- e. When did you first notice activity from the new baby (in utero)?
Probe: When, amount, etc. If appropriate, how do you feel about the movements?
- f. What type of plans have you made for delivery of the new baby?
Probe: Special programs, anxiety about delivery, possible complications.
- g. What preparations have you already made for the arrival of the new baby?
Probe: Details, specific examples of items bought, baby showers, etc.

12. The last thing I would like to talk with you about is your friends and relatives. When a woman is pregnant additional support can be extremely useful and necessary to keep things running smoothly. On the other hand, meaningful relatives and friends can be a lot of trouble and just cause more headaches. Sometimes they just don't seem to be there when you need them, or they are there just when you don't need them.

- a. In what ways have friends been helpful to you?
Probe: Who, amount of time, type support, i.e., behavior or emotional.
- b. In what ways have friends been a pain in the neck?
Probe: Who, amount of time, type problems and emotional responses.
- c. In what ways have relatives been helpful to you?
Probe: Who, amount of time, type support, i.e., behavior or emotional.
- d. In what ways have relatives been a pain in the neck?
Probe: Who, amount of time, type problems, and emotional responses.

If appropriate: Your responses have been very helpful for me and are appreciated. Is there anything else about the pregnancy or the new baby that you think I might be interested in? Thank you very much for your cooperation.

* * * * *

Collect the questionnaires from the father and insure that he understood what was required on each one and had no difficulties.

APPENDIX J-1 (cont'd.)

•

If appropriate: (Your responses have been very helpful for me and are appreciated.) Is there anything else about the pregnancy or the new baby that you can think of that we haven't already covered? Thank you very much for your cooperation.

* * * * *

Collect the questionnaires from the mother and give the father the ACL, Spanier, and Wakefield to fill out. Again, go over the instructions if you feel that it is necessary. Take the mother to another part of the house to conduct her interview while the father is filling out his forms.

APPENDIX J-2

SEMI-STRUCTURED PREGNANCY INTERVIEW WITH WIFE

APPENDIX J-3

SEMI-STRUCTURED INTERVIEW SCALES

APPENDIX J-3

SEMI-STRUCTURED INTERVIEW SCALES

H = Husband's interview

W = Wife's interview

Scale 1 (H): Father's present attitude towards the pregnancy.
(Q. 1a, also 5a, b, c, d, e, f, g)

1. Entirely positive. Pregnancy experienced as highly enjoyable, with no negative aspects.
2. Generally positive. Pregnancy experienced as mostly enjoyable, with a few negative aspects.
3. Moderately positive. Pregnancy experienced as enjoyable, with some negative aspects, but good outweighs the bad.
4. Positive and negative aspects are about the same.
5. Moderately negative. Pregnancy experienced unfavorably with some positive aspects, but bad outweighs the good.
6. Generally negative. Pregnancy experienced unfavorably, with a few positive aspects.
7. Entirely negative. Pregnancy experienced unfavorably, with no positive aspects.

Scale 19 (W): Mother's present attitude towards the pregnancy.
(Q. 7a, also 12 a, b, c, d, e, f)

Same as Scale 1

APPENDIX J-3 (cont'd.)

Scale 2 (H): Father's attitude towards the pregnancy for the first few months of the pregnancy.
(Q. 1b)

1. Entirely positive. (See Scale 1 for specific descriptions)
2. Generally positive.
3. Moderately positive.
4. Positive and negative aspects are about the same.
5. Moderately negative.
6. Generally negative.
7. Entirely negative.

Scale 20 (W): Mother's attitude towards the pregnancy for the first few months of the pregnancy.
(Q. 7b)

Same as Scale 2

APPENDIX J-3 (cont'd.)

Scale 3 (H): Husband's perception of changes that his wife had made since becoming pregnant. Are the changes considered positive or negative?
(Q. 1d)

1. Positive changes only. Only recalls changes his wife has made that he liked.
2. Mostly positive changes. Recalls many positive changes and few negative changes.
3. More positive changes than negative changes.
4. Same amount of positive and negative changes. No difference.
5. More negative changes than positive changes.
6. Mostly negative changes. Recalls many negative changes and few positive changes.
7. Negative changes only. Only recalls changes that his wife has made that he disliked.

Scale 21 (W): Wife's perception of changes that her husband has made since she became pregnant. Are the changes considered positive or negative?
(Q. 7d)

Same as Scale 3

APPENDIX J-3 (cont'd)

Scale 4 (H): Husband's perception of changes that the children have made since his wife became pregnant. Are the changes considered positive or negative?
(Q. 1e)

1. Positive changes only. (See Scale 3 for specific descriptions.)
2. Mostly positive changes.
3. More positive changes than negative changes.
4. Same amount of positive and negative changes.
5. More negative changes than positive changes.
6. Mostly negative changes.
7. Negative changes only.

Scale 22 (W): Wife's perception of changes that the children have made since she became pregnant. Are the changes considered positive or negative?
(Q. 7e)

Same as Scale 4

APPENDIX J-3 (cont'd)

Scale 5 (H): Husband's perception of changes that he has made since his wife became pregnant. Are the changes considered positive or negative?
(Q. 1f)

1. Positive changes only. (See Scale 3 for specific descriptions.)
2. Mostly positive changes.
3. More positive changes than negative changes.
4. Same amount of positive and negative changes.
5. More negative changes than positive changes.
6. Mostly negative changes.
7. Negative changes only.

Scale 23 (W): Wife's perception of changes that she has made since she became pregnant. Are the changes considered positive or negative?
(Q. 7f)

Same as Scale 5

APPENDIX J-3 (cont'd.)

Scale 6 (H): The husband's feelings of closeness or distance to his wife since she became pregnant.
(Q. 2a)

1. Feels exceptionally close to his wife since she became pregnant.
2. Feels closer to his wife since she became pregnant.
3. No changes noted. Feels about the same.
4. Feels more distant from his wife since she became pregnant.
5. Feels exceptionally distant (alienated) from his wife since she became pregnant.

Scale 24 (W): The wife's feelings of closeness or distance to her husband since she became pregnant.
(Q. 9a)

1. Feels exceptionally close to husband since she became pregnant.
2. Feels closer to her husband since she became pregnant.
3. No changes noted. Feels about the same.
4. Feels more distant from her husband since she became pregnant.
5. Feels exceptionally distant (alienated) from her husband since she became pregnant.

APPENDIX J-3 (cont'd.)

Scale 7 (H): Changes in the husband's feelings of closeness or distance to his wife over the course of the pregnancy.
(Q. 2b)

1. Considerably closer. Reports numerous changes towards feeling closer. Marked changes.
2. Moderately closer. Reports feeling closer, but only slightly.
3. No changes noted.
4. Moderately more distant. Reports feeling more distant, but only slightly.
5. Considerably more distant. Numerous changes. Reports feeling alienated and out of touch.

Scale 25 (W): Changes in the wife's feelings of closeness or distance to her husband over the course of the pregnancy.
(Q. 9b)

Same as Scale 7

APPENDIX J-3 (cont'd.)

Scale 8 (H): Husband's present level of self-esteem.
(Q. 3a)

1. Extremely high. Expresses only positive feelings about himself. Seems very pleased with himself.
2. Generally high. Expresses mostly positive things about himself, but has a few doubts.
3. Moderately high. Seems content with himself, but has doubts.
4. Average. Positive things about the same as doubts.
5. Moderately low. Has more doubts about himself than positive things.
6. Generally low. Seems discouraged with himself and down in the dumps.
7. Extremely low. Excessive discouragement and self-doubt. Seems clinically depressed.

Scale 26 (W): Wife's present level of self-esteem.
(Q. 10a)

1. Extremely high. Expresses only positive feelings about herself. Seems very pleased with herself.
2. Generally high. Expressed mostly positive things about herself, but has a few doubts.
3. Moderately high. Seems content with herself, but has doubts.
4. Average. Positive things about the same as doubts.
5. Moderately low. Has more doubts about herself than positive things.
6. Generally low. Seems discouraged with herself and down in the dumps.
7. Extremely low. Excessive discouragement and self-doubt. Seems clinically depressed.

APPENDIX J-3 (cont'd.)

Scale 9 (H): Changes in the husband's self-esteem since his wife became pregnant.
(Q. 3b)

1. Vast improvement in his self-esteem since his wife became pregnant.
2. Moderate improvement in his self-esteem since his wife became pregnant.
3. Slightly higher self-esteem since his wife became pregnant.
4. No change noted in self-esteem since his wife became pregnant.
5. Slightly lower self-esteem since his wife became pregnant.
6. Moderate decline in self-esteem since his wife became pregnant.
7. Extreme decline in self-esteem since his wife became pregnant.

Scale 27 (W): Changes in the wife's self-esteem since she became pregnant.
(Q. 10b)

1. Vast improvement in her self-esteem since she became pregnant.
2. Moderate improvement in her self-esteem since she became pregnant.
3. Slightly higher self-esteem since she became pregnant.
4. No change noted in self-esteem since she became pregnant.
5. Slightly lower self-esteem since she became pregnant.
6. Moderate decline in self-esteem since she became pregnant.
7. Extreme decline in self-esteem since she became pregnant.

APPENDIX J-3 (cont'd.)

Scale 10 (H): Changes in the husband's self-esteem during the course of the pregnancy.
(Q. 3c)

1. Self-esteem has increased greatly during the course of pregnancy.
2. Self-esteem has moderately increased during the course of the pregnancy.
3. Self-esteem has slightly increased during the course of the pregnancy.
4. No change noted in self-esteem during the course of the pregnancy.
5. Self-esteem has slightly decreased during the course of the pregnancy.
6. Self-esteem has moderately decreased during the course of pregnancy.
7. Self-esteem has decreased greatly during the course of the pregnancy.

Scale 28 (W): Changes in the wife's self-esteem during the course of the pregnancy.
(Q. 10c)

Same as Scale 10

APPENDIX J-3 (cont'd.)

Scale 11 (H): Changes in the husband's health since his wife became pregnant.
(Q. 3d)

1. Vast improvement in his overall physical health.
2. Moderate improvement in his overall physical health.
3. Slight improvement in his overall physical health.
4. No changes noted. Overall health has remained about the same.
5. Slight decline in his overall physical health. Reports repeated illness (i.e., colds, flu) during pregnancy, but not before.
6. Moderate decline in his overall physical health. Reports frequent illness that has kept him from work during the pregnancy, but not before.
7. Severe decline in his overall physical health. Reports required hospitalization or lengthy bedrest during pregnancy, but not before.

APPENDIX J-3 (cont'd.)

Scale 12 (H): The husband's present feelings toward his wife.
(Q. 4a)

1. Enjoys her immensely. Can't remember feeling better about her. No negative feelings noted.
2. Generally feels favorably towards wife. Many more positive feelings discussed than negative feelings.
3. Feels slightly favorably towards his wife. Acknowledges a few more positive feelings than negative feelings.
4. Overall feelings towards wife neither favorable nor unfavorable. Positive and negative feelings seem the same. Balanced.
5. Feels slightly dissatisfied with his wife. Acknowledges a few more negative feelings than positive feelings.
6. Generally dissatisfied with his wife. Many more negative feelings discussed than positive feelings.
7. Extremely dissatisfied with his wife. Openly hostile towards wife. Nothing positive discussed.

Scale 29 (W): The wife's present feelings towards her husband.
(Q. 11a)

1. Enjoys him immensely. Can't remember feeling better about him. No negative feelings noted.
2. Generally feels favorably towards husband. Many more positive feelings discussed than negative feelings.
3. Feels slightly favorably towards her husband. Acknowledges a few more positive feelings than negative feelings.
4. Overall feelings towards husband neither favorable nor unfavorable. Positive and negative feelings seem the same. Balanced.
5. Feels slightly dissatisfied with her husband. Acknowledges a few more negative feelings than positive feelings.
6. Generally dissatisfied with her husband. Many more negative feelings discussed than positive feelings.
7. Extremely dissatisfied with her husband. Openly hostile towards husband. Nothing positive discussed.

APPENDIX J-3 (cont'd.)

Scale 13 (H): Husband's feelings toward wife when he first found out that she was pregnant.
(Q. 4b)

1. Absolutely delighted. Can never remember feeling better about her. (May also have wanted very much to have it happen.)
2. Generally felt favorably towards his wife. Many more positive aspects recalled than negative aspects.
3. Felt slightly favorably towards his wife. Slightly more positive aspects recalled than negative aspects.
4. Positive and negative aspects about the same.
5. Felt slightly dissatisfied towards his wife. Slightly more negative aspects recalled than positive aspects.
6. Generally felt dissatisfied towards his wife. Many more negative aspects recalled than positive aspects.
7. Extremely dissatisfied with his wife. Cannot recall any positive aspects.

Scale 30 (W): Wife's feelings toward husband when she first found out that she was pregnant.
(Q. 11b)

1. Absolutely delighted. Can never remember feeling better about him. (May also have wanted very much to have it happen.)
2. Generally felt favorably towards her husband. Many more positive aspects recalled than negative aspects.
3. Felt slightly favorably towards her husband. Slightly more positive aspects recalled than negative aspects.
4. Positive and negative aspects about the same.
5. Felt slightly dissatisfied towards her husband. Slightly more negative aspects recalled than positive aspects.
6. Generally felt dissatisfied towards her husband. Many more negative aspects recalled than positive aspects.
7. Extremely dissatisfied with her husband. Cannot recall any positive aspects.

APPENDIX J-3 (cont'd.)

Scale 14 (H): Changes in the husband's feelings towards his wife from before she was pregnant to afterwards.
(Q. 4c)

1. Vastly more positive. Dramatic changes in his positive regard towards his wife.
2. Moderately more positive. Significant increase in positive regard for his wife.
3. Slightly more positive. Slight increase in positive regard for his wife.
4. No changes reported.
5. Slightly more negative. Slight decrease in positive regard for his wife.
6. Moderately more negative. Significant decrease in positive regard for his wife.
7. Vastly more negative. Marked decrease in positive regard for his wife.

Scale 31 (W): Changes in the wife's feelings towards her husband from before she was pregnant to afterwards.
(Q. 11c)

1. Vastly more positive. Dramatic changes in her positive regard towards her husband.
2. Moderately more positive. Significant increase in positive regard for her husband.
3. Slightly more positive. Slight increase in positive regard for her husband.
4. No changes reported.
5. Slightly more negative. Slight decrease in positive regard for her husband.
6. Moderately more negative. Significant decrease in positive regard for her husband.
7. Vastly more negative. Marked decrease in positive regard for her husband.

APPENDIX J-3 (cont'd.)

Scale 15 (H): Changes in sex life attributed to the time of pregnancy by the husband.
(Q. 4d)

1. Significantly improved. Emphasis here on quality rather than quantity. Sex has become incredibly satisfying.
2. Moderately improved. Sex life is much more satisfying since pregnancy.
3. Slightly improved. Sex life has been better, but only slightly.
4. No changes noted.
5. Slightly worse. Sex life has been worse, but only slightly.
6. Moderately worse. Sex life has become significantly worse since pregnancy. Both quality and quantity have been effected, especially quality.
7. Significantly worse. Husband openly complains. Sex is infrequent and unsatisfying.

Scale 32 (W): Changes in sex life attributed to the time of pregnancy by the wife.
(Q. 11d)

Options 1-6 - same as Scale 15

7. Significantly worse. Wife openly complains. Sex is infrequent and unsatisfying.

APPENDIX J-3 (cont'd.)

Scale 16 (H): Husband's present feelings toward the new baby.
(Q. 5a, d, f)

1. Extremely excited about baby's anticipated arrival. Can hardly wait. (Probably planned, hoped for)
2. Moderately excited about the new baby.
3. Slightly excited about the new baby.
4. Neither excited nor hostile.
5. Slightly hostile towards the prospect of another baby, but still shows some positive affect.
6. Moderately hostile towards the prospect of another baby. Little positive affect in this area.
7. Extremely hostile towards the prospect of another baby. No positive affect in this area. (Probably unplanned/crummy accident)

Scale 33 (W): Wife's present feelings toward the new baby.
(Q. 12a, d, f)

Same as Scale 16

APPENDIX J-3 (cont'd.)

Scale 17 (H): Changes in the husband's attitude towards the new baby during the pregnancy.
(Q. 5b, c, d, e, f)

1. Changes in attitude have been totally positive towards the new baby. No negative changes.
2. Changes mostly positive towards having another baby, but some negative attitudes have developed.
3. Changes slightly more positive than negative. Changes in attitude and feelings toward new baby are predominantly mixed, but slightly more positive changes than negative changes.
4. Positive and negative changes about the same.
5. Changes slightly more rejecting than accepting. Changes in attitude and feelings toward new baby are predominantly mixed, but slightly more negative changes than positive changes.
6. Changes mostly negative towards having another baby, but some positive changes are acknowledged.
7. Changes in attitude have been totally negative towards the new baby. No positive changes. Feels like it is a total mistake to have another baby.

Scale 34 (W): Changes in the wife's attitude towards the new baby during the pregnancy.
(Q. 12b, c, d, e, f)

Same as Scale 17

APPENDIX J-3 (cont'd.)

Scale 18 (H): Support available from friend(s).
(Q. 6a, b)

1. Friend(s) extremely helpful. Always available when needed and willing to do what is needed. Can always be counted on.
2. Friend(s) moderately helpful. Can usually be depended upon when needed, but sometimes not available or willing to help.
3. Friend(s) slightly helpful. Can occasionally be depended upon when needed, but not very reliable. Overall more helpful than not.
4. Friend(s) neither helpful nor unhelpful. You can take them or leave them and it wouldn't matter.
5. Friend(s) slightly unhelpful. Can't usually be depended upon when needed, but occasionally helpful. Overall more unhelpful than helpful.
6. Friend(s) moderately unhelpful. Can't usually be depended upon when needed, but sometimes are available or willing to help.
7. Friend(s) extremely unhelpful. Never available when needed or willing to do what is needed. Never can be counted on.

Scale 35 (W): Support available from friend(s).
(Q. 13a, b)

Same as Scale 18

APPENDIX J-3 (cont'd.)

Scale 19 (H): Support available from relative(s).
(Q. 6c, d)

1. Relative(s) extremely helpful. Always available when needed and willing to do what is needed. Can always be counted on.
2. Relative(s) moderately helpful. Can usually be depended upon when needed, but sometimes not available or willing to help.
3. Relative(s) slightly helpful. Can occasionally be depended upon when needed, but not very reliable. Overall more helpful than not.
4. Relative(s) neither helpful nor unhelpful. You can take them or leave them and it wouldn't matter.
5. Relative(s) slightly unhelpful. Can't usually be depended upon when needed, but occasionally helpful. Overall more unhelpful than helpful.
6. Relative(s) moderately unhelpful. Can't usually be depended upon when needed, but sometimes are available or willing to help.
7. Relative(s) extremely unhelpful. Never available when needed or willing to do what is needed. Never can be counted on.

Scale 36 (W): Support available from relative(s).
(Q. 13c, d)

Same as Scale 19

APPENDIX K

GOUGH ADJECTIVE CHECKLIST

GOUGH ADJECTIVE CHECKLIST

204

APPENDIX L

HISTORY OF PREGNANCY

APPENDIX L

PY Study - Pregnancy History

S#

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI. 48824

History of Pregnancy *

*** Following is a list of common experiences of pregnancy. Please read each of the items and indicate (with a check) if you have experienced this since you became pregnant. Mark your answers in the left hand set of columns, under FREQUENCY.

OFTEN - at least weekly or more often
SOMETIMES - once or twice per month
RARELY - occasionally during the pregnancy
NEVER - this has never troubled you

	FREQUENCY			SEVERITY		
	OFTEN	SOMETIMES	RARELY	NEVER	SEVERE	MODERATE
1. Have you had morning sickness or nausea?						
2. Do you have headaches?						
3. Are you troubled with vomiting?						
4. Are you troubled by vaginal itching or burning?						
5. Have you had constipation?						
6. Have you had diarrhea?						
7. Do you have trouble getting to sleep or staying asleep?						
8. Are you troubled by feelings of depression?						
9. Have you been spotting or bleeding?						
10. Do you feel fatigued?						
11. Are you troubled by backaches?						
12. Have you felt irritable?						

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APPENDIX L (cont'd.)

FY Study - Pregnancy History 2

	FREQUENCY				SEVERITY		
	OFTEN	SOMETIMES	RARELY	NEVER	SEVERE	MODERATE	MILD
13. Do you feel anxious?							
14. Are you troubled by muscular aches?							
15. Have you had heartburn?							
16. Have you had increased sexual desires?							
17. Have you had decreased sexual desires?							
18. Do you have flushed feelings?							
19. Are you troubled by feelings of tension?							
20. Do you suffer from swollen feet or legs?							
21. Have you had dizzy spells?							
22. Do you feel euphoric?							
23. Are you troubled by frequent urination?							
24. Do you suffer from groin pain?							
25. Are you troubled by chills?							
26. Are you troubled by clumsiness?							
27. Have you had feelings of nervousness?							
28. Do you have trouble keeping your weight down?							
29. Are you bothered by cold hands or feet?							
30. Do you suffer from shortness of breath?							
31. Are you troubled by a general loss of social interest?							

APPENDIX L (cont'd.)

FY Study - Pregnancy History 3

	FREQUENCY			SEVERITY		
	OFTEN	SOMETIMES	RARELY	NEVER	SEVERE	MILD
32. Are you not gaining enough weight?						
33. Have you been bothered by indigestion?						

*** For each item you have checked, please go back and now indicate (with a check) how much it troubled you since you became pregnant. Mark your answers in the left hand set of columns, under SEVERITY.

- SEVERE - contacted your physician or unable to function normally
- MODERATE - disrupted your daily routine, but manageable
- MILD - you are aware of the problem, but it did not disrupt your daily routine

APPENDIX M

ANTISOCIAL BEHAVIOR CHECKLIST

APPENDIX M

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

N E V E R	R A R E L Y	S O M E T I M E S	O F T E N	
				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 antennae 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).

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APPENDIX M (cont'd.)

N E V E R	R A R E L Y	S O M E T I M E S	O F T E N	
				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 undesirable discharge from the military.

APPENDIX M (cont'd.)

N E V E R	R A R E L Y	S O M E T I M E S	O F T E N	
				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.

APPENDIX N

DETAILED DRINKING HISTORY

APPENDIX N

OR BEST
Code No.

DRINKING QUESTIONNAIRE

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 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 DO YOU HAVE 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 LAST 6 MONTHS, WHEN YOU GOT DRUNK, HOW BAD WAS YOUR MORNING?
.....

- Never bad (0)
- Not bad (1)
- A little less than average (2)
- Average (3)
- A little more than average (4)
- Very bad (5)
- Terrible (6)
- Worst possible (7)
- Never drunk enough to get hangover (8)

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?
1 or more times a day (1)
2 times a day (2)
Once a day (3)
Nearly every day (4)
1 or 4 times a week (5)
Less than once a year (10)
Never (11)

- b) THINK OF ALL THE TIMES YOU HAD WINE RECENTLY. WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE MORE THAN SIX GLASSES OR CANS?

- Nearly every time (1) SKIP TO QUESTION #2 BELOW
- More than half the time (2) SKIP TO QUESTION #2 BELOW
- Less than half the time (3)
- Once in a while (4)
- Never (5)

-2-

- c) WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE AS MANY AS FIVE OR SIX GLASSES?

- Nearly every time (1) SKIP TO QUESTION #2 BELOW
- More than half the time (2) SKIP TO QUESTION #2 BELOW
- Less than half the time (3)
- Once in a while (4)
- Never (5)

- d) WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE THREE OR FOUR GLASSES?

- Nearly every time (1) SKIP TO QUESTION #2 BELOW
- More than half the time (2) SKIP TO QUESTION #2 BELOW
- Less than half the time (3)
- Once in a while (4)
- Never (5)

- e) WHEN YOU DRINK WINE, HOW OFTEN DO YOU HAVE ONE OR TWO GLASSES?

- Nearly every time (1)
- More than half the time (2)
- Less than half the time (3)
- Once in a while (4)
- Never (5)

2. WHEN DRINKING BEER

- a) HOW OFTEN DO YOU USUALLY HAVE BEER?

- 3 or more times a day (1)
- 2 times a day (2)
- Once a day (3)
- Nearly every day (4)
- 1 or 4 times a week (5)
- Once or twice a week (6)
- 2 or 3 times a month (7)
- Less than once a month (8)
- Less than once a month but at least once a year (9)
- Less than once a year (10)

- b) THINK OF ALL THE TIMES YOU HAVE HAD BEER RECENTLY. WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE MORE THAN SIX GLASSES OR CANS?

- Nearly every time (1) SKIP TO QUESTION #3 BELOW
- More than half the time (2) SKIP TO QUESTION #3 BELOW
- Less than half the time (3)
- Once in a while (4)
- Never (5)

- c) WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE AS MANY AS FIVE OR SIX GLASSES OR CANS?

- Nearly every time (1) SKIP TO QUESTIONS #3 BELOW
- More than half the time (2) SKIP TO QUESTION #3 BELOW
- Less than half the time (3)
- Once in a while (4)
- Never (5)

APPENDIX N (cont'd.)

-3-

4-

d) WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE AS MANY AS THREE OR FOUR GLASSES OR CANIS?

- _____ Nearly every time (1) SKIP TO QUESTION #3 BELOW
- _____ More than half the time (2) SKIP TO QUESTION #3 BELOW
- _____ Less than half the time (3)
- _____ Once in a while (4)
- _____ Never (5)

e) WHEN YOU DRINK BEER, HOW OFTEN DO YOU HAVE ONE OR TWO GLASSES OR CANIS?

- _____ Nearly every time (1)
- _____ More than half the time (2)
- _____ Less than half the time (3)
- _____ Once in a while (4)
- _____ Never (5)

3. WHEN DRINKING WHISKEY OR LIQUOR

a) HOW OFTEN DO YOU USUALLY HAVE WHISKEY OR LIQUOR (SUCH AS MARTINI, MANHATTAN, BICHBALLS, OR STRAIGHT DRINKS INCLUDING: SCOTCH, BOURBON, GIN, VODKA, RUM, ETC.)?

- _____ 3 or more times a day (1) _____ Once or twice a week (6)
- _____ 2 times a day (2) _____ 2 or 3 times a month (7)
- _____ Once a day (3) _____ About once a month (8)
- _____ Nearly every day (4) _____ Less than once a month but at least once a year (9)
- _____ 3 or 4 times a week (5) _____ Less than once a year

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

- _____ Nearly every time (1) SKIP TO QUESTION #4 BELOW
- _____ More than half the time (2) SKIP TO QUESTION #4 BELOW
- _____ Less than half the time (3)
- _____ Once in a while (4)
- _____ Never (5)

c) WHEN YOU HAVE HAD DRINKS CONTAINING WHISKEY OR LIQUOR, HOW OFTEN DO YOU HAVE AS MANY AS FIVE OR SIX DRINKS?

- _____ Nearly every time (1) SKIP TO QUESTION #4 BELOW
- _____ More than half the time (2) SKIP TO QUESTION #4 BELOW
- _____ Less than half the time (3)
- _____ Once in a while (4)
- _____ Never (5)

d) WHEN YOU HAVE HAD DRINKS CONTAINING WHISKEY OR LIQUOR, HOW OFTEN DO YOU HAVE AS MANY AS THREE OR FOUR DRINKS?

- _____ Nearly every time (1) SKIP TO QUESTION #4 BELOW
- _____ More than half the time (2) SKIP TO QUESTION #4 BELOW
- _____ Less than half the time (3)
- _____ Once in a while (4)
- _____ Never (5)

e) WHEN YOU HAVE DRINKS CONTAINING WHISKEY OR OTHER LIQUOR, HOW OFTEN DO YOU HAVE ONE OR TWO DRINKS?

- _____ Nearly every time (1)
- _____ More than half the time (2)
- _____ Less than half the time (3)
- _____ Once in a while (4)
- _____ Never (5)

4. 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 IN ANY OF THE PRECEDING QUESTIONS.

- _____ 3 or more times a day (1) _____ Once or twice a week (6)
- _____ 2 times a day (2) _____ 2 or 3 times a month (7)
- _____ Once a day (3) _____ About once a month (8)
- _____ Nearly every day (4) _____ Less than once a month but at least once a year (9)
- _____ 3 or 4 times a week (5) _____ Less than once a year (10)

APPENDIX N (cont'd.)

-5-

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

	IF YES		HOW MANY TIMES (approximately)	AGE FIRST TIME
	Yes	No (0)		
1. MISSED SCHOOL OR TIME ON JOB				
2. THOUGHT I WAS DRINKING TOO MUCH				
3. CAME ON A BINGE OF CONSTANT DRINKING FOR 2 OR MORE DAYS				
4. LOST FRIENDS				
5. MY SPOUSE OR OTHERS IN MY FAMILY (PARENTS OR CHILDREN) OBJECTED TO MY DRINKING				
6. FELT GUILTY ABOUT MY DRINKING				
7. DIVORCE OR SEPARATION				
8. TOOK A DRINK ON TWO FIRST THING IN MORNING				
9. RESTRICTED MY DRINKING TO CERTAIN TIMES OF DAY OR WEEK (LIKE AFTER 5PM, OR ONLY ON WEDNESDAYS, OR ONLY WITH OTHER PEOPLE AROUND)				
10. BEEN FIRED OR LAID OFF				
11. ONCE STARTED DRINKING, KEPT ON GOING TILL COMPLETELY INTOXICATED				
12. HAD A CAR ACCIDENT WHEN YOU WERE DRIVING				
13. LEFT 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 DRIVING WHILE DRUNK (DWI)				
20. HAD FEVER, OR VITS (CONVULSIONS) SEVERAL DAYS AFTER STOPPING DRINKING				
21. BEEN GIVEN A TICKET FOR PUBLIC INTOXICATION, DRUNK AND DISORDERLY OR OTHER DRINKING-RELATED ARREST				
22. HAD THE B.T.'S SYMPTOMS (SHAKES, SWEATING, RAPID HEART, ETC.) WITHIN 2-3 DAYS AFTER STOPPING DRINKING				

-6-

D. NOW SOME QUESTIONS ABOUT ILLEGAL USE OF DRUGS. ILLEGAL INCLUDES DRUGS WHICH ARE ILLEGAL AS WELL AS DELIBERATE MISUSE OF PRESCRIPTIONS. HAVE YOU EVER HAD ANY OF THE FOLLOWING PROBLEMS BECAUSE OF YOUR ILLEGAL USE OF DRUGS?

	IF YES		HOW MANY TIMES (approximately)	AGE FIRST TIME
	Yes	No (0)		
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 A 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 MORE THAN ONCE FOR POSSESSION OR SALE OF DRUGS OTHER THAN MARIJUANA				
11. HAVE YOU EVER TAKEN ANY 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 (0) Yes (1)

IF YES, WHAT DRUGS HAVE YOU TAKEN INTRAVENOUSLY (IV)?

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

APPENDIX O

FEEDING SCALES

APPENDIX O

S# _____

FY Study - Feeding Scales

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

Rater: _____

Date: _____

Time rating began: _____

Time rating ended: _____

C = Caregiver or Catetaker

B = Baby or Infant

Item #1: Synchronization of C's Interventions with B's Rhythms:

1	2	3	4	5	6	7	8	9
Very		Arbitrary		Some Ad-		Flexible		Excellent
Arbitrary		Timing		justment		Timing		Adaptation
Timing				to B's				of Timing
				timing				

Item #2: Determination of Amount of Food and End of Feeding:

1	2	3	4	5	6	7	8	9
Very		Arbitrary	C Terminates		Flexible			Excellent
Arbitrary		Termina-	Feeding but		Termination			Adaptation
Termi-		tion	Believes that					in Regard
nation			B Does					to Amount
								of Food

Item #3: C's Handling of B's Preferences for Kind of Food:

1	2	3	4	5	6	7	8	9
Great		Disregard		Some Con-		Considera-		Excellent
Disregard		of B's		sideration		tion for		Adaptation
of B's		-Prefer-		for B's		B's Pref-		
Prefer-		ences		Prefer-		erences		
ences				ences				

Item #4: C's Synchronization of Rate of Feeding to B's Pace:

1	2	3	4	5	6	7	8	9
C Inter-		C Tends to		C Alternates		C is Sen-		C is Very
feres with		Determine		Between		sitive to		Well Adapted
B's Pacing		the pacing		Determining		B's Pacing		to B's Pace
				Pacing and				
				Letting B				
				Determine it				

APPENDIX P

NEONATAL PERCEPTION INVENTORY

APPENDIX P

NEONATAL PERCEPTION INVENTORY

AVERAGE BABY

Although this is your first baby, you probably have some ideas of what most little babies are like. Please check the blank you think best describes the AVERAGE baby.

How much crying do you think the average baby does?

a great deal a good bit moderate amount very little none

How much trouble do you think the average baby has in feeding?

a great deal a good bit moderate amount very little none

How much spitting up or vomiting do you think the average baby does?

a great deal a good bit moderate amount very little none

How much difficulty do you think the average baby has in sleeping?

a great deal a good bit moderate amount very little none

How much difficulty does the average baby have with bowel movements?

a great deal a good bit moderate amount very little none

How much trouble do you think the average baby has in settling down to a predictable pattern of eating and sleeping?

a great deal a good bit moderate amount very little none

Form A₁

AVERAGE BABY

Although this is your first baby, you probably have some ideas of what most little babies are like. Please check the blank you think best describes the AVERAGE baby.

How much crying do you think the average baby does?

a great deal a good bit moderate amount very little none

How much trouble do you think the average baby has in feeding?

a great deal a good bit moderate amount very little none

How much spitting up or vomiting do you think the average baby does?

a great deal a good bit moderate amount very little none

How much difficulty do you think the average baby has in sleeping?

a great deal a good bit moderate amount very little none

How much difficulty does the average baby have with bowel movements?

a great deal a good bit moderate amount very little none

How much trouble do you think the average baby has in settling down to a predictable pattern of eating and sleeping?

a great deal a good bit moderate amount very little none

Form A₂

APPENDIX P (cont'd.)

YOUR BABY

While it is not possible to know for certain what your baby will be like, you probably have some ideas of what your baby will be like. Please check the blank that you think best describes what your baby will be like.

How much crying do you think your baby will do?

a great deal a good bit moderate amount very little none

How much trouble do you think your baby will have feeding?

a great deal a good bit moderate amount very little none

How much spitting up or vomiting do you think your baby will do?

a great deal a good bit moderate amount very little none

How much difficulty do you think your baby will have sleeping?

a great deal a good bit moderate amount very little none

How much difficulty do you expect your baby to have with bowel movements?

a great deal a good bit moderate amount very little none

How much trouble do you think that your baby will have settling down to a predictable pattern of eating and sleeping?

a great deal a good bit moderate amount very little none

Form B₁

YOUR BABY

You have had a chance to live with your baby for about a month now. Please check the blank you think best describes your baby.

How much crying has your baby done?

a great deal a good bit moderate amount very little none

How much trouble has your baby had feeding?

a great deal a good bit moderate amount very little none

How much spitting up or vomiting has your baby done?

a great deal a good bit moderate amount very little none

How much difficulty has your baby had in sleeping?

a great deal a good bit moderate amount very little none

How much difficulty has your baby had with bowel movements?

a great deal a good bit moderate amount very little none

How much trouble has your baby had in settling down to a predictable pattern of eating and sleeping?

a great deal a good bit moderate amount very little none

Form B₂

APPENDIX Q

SOCIAL READJUSTMENT RATING SCALES

APPENDIX Q

S# _____

MICHIGAN STATE UNIVERSITY - Department of Psychology
East Lansing, MI 48824

FY. Study LEQ

Life Events Questionnaire

Please read the following list of common life events and check all items that have occurred to you during the past one (1) year. Mark the space to the left of each item if it applies.

New Events

- _____ Marriage
- _____ Troubles with the boss
- _____ Detention in jail or other institution
- _____ Death of spouse
- _____ Major change in sleeping habits (a lot more or a lot less sleep, or change in part of day when asleep)
- _____ Death of a close family member
- _____ Major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings)
- _____ Foreclosure on a mortgage or loan
- _____ Revision of personal habits (dress, manners, associations, etc.)
- _____ Death of a close friend
- _____ Minor violations of the law (e.g. traffic tickets, jay walking, disturbing the peace, etc.)
- _____ Outstanding personal achievement
- _____ Pregnancy
- _____ Major change in the health or behavior of a family member
- _____ Sexual difficulties
- _____ In-law troubles
- _____ Major change in number of family get-togethers (e.g. a lot more or a lot less than usual)
- _____ Major change in financial state (e.g. a lot worse off or a lot better off than usual)
- _____ Gaining a new family member (e.g. through birth, adoption, older moving in etc.)
- _____ Change in residence
- _____ Son or daughter leaving home (e.g. marriage, attending college, etc.)
- _____ Marital separation from mate
- _____ Major change in church activities (e.g. a lot more or a lot less than usual)
- _____ Marital reconciliation with mate
- _____ Being fired from work
- _____ Divorce

APPENDIX Q (cont'd.)

2

- _____ Changing to a different line of work
- _____ Major change in the number of arguments with spouse (e.g. either a lot more or a lot less than usual regarding childrearing, personal habits, etc.)
- _____ Major change in responsibilities at work (e.g. promotion, demotion, lateral transfer)
- _____ Wife beginning or ceasing work outside the home
- _____ Major change in working hours or conditions
- _____ Major change in usual type and/or amount of recreation
- _____ Taking on a mortgage greater than \$10,000 (e.g. purchasing a home, business, etc.)
- _____ Taking on a mortgage or loan less than \$10,000 (e.g. purchasing a car, TV, freezer, etc.)
- _____ Major personal injury or illness
- _____ Major business readjustment (e.g. merger, reorganization, bankruptcy, etc.)
- _____ Major change in social activities (e.g. clubs, dancing, movies, visiting etc.)
- _____ Major change in living conditions (e.g. building a new home, remodeling deterioration of home or neighborhood)
- _____ Retirement from work
- _____ Vacation
- _____ Christmas
- _____ Changing to a new school
- _____ Beginning or ceasing formal schooling

APPENDIX R

FOUR SCALES FOR RATING CAREGIVER BEHAVIOR

APPENDIX R

S# _____ FY Study - Four Scales

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

Rater: _____ Parent observed: (mother or father)

Time rating began: _____ Time rating ended: _____

Date: _____

Scale #1: Sensitivity VS Insensitivity of the Baby's Communications

1	2	3	4	5	6	7	8	9
Highly		Insen-	Inconsis-		Sensitive			Highly
Insensi-		sitive	tently					Sensitive
tive			Sensitive					

Scale #2: Acceptance VS Rejection:

1	2	3	4	5	6	7	8	9
Highly		Substan-	Ambivalent		Accepting			Highly
Rejecting		tially						Accepting
		Rejecting						

Scale #3: Cooperation VS Interference:

1	2	3	4	5	6	7	8	9
Highly		Interfer-		Mildly	Cooperative			Conspicuously
Interfer-		ing		Inter-				Cooperative
ing				fering				

Scale #4: Accessibility VS Ignoring and Neglecting:

1	2	3	4	5	6	7	8	9
Highly		Often In-	Inconsis-		Usually			Highly
Inaccessi-		accessible,	tently		Accessi-			Accessible
ble, Ig-		Ignoring or	Accessi-		ble			
noring, or		Neglecting	ble					
Neglecting								

APPENDIX S

WORK QUESTIONNAIRE

APPENDIX S

WORK QUESTIONNAIRE

S# _____

FyStudy - Work Questionnaire

MICHIGAN STATE UNIVERSITY, Department of Psychology
East Lansing, MI 48824

Work Questionnaire

Following is a list of items about work and your attitude towards your job.
Please read each of the items and circle the one answer that seems best to you.

1. Doing my job well gives me a good feeling.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
2. All in all, I am satisfied by my job.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
3. I have too much at stake in my job to change jobs now.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
4. In general, I like working where I do.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree

APPENDIX S (cont'd.)

2

5. When I disagree with my supervisor, I generally
 - A. Refrain from argument; try not to get involved.
 - B. Play down the differences and emphasize common interests.
 - C. Search for a position in the middle; try to find a compromise.
 - D. Use the power of my position or knowledge to win acceptance of my point of view.
 - E. Bring the problem clearly into the open and carry it out until it is solved, even if feelings are hurt.
6. I have to engage in organizational politics if I am to perform my job.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
7. I am very much personally involved in my work.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
8. Do you feel you have suffered employment discrimination in the past five years?
 - A. Yes
 - B. No
9. If you feel you have suffered employment discrimination, was it because of:
 - A. Sex
 - B. Race
 - C. Ethnic origin or religion
 - D. Age
 - E. Physical health handicaps (Specify _____)
 - F. Emotional handicap (Specify _____)

APPENDIX S (cont'd.)

3

10. What form did the discrimination take? (Circle as many as apply)
 - A. Affirmative action guidelines led to my not being hired although I had sufficient qualifications.
 - B. My salary was lower than for other workers doing comparable work.
 - C. I was expected to do more work, different work, or less prestigious work than other workers who had similar jobs.
 - D. I could not get the job for which my skills qualified me.
 - E. My salary was lower than for other workers doing comparable work.
 - F. I was not accepted or invited to participate in informal social activities like lunch or a drink after work.
 - G. I was not encouraged or allowed to participate in in-house training programs.
 - H. I did not have access to informal communication or sources of information relevant to my job.
 - I. I was fired.
11. If you discovered your employer was engaged in immoral or illegal business practice, how likely is it that you would report him to the proper authorities, even though it might mean losing your job?
 - A. Not at all likely
 - B. Somewhat likely
 - C. Quite likely
 - D. Extremely likely
12. If your boss were behaving illegally or immorally, how likely is it that you would confront him/her on the issue even though it might mean losing your job?
 - A. Not at all likely
 - B. Somewhat likely
 - C. Quite likely
 - D. Extremely likely
13. Sometimes it is necessary for me to engage in behaviors which are considered immoral or illegal if I am to perform my job effectively.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
14. I live, eat, and breathe my job.
 - A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
15. How likely is it that you will actively look for a new job in the next year?
 - A. Not at all likely
 - B. Somewhat likely
 - C. Quite likely
 - D. Extremely likely

APPENDIX S (cont'd.)

4

16. Does your partner work?
- A. Yes
 - B. No
17. If your partner were offered a better job in another city, how likely is it that you would move even though you might initially be underemployed or unemployed?
- A. Not at all likely
 - B. Somewhat likely
 - C. Quite likely
 - D. Extremely likely
18. Most of the people that I see socially outside of work are people that my partner met in connection with his/her job.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
19. Who generally performs the following household tasks?

	Does not apply 6					
	Relative does it 5					
	We hire someone 4					
	Partner does 3					
	We share equally 2					
	I do 1					
A. Child care	1	2	3	4	5	6
B. Cooking	1	2	3	4	5	6
C. Cleaning up after meals	1	2	3	4	5	6
D. House-cleaning	1	2	3	4	5	6
E. Driving children in activities	1	2	3	4	5	6
F. Finances	1	2	3	4	5	6
G. Grocery shopping	1	2	3	4	5	6
H. Yard work	1	2	3	4	5	6

20. All in all, whose career is given more weight when making decisions that affect both careers?
- A. Mine
 - B. Equal Weight
 - C. Partner's
 - D. Does not apply

APPENDIX S (cont'd.)

5

21. How much do you talk over job concerns with your partner?
- A. Not at all
 - B. A little
 - C. Quite a bit
 - D. A great deal
22. Most of the people that I see socially outside of work are people I've met in connection with my job.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
23. How likely is it that you will change your occupation in the next five years?
- A. Not at all likely
 - B. Somewhat likely
 - C. Quite likely
 - D. Extremely likely
24. People may relieve job-related stress in a number of ways. How likely are you to engage in the following behaviors as a result of work related tension? (Numbers in between 1 and 7 indicate intermediate degrees of likelihood.)
- | | Not at all likely | Somewhat likely | Quite likely | Extremely likely | | | |
|---|-------------------|-----------------|--------------|------------------|---|---|---|
| A. Have a drink of liquor, beer, or wine after. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B. Have a drink of liquor, beer, or wine during the working day. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| C. Use drugs including tranquilizers, amphetamines, and marijuana off the job. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| D. Use drugs including tranquilizers, amphetamines, and marijuana during the working day. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| E. Daydream | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| F. Participate in counseling or therapy | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| G. Exercise | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| H. Eat | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I. Buy something for yourself | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| J. Smoke | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

APPENDIX S (cont'd.)

6

25. On most days, time seems to drag on the job
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
26. Hard work makes you a better person.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
27. What problems or difficulties do you run into concerning hours of work, your work schedule, or overtime? Circle all that apply.
- A. I have to start work too early and/or leave work too late.
 - B. My work schedule interferes with my family life.
 - C. An excessive amount of overtime is required.
 - D. I have difficulty completing my assigned work during office hours.
 - E. All in all, my job requires excessive hours.
28. How often do you feel this way at work? (Numbers in between 1 and 7 indicate intermediate degree of frequency.)

	1	2	3	4	5	6	7
A. I feel down-hearted and blue.							
B. I get tired for no reason							
C. I find myself restless and can't keep still							
D. I find it easy to do the things I used to do							
E. My mind is as clear as it used to be.							
F. I feel hopeful about the future.							
G. I find it easy to make decisions.							
H. I am more irritable than usual.							
I. I feel that I am useful							

Almost never
Never
Sometimes
Frequently
Almost always
Always

APPENDIX S (cont'd.)

7

29. I get a feeling of personal satisfaction from doing my job well.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
30. When you get home, how frequently do you think about the problems, errors, or frustrations that occurred during the day at work?
- A. Very infrequently
 - B. Infrequently
 - C. Sometimes
 - D. Frequently
 - E. Very frequently
31. I dread the thought of what might happen if I quit my job without having another one lined up.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
32. How often would you say your home life interferes with your job?
- A. Almost never
 - B. Seldom
 - C. Sometimes
 - D. Frequently
 - E. Almost always

APPENDIX S (cont'd.)

8

33. How satisfied are you and how important to you is each of the following aspects of your job?

	<u>Satisfaction</u>							<u>Importance</u>						
	Neither satisfied nor dissatisfied	Slightly dissatisfied	Slightly satisfied	Very Satisfied	Moderately important or less	Quite important	Extremely important	1	2	3	4	5	6	7
A. The way you are treated by the people you work with.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
B. The respect you receive from the people you work with.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
C. The friendliness of the people you work with.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
D. The opportunity to develop your skills and abilities.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
E. The chances you have to learn new things.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
F. The chances you have to accomplish something worthwhile.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
G. The chances you have to do the things you do best.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
H. The chances you have to do something that makes you feel good about yourself as a person.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I. The amount of information you get about how well you are doing your job.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
J. The amount of pay you get.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
K. The fringe benefits you receive.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
L. The amount of job security you have.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
M. The praise you get when you do a good job.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
N. The physical surroundings of your job.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
O. Your chances for getting a promotion.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
P. The chances you have to take part in making decisions.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Q. The amount of freedom you have on your job.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
R. The resources you have to do your job.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

APPENDIX S (cont'd.)

9

34. I often feel trapped in my present job.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree
35. How likely is it that you could find a job with another employer with about the same pay and benefits you now have?
- A. Not at all likely
 - B. Somewhat likely
 - C. Quite likely
 - D. Extremely likely
36. How often would you say your job interferes with your home life?
- A. Almost never
 - B. Seldom
 - C. Sometimes
 - D. Frequently
 - E. Almost always
37. All in all, how satisfied are you with your life?
- A. Very dissatisfied
 - B. Dissatisfied
 - C. Slightly dissatisfied
 - D. Neither satisfied nor dissatisfied
 - E. Slightly satisfied
 - F. Satisfied
 - G. Very satisfied
38. I feel bad when I do a poor job.
- A. Strongly disagree
 - B. Disagree
 - C. Slightly disagree
 - D. Neither agree nor disagree
 - E. Slightly agree
 - F. Agree
 - G. Strongly agree

APPENDIX S (cont'd.)

11

45. How many years have you been in the work force?
- A. Less than one year
 - B. One to five years
 - C. Six to 10 years
 - D. Eleven to 15 years
 - E. More than 15 years
46. Approximately what is the percentage of women at your workplace?
- A. 0 percent
 - B. 25 percent
 - C. 50 percent
 - D. 75 percent
 - E. 100 percent
47. What is your sex?
- A. Female
 - B. Male
48. What is the sex of your supervisor?
- A. Female
 - B. Male
49. What is your age?
- A. Under 18
 - B. 18-24
 - C. 25-34
 - D. 35-44
 - E. 45-54
 - F. Over 55
50. Where do you stand politically on most issues?
- A. Very liberal
 - B. Somewhat liberal
 - C. Moderate
 - D. Somewhat conservative
 - E. Very conservative
51. In what type of community did you spend the largest portion of your life up to the time you were 16 years age?
- A. Large city (250,000 people or more)
 - B. Small city (less than 250,000 people)
 - C. Suburb
 - D. Rural

APPENDIX S (cont'd.)

12

52. In what type of community do you now live?

- A. Large city (250,000 people or more)
- B. Small city (less than 250,000 people)
- C. Small city (less than 250,000 people)
- D. Rural

APPENDIX T

CHILD BEHAVIOR CHECKLIST

APPENDIX T

Department of Health, Education, and Welfare		CHILD BEHAVIOR CHECKLIST - - For ages 4 - 16			
CHILD'S AGE	CHILD'S SEX <input type="checkbox"/> Boy <input type="checkbox"/> Girl	RACE	PARENT'S TYPE OF WORK <i>(Please be specific—for example: auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant, even if parent does not live with child.)</i>		
THIS FORM FILLED OUT BY: <input type="checkbox"/> Mother <input type="checkbox"/> Father <input type="checkbox"/> Other (Specify):		DATE	FATHER'S TYPE OF WORK: _____		
			MOTHER'S TYPE OF WORK: _____		

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc. <input type="checkbox"/> None	Compared to other children of the same age, about how much time does he/she spend in each?	Compared to other children of the same age, how well does he/she do each one?
	Don't Know Less Than Average Average More Than Average	Don't Know Below Average Average Above Average
a. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
c. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, singing, etc. (Do not include T.V.) <input type="checkbox"/> None	Compared to other children of the same age, about how much time does he/she spend in each?	Compared to other children of the same age, how well does he/she do each one?
	Don't Know Less Than Average Average More Than Average	Don't Know Below Average Average Above Average
a. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
c. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

III. Please list any organizations, clubs, teams, or groups your child belongs to. <input type="checkbox"/> None	Compared to other children of the same age, how active is he/she in each?
	Don't Know Less Active Average More Active
a. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
c. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

IV. Please list any jobs or chores your child has. For example: Paper route, babysitting, making bed, etc. <input type="checkbox"/> None	Compared to other children of the same age, how well does he/she carry them out?
	Don't Know Below Average Average Above Average
a. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
c. _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

APPENDIX T (cont'd.)

V. 1. About how many close friends does your child have? ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week does your child do things with them? ☐ less than 1 ☐ 1 or 2 ☐ 3 or more

VI. Compared to other children of his/her age, how well does your child:

	Worse	About the same	Better
a. Get along with his/her brothers & sisters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Get along with other children?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Behave with his/her parents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Play and work by himself/herself?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VII. 1. Current school performance—for children aged 6 and older:

	Failing	Below average	Average	Above average
<input type="checkbox"/> Does not go to school				
a. Reading or English	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Writing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Arithmetic or Math	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Spelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other academic subjects: e. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(for example: history, science, foreign language, f. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
geography). g. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Is your child in a special class?

☐ No ☐ Yes—what kind?

3. Has your child ever repeated a grade?

☐ No ☐ Yes—grade and reason

4. Please describe any academic or other problems your child has had in school.

☐ None

APPENDIX T (cont'd.)

VIII. Below is a list of items that describe children. For each item that describes your child *now or within the past 12 months*, please circle the 2 if the item is *very true or often true* of your child. Circle the 1 if the item is *somewhat or sometimes true* of your child. If the item is *not true* of your child, circle the 0.

0 1 2	1. Acts too young for his/her age	0 1 2	31. Fears he/she might think or do something bad
0 1 2	2. Allergy (describe): _____	0 1 2	32. Feels he/she has to be perfect
		0 1 2	33. Feels or complains that no one loves him/her
0 1 2	3. Argues a lot	0 1 2	34. Feels others are out to get him/her
0 1 2	4. Asthma	0 1 2	35. Feels worthless or inferior
0 1 2	5. Behaves like opposite sex	0 1 2	36. Gets hurt a lot, accident-prone
0 1 2	6. Bowel movements outside toilet	0 1 2	37. Gets in many fights
0 1 2	7. Bragging, boasting	0 1 2	38. Gets teased a lot
0 1 2	8. Can't concentrate, can't pay attention for long	0 1 2	39. Hangs around with children who get in trouble
0 1 2	9. Can't get his/her mind off certain thoughts; obsessions (describe): _____	0 1 2	40. Hears things that aren't there (describe): _____
0 1 2	10. Can't sit still, restless, or hyperactive	0 1 2	41. Impulsive or acts without thinking
0 1 2	11. Clings to adults or too dependent	0 1 2	42. Likes to be alone
0 1 2	12. Complaints of loneliness	0 1 2	43. Lying or cheating
0 1 2	13. Confused or seems to be in a fog	0 1 2	44. Bites fingernails
0 1 2	14. Cries a lot	0 1 2	45. Nervous, highstrung, or tense
0 1 2	15. Cruel to animals	0 1 2	46. Nervous movements or twitching (describe): _____
0 1 2	16. Cruelty, bullying, or meanness to others		
0 1 2	17. Day-dreams or gets lost in his/her thoughts	0 1 2	47. Nightmares
0 1 2	18. Deliberately harms self or attempts suicide	0 1 2	48. Not liked by other children
0 1 2	19. Demands a lot of attention	0 1 2	49. Constipated, doesn't move bowels
0 1 2	20. Destroys his/her own things	0 1 2	50. Too fearful or anxious
0 1 2	21. Destroys things belonging to his/her family or other children	0 1 2	51. Feels dizzy
0 1 2	22. Disobedient at home	0 1 2	52. Feels too guilty
0 1 2	23. Disobedient at school	0 1 2	53. Overeating
0 1 2	24. Doesn't eat well	0 1 2	54. Overtired
0 1 2	25. Doesn't get along with other children	0 1 2	55. Overweight
0 1 2	26. Doesn't seem to feel guilty after misbehaving		
0 1 2	27. Easily jealous	56. Physical problems without known medical cause:	
0 1 2	28. Eats or drinks things that are not food (describe): _____	0 1 2	a. Aches or pains
		0 1 2	b. Headaches
		0 1 2	c. Nausea, feels sick
		0 1 2	d. Problems with eyes (describe): _____
0 1 2	29. Fears certain animals, situations, or places, other than school (describe): _____	0 1 2	e. Rashes or other skin problems
		0 1 2	f. Stomachaches or cramps
		0 1 2	g. Vomiting, throwing up
0 1 2	30. Fears going to school	0 1 2	h. Other (describe): _____

APPENDIX T (cont'd.)

0	1	2	57.	Physically attacks people	0	1	2	84.	Strange behavior (describe): _____
0	1	2	58.	Picks nose, skin, or other parts of body (describe): _____					_____
0	1	2	59.	Plays with own sex parts in public	0	1	2	85.	Strange ideas (describe): _____
0	1	2	60.	Plays with own sex parts too much	0	1	2	86.	Stubborn, sullen, or irritable
0	1	2	61.	Poor school work	0	1	2	87.	Sudden changes in mood or feelings
0	1	2	62.	Poorly coordinated or clumsy	0	1	2	88.	Sulks a lot
0	1	2	63.	Prefers playing with older children	0	1	2	89.	Suspicious
0	1	2	64.	Prefers playing with younger children	0	1	2	90.	Swearing or obscene language
0	1	2	65.	Refuses to talk	0	1	2	91.	Talks about killing self
0	1	2	66.	Repeats certain acts over and over; compulsions (describe): _____	0	1	2	92.	Talks or walks in sleep (describe): _____
0	1	2	67.	Runs away from home	0	1	2	93.	Talks too much
0	1	2	68.	Screams a lot	0	1	2	94.	Teeses a lot
0	1	2	69.	Secretive, keeps things to self	0	1	2	95.	Temper tantrums or hot temper
0	1	2	70.	Sees things that aren't there (describe): _____	0	1	2	96.	Thinks about sex too much
0	1	2	71.	Self-conscious or easily embarrassed	0	1	2	97.	Threatens people
0	1	2	72.	Sets fires	0	1	2	98.	Thumb-sucking
0	1	2	73.	Sexual problems (describe): _____	0	1	2	99.	Too concerned with neatness or cleanliness
0	1	2	74.	Showing off or clowning	0	1	2	100.	Trouble sleeping (describe): _____
0	1	2	75.	Shy or timid	0	1	2	101.	Truancy, skips school
0	1	2	76.	Sleeps less than most children	0	1	2	102.	Underactive, slow moving, or lacks energy
0	1	2	77.	Sleeps more than most children during day and/or night (describe): _____	0	1	2	103.	Unhappy, sad, or depressed
0	1	2	78.	Smears or plays with bowel movements	0	1	2	104.	Unusually loud
0	1	2	79.	Speech problem (describe): _____	0	1	2	105.	Uses alcohol or drugs (describe): _____
0	1	2	80.	Stares blankly	0	1	2	106.	Vandalism
0	1	2	81.	Steals at home	0	1	2	107.	Wets self during the day
0	1	2	82.	Steals outside the home	0	1	2	108.	Wets the bed
0	1	2	83.	Stores up things he/she doesn't need (describe): _____	0	1	2	109.	Whining
					0	1	2	110.	Wishes to be of opposite sex
					0	1	2	111.	Withdrawn, doesn't get involved with others
					0	1	2	112.	Worrying
								113.	Please write in any problems your child has that were not listed above:
					0	1	2		_____
					0	1	2		_____
					0	1	2		_____

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