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RELATIONSHIPS BETWEEN PARENTAL PSYCHOPATHOLOGY, FAMILY CONFLICT, AND CHILD BEHAVIOR PROBLEMS IN YOUNG ALCOHOLIC FAMILIES

By

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ABSTRACT

RELATIONSHIPS BETWEEN PARENTAL PSYCHOPATHOLOGY, FAMILY CONFLICT, AND CHILD BEHAVIOR PROBLEMS IN YOUNG ALCOHOLIC FAMILIES

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This study examined the relationships between parental psychopathology, family functioning, and child behavior problems in a systematically drawn, nonclinical sample of families with preschool aged sons. Fathers in the families varied in the extent to which they had a prior history of severe alcohol related trouble, and both parents varied in the extent to which heavy drinking was currently being carried on. An extensive comparison of mother versus father reports of child behavior indicated that the two cannot be regarded as parallel sources of information about child functioning. Differentiations were also made between lifetime and current parental symptomatology. Path models were constructed to predict the relationships between parental symptomatology and family conflict in predicting behavior problems in the children. It was hypothesized that lifetime trouble of antisocial behavior and alcohol involvement in the parents would contribute to increased current parental depression, and that family conflict and current parental depression would contribute to heightened parent report of child behavior

problems. Results showed that for both mothers and fathers, parental lifetime trouble contributed significantly to current parent depression. Parental lifetime symptomatology did not contribute to family conflict, but family conflict contributed significantly to father current depression and there was a trend for mother current depression to operate in a parallel fashion. Family conflict did not contribute directly to child behavior problems, but did indirectly, through current parental depression. Both mother and father current depression had significant paths to total child behavior problems and to child depression. Only mother current depression had a significant path to child aggression. Children in the study were rated in the clinical range at a significantly higher rate than children of the same age in the Achenbach Child Behavior Checklist (CBCL) nonclinical standardization sample, but at a significantly lower rate than children of the same age in the CBCL clinical sample.

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INTRODUCTION TO THE PROBLEM

The subject of alcohol problems and alcohol abuse has become of national concern during the 1980s. Attention has been directed to the prevention and treatment of alcoholism-- in the courts and the workplace, as well as in the classroom and on television. Research in this area has recognized that family functioning plays an important role in the maintenance and termination of alcohol use. Because rates of alcoholism are higher in males than females, special attention has been given in the literature to the male alcoholic and his family. Also, the sons of male alcoholics are at increased risk for becoming alcoholic as adults (Cotton, 1979).

More often than not, the alcoholic family is recognized as a multi-problem dysfunctional family. The male alcoholic is described as hostile, antisocial and impulsive. His wife may share these same troubles, or else experience distress because she lives with an alcoholic husband (Weil, 1987). The alcoholic marriage is dysfunctional, discordant, conflicted, and even violent at times (Reider, 1987). Other troubles include the legal system and work place. Despite a literature lacking sound methodological research, there is some agreement that children in alcoholic families do exhibit more adjustment problems (Jacob, Favorini, Meisel, & Anderson, 1978;

West & Prinz, 1987). Given the level of distress and discord in which they live, this is not surprising. However, it is likely that not all sons of male alcoholics experience difficulties as children. It is important to determine what are some of the important variables that are related to the behavioral adjustment of children in alcoholic families.

The present study is drawn out of a theoretical network and earlier findings from the MSU Longitudinal Study (Zucker, Noll, & Fitzgerald, 1986). The study hypothesized that: (a) early antisocial involvement of children will be precursive to later alcohol and drug problems (as well as continued antisociality), and (b) that a network of factors will contribute to this process. These factors include parental psychopathology, family conflict, and child individual differences.

There are two salient family variables that will be examined in the present study, in an effort to gain a more comprehensive understanding of child behavior problems in male alcoholic families with sons of preschool age: (a) the psychological resources of the parents, and (b) the nature of family and marital relationships. First, a very large literature exists suggesting a link between parental psychopathology and child maladjustment. However, much of the research focuses on maternal psychopathology. The male alcoholic is likely to have problems with long term alcohol abuse and antisocial behavior, as well as possibly depression. The wife of the alcoholic may share these same troubles, or she may experience some distress because of the difficulties she encounters in living with an alcoholic

husband (Weil, 1987). Therefore, it is likely that a positive relationship will be found between parental psychopathology and child behavior problems in alcoholic families.

The literature suggests that mothers' psychological functioning may play an important mediating role in whether fathers' alcoholism has a detrimental effect on children (Elder, Caspi, & van Nguyen, 1985; Jacob & Leonard, 1986). Mothers play an important role in the development of preschool-age children. A competent and less distressed mother may compensate and protect a child from some of the stressors experienced from living in an alcoholic family. Also, there is limited data on maternal versus paternal alcoholism (Miller & Jang, 1977), that indicates children of alcoholic mothers have greater maladjustment. Therefore, the psychological resources of mothers in alcoholic families will be important to consider when examining the adjustment of their children.

Second, another literature exists documenting a relationship between family and marital discord and child behavior problems (Emery, 1982; O'Leary & Emery, 1984). Psychologists of diverse theoretical orientations will agree with the notion that marital discord is a determinant or maintainer of child behavior problems, and the existing research confirms this relationship. Marital and child problems are weakly related in the general population and more strongly related in special populations where the child or parent has psychological problems, or the child is referred for treatment (Emery, 1982; O'Leary & Emery, 1984).

It is important to gain a comprehensive understanding of the relationships between these three variables to understand the occurrence of child behavior problems in alcoholic families. For example, the psychological resources of the parent will likely have an influence on the marital relationship. This is seen in consistent reports of relatively poor levels of adjustment in the marriages of psychiatric disordered individuals (Bullock, Siegel, Weissman, & Paykel, 1972; Hafner, 1986; Hoover & Fitzgerald, 1981; Weissman & Paykel, 1974). In survey work as well, a strong positive relationship is found between marital stressors and symptoms of depression (Ilfeld, 1977). A positive relationship is known to exist between long-term alcoholic use and family conflict, as well as violence, in alcoholic families (Reider, 1987). The alcoholic marriage has been shown to be quite discordant and conflictual, even violent at times.

It is quite likely that positive relationships will be found between parental psychopathology, family and marital discord, and child behavior problems in alcohol families. A few studies have found that increased interparental conflict may explain many of the negative effects found among children of parents with individual psychopathology (Emery, Weintraub, & Neale, 1982; Rutter, 1971). Indeed, it is believed that family functioning will play a mediating role in the relationship between parental psychopathology and child maladjustment in alcoholic families. The following study will examine the interrelationships between the psychological resources of the parents, their marital and family relationships, and their child's adjustment in male alcoholic families with sons of preschool age.

REVIEW OF THE LITERATURE

The Alcoholic Family

Little research exists documenting the interrelationships between psychological resources of the parents, marital relationship and child adjustment in alcoholic families with preschool age children. Therefore, the ensuing literature on the alcoholic family will examine existing information within and between these areas that will contribute to a better understanding of these relationships. Areas to be examined include psychological functioning of the alcoholic and spouse, their marital relationship, and child adjustment in these families.

The Male Alcoholic

Given that alcoholism is four times more likely to occur in males than females, much of the literature has focused on the male alcoholic. Therefore, understanding of the female alcoholic is far less comprehensive than that of the male alcoholic. However, it should be noted that the wife of the alcoholic has also been found to share the same problems of alcohol use, antisocial behavior, and depression as her husband (Cronkite & Moos, 1984; Weil, 1987).

Much time, energy and money has been consumed in the past twenty-five years in attempts to derive a comprehensive understanding of the "alcoholic personality." There is consensus in the literature that a complete picture of the alcoholic personality does not exist (Barnes, 1979; Williams, 1976). However, a few characteristics have been consistently identified. Aggression, activity, antisocial behavior, and impulsivity are factors consistently noted in alcoholics, as well as in prealcoholics who later become alcoholic (Williams, 1976). According to Williams (1976), alcoholics are described as rebellious, hostile, and nonconforming. Additionally, they frequently exhibit antisocial behavior. Both depression and antisocial personality disorder are found more often than expected by chance in individuals who are alcoholics or who are reared in alcoholic families (Schuckit, 1982; Solomon & Hanson, 1982). Also, alcoholism and depression tend to coexist in families (Cloninger, Reich, & Weitzel, 1979; Schuckit, 1982).

Earlier findings from the MSU Vulnerability Study document a relationship of greater lifetime drinking in males with higher rates of current depression, and more antisocial behavior within their childhoods, and in adulthood (Reider, 1987; Weil, 1987). Greater lifetime drinking in these males is positively related to both internalizing and externalizing symptoms, while greater <u>current</u> drinking is positively related to externalizing symptoms only (Weil, 1987). The present study will continue to explore the inter-relationship of the variables of alcohol use, antisocial behavior, and depression in male alcoholics and their wives.

The Wife of the Alcoholic

During the past thirty years, three perspectives have been developed to explain the characteristics of spouses of alcoholics (Finney, Moos, Cronkite, & Gamble, 1983; Moos, Finney, & Gamble, 1982). These perspectives are denoted as: (a) the "disturbed personality" theory, (b) the "stress" hypothesis, and (c) the "coping" perspective (Finney et al., 1983; Moos et al., 1982).

The disturbed personality hypothesis postulated that wives of alcoholics had abnormal personalities which led them to seek out and marry alcoholic men, nurture their alcoholism, and decompensate if their husbands became abstinent. Investigators have largely failed to substantiate that spouses of current or recovered alcoholics were characterized by neurotic or disturbed personality traits (Ablon, 1976; Jacob et al., 1978; Moos et al., 1982; Paolino, McCrady, Diamond, & Longabaugh, 1976).

The stress hypothesis examined the stress created by being married to an alcoholic partner, and have suggested that such spouse characteristics as depression, anxiety, complaints of physical symptoms, and poor health were a direct result of this stress (Moos et al., 1982). There is some support in the literature for this hypothesis (Jacob et al., 1978).

More recently, research has focused on the various coping styles used by spouses of alcoholic partners, and on the consequences of those styles for both the spouse and the alcoholic mate (Finney et al., 1983; James & Goldman, 1971). According to Moos et al. (1982), this perspective argues that many spouses can cope adequately with the

stress they experience, and in fact can lead essentially normal lives, depending on their personal resources. Moos et al. (1982) have urged the integration of the above three perspectives within a conceptual framework. According to Finney et al. (1983), this conceptual framework would:

> (a) recognize that spouse functioning is affected not only by the severity of the alcoholic partner's drinking problem but also by other characteristics of the partner (such as level of anxiety, depression, occupational functioning); (b) incorporate other sources of environmental stress (for example, life-change events such as the death of a friend) in addition to partner dysfunction, and (c) acknowledge that a spouse's coping style and family social environment both mediate the effects of stressors and directly influence spouse functioning. (p. 24)

This model can also be applied to families where there are other types of illness, thereby reducing the "specialism" that characterizes spouse research in the alcoholism field (Finney et al., 1983; Orford, 1975).

At a conceptual level, Jacob et al. (1978) note that in most studies in both the "disturbed wife" and "stressed wife" literatures, one marital partner is viewed as the victim and the other as the villain. Since much of the recent research suggests there is greater utility in examining the alcoholic family from a systems perspective, it is important to understand how both the alcoholic and the spouse play a role in family functioning, rather than labeling individuals as villains and victims. One needs to view people as elements within systems as well as individuals, because this yields alternative, and sometimes more powerful frameworks within which to understand their behaviors.

Earlier findings from the MSU Vulnerability Study support a positive relationship of lifetime drinking in women with depression and adult antisocial behavior (Reider, 1987; Weil, 1987). Like the men, greater lifetime drinking in women is related to more internalizing and externalizing symptoms. When using regression analyses, lifetime drinking was found to be the most significant factor in predicting current self-reported depression and adult antisocial behavior in both men and women. Within the sample, antisocial women were found to be more often married to men with heavy lifetime drinking histories; similarly, men with higher rates of antisocial behaviors were more likely to be married to women who were currently drinking heavily. Women married to heavier lifetime drinkers were experiencing more physical illness and depression. Yet, women married to husbands who were currently heavier drinkers were experiencing less physical illness and depression. It was felt that wives may be mobilized by their husbands' current drinking and end up perceiving their own problems as diminishing. However, the data suggest that husbands' heavier lifetime drinking leads women to develop more internalizing problems. Corroborating some of these findings, Cronkite and Moos (1984) found in a survey sample of 267 couples from the San Francisco area that increased drinking for one spouse was related to increased drinking in the other spouse.

The Alcoholic Marriage and Family

During the past twenty-five years much work has been completed on the alcoholic marriage. The focus of this work during the past fifteen years has placed an increased emphasis on the family as a unit or system. Researchers are now interested in how the alcoholic family operates, its life history, how alcohol affects the functioning of the system, and how the system adapts and functions (Steinglass, 1982). Increased attention is being paid to the interactions between family members, rather than solely examining individual psychopathology. There are still some weaknesses in the research methodology used to study the alcoholic marriage (Orford, 1975). First, much of the research is descriptive rather than experimental. Second, reliability and validity of the data are rarely questioned. Third, there has been a failure to describe and define samples, or to consider differences between samples. Fourth, much of the earlier work lacked comparison groups. More importantly, Orford (1975) argues that most studies have focused on alcoholism to the exclusion of other factors involved in family disruption. Recently, researchers have become interested in the question of whether alcoholic families are similar to other families in which marital difficulties exist (Orford, 1975), or in families in which there is some type of chronic illness in the family (Finney et al., 1983).

A large portion of this work emphasizes the negative psychosocial implications of living in an alcoholic family (Steinglass, 1981). There is consensus that serious conflicts and role dysfunctions exist in alcoholic families (Ablon, 1976; Moos & Moos, 1984). Research

examining interactions among alcoholic couples indicate that they are "more rigid, show more conflict, engage in more negative and hostile acts, and are less rational in their problem-solving activities than nonalcoholic couples" (Moos & Moos, 1984, p. 112). In terms of family environment, relapsed alcoholic families demonstrate high conflict and low cohesion, expressiveness, and organization (Moos, Finney, & Chan, 1981). Alcoholic families are perceived as chaotic, embedded in conflict, rigid in their interactions, and competitive in manner (Bullock & Mudd, 1959; Gorad, 1971; Moos et al., 1982). These families are described as inconsistent and disorganized.

Parents with longterm histories of alcohol-related difficulty and antisocial behavior evidence troubles in their interpersonal relationships (Zucker & Fitzgerald, 1991; Zucker et al., 1986). Their intra- and interpersonal troubles affect the family system by way of marital discord and poor parent-child relationships. Antisocial alcoholic parents who are grappling with marital discord and concomitant depression have difficulty providing the attention, nurturance, structure, and discipline required for consistent parenting. Ineffective parenting practices, consisting of noncontingent and coercive interactions, are considered the determinants for child conduct disorders (Patterson, DeBaryshe, & Ramsey, 1989). These conduct-disordered behaviors lead to academic failure and peer rejection, which subsequently leads to increased risk for depressed mood and involvement in a deviant peer group in later childhood and early adolescence.

Even though alcoholic families have many difficulties in functioning, alcohol has also been perceived as having adaptive consequences for the alcoholic marriage (Steinglass, 1981). It may also be an integral part of adaptive functioning in the system (Steinglass, Weiner, & Mendelson, 1971). Jacob, Dunn, and Leonard (1983) found high alcohol consumption associated with high satisfaction and reduced symptomatology in the spouses of steady, but not binge drinkers. From these results it was hypothesized that marital/family relationships are more satisfying during high versus low consumption periods. It was noted that binge drinkers presented more pathological adjustments than steady drinkers, as indicated by higher scores on various MMPI scales. Dunn, Jacob, Hummon, and Sulkamer (1987) identified a causal relation between alcohol consumption and marital stability and indicated the significant impact of drinking location on these relations. They found that high-rate drinking among in-home drinkers is likely to be reinforced and associated with positive consequences. Alternatively, for both binge drinkers and steady out-of-home drinkers, there "appears to be greater individual pathology than with steady, in-home drinkers, and the drinking pattern is extremely variable, at times chaotic, and is not incorporated into family life" (p. 106). The alcoholic's drinking patterns play an important role in family functioning, although this role is not yet fully understood. Researchers continue to examine the factors that determine the complex nature of functioning in these families (Moos & Moos, 1984).

Previous results from the MSU Vulnerability Study illustrate the complexities of these relationships. Families with long term alcohol related difficulties were found to have greater family conflict, higher rates of marital separation in the lifetimes of the parents, and higher rates of violence among family members (Relder, 1987). However, families with greater current alcohol consumption were found to have lower rates of aggression between parents and children, and no relationships were found between spousal aggression and parent current drinking.

Children in Alcoholic Families

The existing literature addressing the adjustment of children in alcoholic families is a confusing one. In the past, clinical reports indicated that these children exhibit major emotional problems and adjustment difficulties stemming from their interactions with alcoholic parents. Although the consensus among clinicians is that some of these children are severely impaired, relatively few empirical studies have examined this issue (El-Guebaly and Offord, 1977; Jacob et al., 1978). Also, most studies have been characterized by major methodological problems, which render conclusions as tenative or ambiguous.

More recently, some well-controlled and thoughtful research has evolved that begins to address questions regarding the emotional and behavioral adjustment of children of alcoholics. One idea that is evolving from this work is that not all children are impaired solely as a result of being raised in an alcoholic home (Clair & Genest,

1987; Jacob & Leonard, 1986; Werner, 1986). Researchers have begun to examine the various family variables that may account for the variability in offsprings' adjustment (West & Prinz, 1987). Limited data on maternal versus paternal alcoholism indicates that children of alcoholic mothers have greater maladjustment (Miller & Jang, 1977).

In comparing impaired and unimpaired children of alcoholic fathers, Jacob and Leonard (1986) found that the fathers of impaired children scored higher on the Beck Depression Inventory. On the MMPI, they scored higher on the F and K validity scales, and on clinical scales 6 (Paranoia), 7 (Psychasthenia), and 8 (Schizophrenia). Also, mothers of impaired children versus unimpaired children had higher scores on the L and F validity scales of the MMPI, and on clinical scales 1 (Hypochondriasis), 4 (Psychopathic Deviate), and 8 (Schizophrenia). The researchers offered two interesting interpretations of the data. First, those fathers with the most severe alcohol-related difficulties and the most significant levels of concomitant psychopathology may "exert the most disruptive effects on the family, and in turn, significantly increase the psychological problems of their wives and children" (p. 378). Second, the wife possibly plays an important mediating role in whether paternal alcoholism exerts a significant and detrimental effect on the children (Elder et al., 1985). According to Jacob and Leonard, although such factors as chaotic family structures and the absence of an appropriate paternal role model are more probable within alcoholic families, a competent and less distressed wife may be able to replace or compensate for these factors. They suggest that the identification of

paternal and maternal psychopathology as factors related to child impairment would be an important finding, since it would suggest that impairment may be due to the conjoint influences of alcoholism and other parental problems rather than to alcoholism alone.

Moos and Billings (1982) compared children of relapsed and recovered alcoholic patients with children from sociodemographically matched control families on a set of indices of emotional and physical status. Regression analyses were completed to predict children's emotional health in alcoholic families. A variety of individual and family variables were related to children's level of health functioning. Variables that provided incremental information in predicting children's emotional health included alcohol consumption and drinking problems, the emotional, physical, and occupational functioning of both parents, and their methods of coping with stress. Characteristics of the family system, such as the occurrence of undesirable life change events and family environment dimensions were also significant predictors of children's emotional symptoms. It was noted that these indices of parental functioning are related to family cohesion, conflict, and husband-wife incongruence about the family environment (Moos & Moos, 1980). "Taken together, the findings highlight the complex interplay between the functioning of individual family members and aggregate characteristics of the family system" (Moos & Billing, 1982, p. 162).

These studies underscore the need to examine both parental and family functioning in the effort to gain a comprehensive understanding of the adjustment of children in alcoholic families (West & Prinz,

1987). Moos and Billings (1982) note that future studies should focus on factors such as parental functioning and coping responses, and family resources and stressors, which may help to either moderate or accentuate the impact of one family member's dysfunction. The following literature review will examine the relationships between parental psychopathology, marital and family discord, and child adjustment in populations other than alcoholic families, so that general and disorder-specific factors that affect child functioning may be identified.

Relationships between Parental Psychopathology, Family and Marital Discord, and Child Adjustment

Children from families with a parent with psychological problems are at risk for a variety of adjustment problems (Feldman, Stiffman, & Jung, 1987). In addition, mentally ill individuals are more likely to have conflicted marriages and divorce (Molholm & Dinitz, 1972). Some researchers believe that the troubles children experience living in families with mentally ill parents are not solely derived from having parents with a psychiatric disturbance, but are mediated in part along with other factors by the marital troubles and family conflict that occur in these families (Emery et al., 1982; Feldman et al., 1987; Rutter, 1971). According to Emery and his colleagues (1982), it was suggested that, except in the case of schizophrenia, marital discord may explain a good part of the increased problems among children of behaviorally disordered parents. Emery (1982) noted the need for researchers to examine more closely the dual, nonindependent effects

of interparental conflict and psychopathology on children. The following sections will examine more closely the relationships between parental psychopathology and child adjustment, parental psychopathology and marital discord, and marital discord and child adjustment.

Parental Psychopathology and Child Adjustment

In general, a relationship is found in the literature between parental psychopathology and adjustment difficulties in children, with the children of mentally ill parents at greater risk for developing psychopathology than the children of well parents (Feldman et al., 1987; Garmezy, 1974; Rutter, 1966). More recently, researchers have become interested in the concepts of vulnerability and resilience in at-risk research (Rutter, 1987). The vulnerable child is likely to have difficulties even in a benign environment, while the resilient child is able to survive highly stressful environments during development. Some researchers are especially interested in groups of high-risk children who do not develop problems and in low-risk children who end up being very vulnerable (Anthony, 1974a, 1974b; Chiland, 1974). Others have recognized that children in at-risk research cannot simply be classified into the categories of "victims" or "invincibles" of mental illness, but have recognized the need for a "vulnerable" group, who do not display clear evidence of mental illness, yet are also not free of symptoms that portend their possible emotional or behavioral disorder (Feldman et al., 1987). These researchers utilize a social interaction model, in which a child's

risk status and subsequent behavioral outcomes are considered a function of the relative balance between personal coping skills and net environmental stressors and protectors.

Much attention has been devoted in the past twenty years to obtaining a greater understanding of the effects of psychiatric disorders in parents on the subsequent behavioral, cognitive, and emotional development of their children. Recent prospective longitudinal studies have been most focused upon families with schizophrenic and depressed parents. However, it should be noted that the specific focus of much of the research is on disordered mothers and their children, with little known about the fathers. This may be because there is a higher prevalence rate of depression for women than men (Goldman & Ravid, 1980; Myers et al., 1984; Weissman & Klerman, 1977), as well as a higher marriage rate for schizophrenic women than men (Gibbons, Horn, Powell, & Gibbons, 1984). Until recently, however, many studies did not look at the relationships between paternal variables and child functioning, since the mother-child relationship was felt to be the primary one. It was probably also easier to enlist mothers in research projects than fathers.

In a review of the literature, Rutter (1980) notes that a link exists between mental disorders in parents and psychiatric impairment in children. Chronic disorders and conditions associated with personality abnormalities seem to have a greater risk for children. However, parental diagnosis does not seem to be a critical variable. Also, childhood disorders do not seem to follow a particular pattern,

and close connections do not exist between parental diagnosis and specific childhood disorders. Parental mental illness is often linked with marital discord, conflict over childrearing, irritability toward children, and impaired family communication (Rutter & Quinton, 1984; Rutter, Yule, Quinton, Rowlands, Yule, & Berger, 1975). Since family conflict is related more directly with problems in the children of mentally disordered parents, children may be at risk primarily because of the accompanying family disturbances and marital problems. Rutter (1980) indicates that the risk to children results from their involvement in abnormal parental behavior, and in the relationship between parental mental illness and increased family conflict, maladaptive communication, and impaired parent-child interaction.

In terms of parental psychopathology, the areas of interest that will be examined in the proposed study are lifetime alcohol use, antisocial behavior, and depression, in both mothers and fathers. The fathers in the proposed study are targeted because of their heavy drinking. Since the subject of parent alcohol use and subsequent child adjustment was already discussed in the section on children in alcoholic families, the focus will now be on studies of children of depressed parents, and of antisocial parents.

Depressed parents and their children. Children in families with depressed parents show more behavioral deviance than do controls (Reid & Morrison, 1983; Rutter, 1974). According to Gammon (1983), children of depressed parents appeared to have a threefold higher risk than normals for manifesting an emotional disturbance. Several studies indicate that an especially high rate of impairment exists in at-risk

children when both parents are mentally ill (Beardslee, Bemporad, Keller, & Klerman, 1983; Gammon, 1983; Gershon et al., 1982). Thus far, existing research suggests that there is not an especially direct relationship between parental diagnosis and a specific type of childhood behavior disorder.

In a literature concerning the children of parents with a major affective disorder, Beardslee and his colleagues concluded that factors such as the degree and duration of parental impairment, speed of recovery from the mental illness, and difficulties in family communication may be more powerful predictors of childhood disorder than the parent's diagnostic category (Beardslee et al., 1983). In addition, certain attributes of the child may mediate impact of the ill parent, which include intelligence, presence of absence of learning disabilities, and the quality of the child's coping skills. It was also noted that the psychosocial impact on children of parents with major affective disorders may derive not from the specific nature of the affective diagnosis itself, but from the accumulated life stress due to parental unavailability and impairment (Beardslee, 1984). Yet, it has been noted that a specific psychosocial impact can also follow from the parent's depression through such mechanisms as the child imitating the parent's behavior, learning over time to view and react to the world as the parent does, or through a specific factor in the interaction between the parent and the child, such as parental withdrawal or devaluation of the child's actions (Beardslee, 1984).

Rutter describes modifying factors that have meliorating effects, such as the existence of a good relationship with one of the parents, or a change from a conflicted to a harmonious family setting. These problems are even greater in the child who is "vulnerable," since when parents are depressed, they may tend to displace their frustrations onto a difficult child. Thus, the child's predisposing characteristics, innate or acquired, are perceived as influencing parental behavior. According to Rutter (1974), they put the child at increased risk through their influence on the child's interactions in the environment already made pathological by virtue of parental depression.

Antisocial parents and their children. Much of the information obtained regarding antisocial parents and their children is derived from the literature on parental criminality and juvenile delinquency. Joan and William McCord (1957) found that 87% of children with criminal parents end up becoming delinquent. Robins' research (1975) shows that criminal parents tend to have relatively larger numbers of disturbed children, but that some of the children appear to be normal. Also, disturbances in those troubled children do not always take the form of delinquent behavior. Children are at greater risk when both parents have a sustained history of deviant behavior (Robins, West, & Herjanic, 1975), although many children of these parents do not become delinquent even when both parents had been delinquent and arrested as adults. In studies of the general population in London and Isle of Wight, Rutter and his colleagues (Rutter et al., 1975) found that paternal criminality is associated with a twofold increase of

psychiatric disorder in children. Rutter (1977) concluded that identification with the same-sex parent is an insufficient explanation for the transmission of deviance. The association with parental criminality seems to be equally strong among both boys and girls.

There seems to be a consensus among studies that no direct link exists between parental diagnosis and child behavior problems, thus it is more germane to examine the frequency and chronicity of parental psychopathology, as well as proportion of psychopathology in the family (Feldman et al., 1987). More importantly, the link between parental psychopathology and child behavior problems is mediated by others factors, such as family relationships and the accumulated life stressors of living with a mentally ill parent or parents. These stressors include increased marital and family conflict, maladaptive communication, and impaired parent-child interaction.

Parental Psychopathology and Marital Discord

The prevalence rate for overall psychiatric disorder is 32.7%, of which anxiety disorders compromise about 14.6%, alcohol and drug-dependence/abuse 16.7%, and affective disorders 8.3% (Regier et al., 1990). Both anxiety and affective disorders are twice as prevalent in women than men (Myers et al., 1984).

Although there are few well-controlled studies, there have been consistent reports of relatively poor levels of adjustment in the marriages of psychiatrically ill patients (Bullock et al., 1972; Hafner, 1986; Hoover & Fitzgerald, 1981; Weissman & Paykel, 1974). Psychiatric illness has also been associated with increased divorced

rates (Briscoe, Smith, Robins, Marten, & Gaskin, 1973). Neurotic symptoms in general, and depressive neurosis in particular, are strongly associated with marital dissatisfaction and conflict (Sims, 1975). In survey work as well, a strong positive relationship is found between marital stressors and symptoms of depression (Ilfeld, 1977).

The denial of marital factors is found to be a major but largely unacknowledged contributor to the maintenance or recurrence of patients' symptoms in the treatment of married patients, who are a majority in many adult psychiatric disorders (Goldstein & Chambless, 1981; Kohl, 1962). Marital and family interactions can be critical in precipitating manic or depressive episodes, and thus in continuing the disorder (Mayo, 1979). This relationship between marital discord and psychiatric illness is not well understood. Although marital discord has been associated with depression in the literature, rates of separation and divorce are also very high in couples in which one spouse has a diagnosis of schizophrenia (Erlenmyer-Kimling, Wunsch-Hitzig, & Deutsch, 1980), antisocial personality (Briscoe et al., 1973), or bipolar disorder (Brodie & Leff, 1971).

The literature indicates that young married women have high levels of psychological symptoms and psychiatric disorder (Berg, Butler, Houston, & McGuire, 1984; Briscoe, 1982; D'Arcy, 1982). Married unemployed women with young children are considered at greatest risk because of their child-care and domestic commitments. Three risk factors associated with psychiatric disorder in married women are lack of outside employment, presence of young children in

the home, and the absence of a close, confiding relationship with the husband (Henderson, Byrne, & Duncan-Jones, 1981). An individual is more likely to develop psychological symptoms if he or she experiences significant problems and lacks a relationship perceived as adequately supportive or intimate. The level of intimacy within the marital relationship is considered a central factor in determining whether a wife develops psychological symptoms (Brown & Harris, 1978; Bebbington, Sturt, Tennant, & Hurry, 1984; D'Arcy, 1982). Henderson et al. (1981) point out the liklihood of a circular relationship, with psychological symptoms reinforcing marital discord, and marital discord reinforcing the symptoms, thus establishing a vicious cycle. Although the relationship between individual psychopathology and marital discord is not well understood, there is little doubt about its pervasiveness.

Marital Discord and Child Adjustment

Psychologists of diverse theoretical orientations will agree with the notion that a relationship exists between marital discord and behavior problems in children. In addition, many will take a step further in positing that marital discord causes or maintains child maladjustment. Although many may disagree with such a bold pronouncement, Framo (1975) has declared that "... whenever you have a disturbed child, you have a disturbed marriage" (p.22). In any case, the research indicates that a relationship does indeed exist between discord in intact marriages and the severity or frequency of behavior problems in children (Emery, 1982; O'Leary & Emery, 1984).

However, some posit that a direct link does not always exist between marital discord and child behavior problems. For example, Feldman et al. (1987) found that mother-child and family discord were critical variables in predicting child maladjustment in mentally ill families, but that mother-father discord were critical in comparison families. The existing literature on separation and divorce suggests that interparental conflict, not separation, may be the principal explanation for the association between divorce and continuing childhood problems (O'Leary & Emery, 1984).

O'Leary and Emery (1984) reviewed the research on marital discord and child behavior problems, distinguishing between findings of clinic and nonclinic samples. Although they found significant relations in both samples, stronger associations between marital discord and child adjustment were found in clinic rather than nonclinic samples. Marital and child problems seem to be weakly related in the general population, and are more strongly related in special populations where the child has psychological problems, the parent has psychological problems, or the child is referred for treatment (O'Leary & Emery, 1984).

It was felt that clinic samples may have differed from nonclinic ones on some third variable that increased estimates of the association between marital and child problems. Marital discord is a stressor that, by itself, is perhaps insufficient to cause psychological problems in children (O'Leary & Emery, 1984). Yet, in combination with other stressors, marital discord may lead to child behavior problems. During the past several years, researchers have

begun to examine the factors associated with parents' evaluations of their clinic-referred children. It has been found that parent perceptions of child adjustment have been shown to be the best predictor of referral for psychological treatment (Griest, Forehand, Wells, & McMahon, 1980; Lobitz & Johnson, 1975). However, it has also been shown that parent perceptions are not always accurate (Furey & Forehand, 1986). Other factors have been considered to play a role in parent perceptions of their children's behaviors.

Available research suggests that three primary areas of behaviors/events may influence a parent's satisfaction with their child, which include child behavior, marital behavior/events, and personal behavior/events (Furey & Forehand, 1986). According to Furey & Forehand (1986), child behaviors are used inconsistently by parents in forming their perceptions. As already noted, the research suggests inter-parental conflict contributes to behavior problems and the referral of children. For personal factors, researchers have indicated that the reason for clinic referral of children may reside in parents in addition to/rather than the child himself (e.g., Griest, Wells, & Forehand, 1979). Some of these factors include maternal depression and independent maternal activity.

In a review of the literature on the relationships between marital conflict and child behavior problems, Emery (1982) concludes:

> (a) concomitant conflict, not separation per se, appears to be responsible for many of divorce's serious, longterm pathogenic effects, (b) openly hostile and continued conflict has a great effect, (c) the most prominent behavior disorder is a problems of undercontrol, (d) boys demonstrate a greater observable response than do girls, (e) age has not been shown to alter the child's reaction, (f) a good relationship with at least one parent can

> partially buffer the negative effects, and (g) increased interparental conflict may explain many of the negative effects found among children of parents with individual psychopathology. (p. 319)

In his summary of existing research on interparental conflict and the children of discord and divorce, Emery (1982) posits several hypotheses about how marital discord may produce childhood behavior problems: disruption of attachment bonds, modeling, altered discipline practices, stress, taking on the symptom, and child effects. He correctly indicates that is is unlikely that any single hypothesis will fully explain the relation between marital and child problems. Instead, he notes that each may have some merit and he integrates the given hypotheses with existing research.

> Parents involved in conflict with each other are probably poorer models, are more inconsistent in their discipline, and place more stress on their children. Some children probably serve to distract attention away from parental conflict, whereas others may aggravate the conflict. Attachment bonds are certainly disrupted by separation and may also be affected by conflict. These (and perhaps other) processes are likely to operate collectively in affecting the children of marital turmoil, although, in any given instance, one influence may predominate. (p. 324)

It was noted that modeling and discipline practices hold particular merit in light of the available data. However, Emery (1982) also relates that these two etiologic accounts cannot be given strong support because the data preceded specific predictions. It was denoted that a general lack of hypothesis testing is charateristic of the literature on marital and child problems, and the need for future investigators to make specific predictions based on theoretical rationales was emphasized.

Statement of the Problem

Different bodies of literatures exist exploring various aspects of relationships between parental psychopathology, marital and family discord, and child adjustment in mentally disordered and comparison families. However, there are few studies that examine the relative contributions of different types and degrees of parental psychopathology in combination with marital and family discord in accounting for child behavior problems. Fewer studies still have examined these relationships with data collected from both parents. Links have been found between parental psychopathology and child behavior problems (Feldman et al., 1987), parental psychopathology and marital discord (Hafner, 1986), and marital discord and child behavior problems (Emery, 1982; O'Leary & Emery, 1984).

It should be noted that not all children in mentally disordered families exhibit behavioral problems, nor do all children in maritally discordant families. Researchers have begun to examine the relative importance of parental psychopathology and marital and family discord in accounting for the adjustment of children in families. The notion has been raised that the problems children experience living in families with mentally troubled parents are not solely derived from having parents with psychiatric problems. Rather, they are mediated by the marital difficulties and family conflict that occur in these families, as well as other stressors these families experience (Emery et al. 1982; Feldman et al., 1987; Rutter, 1971).

It is easy to apply this train of thought when considering the adjustment of children in alcoholic families. As noted, the alcoholic family is a multi-problem one (West & Prinz, 1987). Both husband and wife are known to have difficulties with alcohol abuse, antisocial behavior, and depression (Weil, 1987). The alcoholic marriage is discordant and conflictual, containing high rates of separation, divorce, and even violence at times (Reider, 1987). Other stressors for these families include legal and economic problems.

Given all of these possibilities, it is likely that children in these families may experience adjustment problems. Indeed, a relationship has been found in the literature between parental alcoholism and child impairment (West & Prinz, 1987). However, according to West and Prinz, "Neither all nor a major portion of the population of children from alcoholic homes are inevitably doomed to childhood psychological disorder" (p. 204). As with other troubled families, a plausible hypothesis is that the troubles these children experience are mediated by the increased marital and family discord that exists in these families.

There is also evidence that the mother plays an important mediating role in whether paternal alcoholism plays a significant and detrimental effect on children-- at least in older families (Jacob & Leonard, 1986). A competent and less distressed mother may compensate and protect a child from some of the stressors experienced from living in an alcoholic family. Limited available data on maternal versus paternal alcoholism indicates that children of alcoholic mothers have greater maladjustment (Miller & Jang, 1977). Therefore, a child

living in a family with two problem drinking parents may be at greater risk for behavior problems. Thus the child's behavior problems may be due to the conjoint influences of alcoholism and other parental difficulties, as well as family difficulties, rather than to alcoholism alone.

The present research explores this problem using a systematically drawn, nonclinical sample of intact families with young children. These families vary in the extent to which heavy drinking is currently being carried on by the fathers (and to a much lesser degree by the mothers). The relationships of parental psychopathology and marital and family discord to child behavior adjustment will be examined. Parental psychopathology will be denoted by current and lifetime measures of drinking, antisocial behavior, and depression. The relative contributions of parental psychopathology and marital and family discord to child behavior problems will be determined, to gain a better understanding of its occurrence in alcoholic families. The study has considerable potential for delineating the early characteristics that relate to child risk status for difficulty in the later years.

Formal Predictions

Given all of the prior literature, there is good reason to anticipate that there will be higher rates of child behavior problems in those families with greater amounts of alcohol consumption and alcohol-related problems. The purpose of the present exploratory investigation is to examine the relations among lifetime and current

parental psychopathology and current family and marital functioning in a causal model predicting child behavior problems in young alcoholic families. The specific goal is to develop and test a causal model to determine the direct and indirect influences upon child adjustment. In addition, the following hypotheses are offered.

Hypothesis 1

For both mothers and fathers, there will be significant positive associations among lifetime measures of alcohol abuse, antisocial behavior, and depression.

Hypothesis 2

For both mothers and fathers, there will be significant positive associations among current measures of alcohol use, antisocial activity, and depression.

Hypothesis 3

For both mothers and fathers in these families, higher rates of family conflict and marital discord will be significantly positively associated with both lifetime and current measures of parental symptomatology, including alcohol-related troubles, antisocial behavior, and depression.

Hypothesis 4

Individuals experiencing higher amounts of lifetime trouble relating to alcohol abuse, antisocial behavior, and depression will have greater difficulties in their family and marital relationships. These difficulties in interpersonal relationships are likely to contribute to higher levels of current symptomatology in the parents. Higher levels of current family and marital discord will impact upon

child behavior problems directly as well as indirectly through current parent trouble. Therefore, both greater difficulties in family functioning and increased levels of current parental symptomatology are hypothesized to contribute to higher levels of behavior problems in the children. The general theoretical causal model is presented in Figure 1.

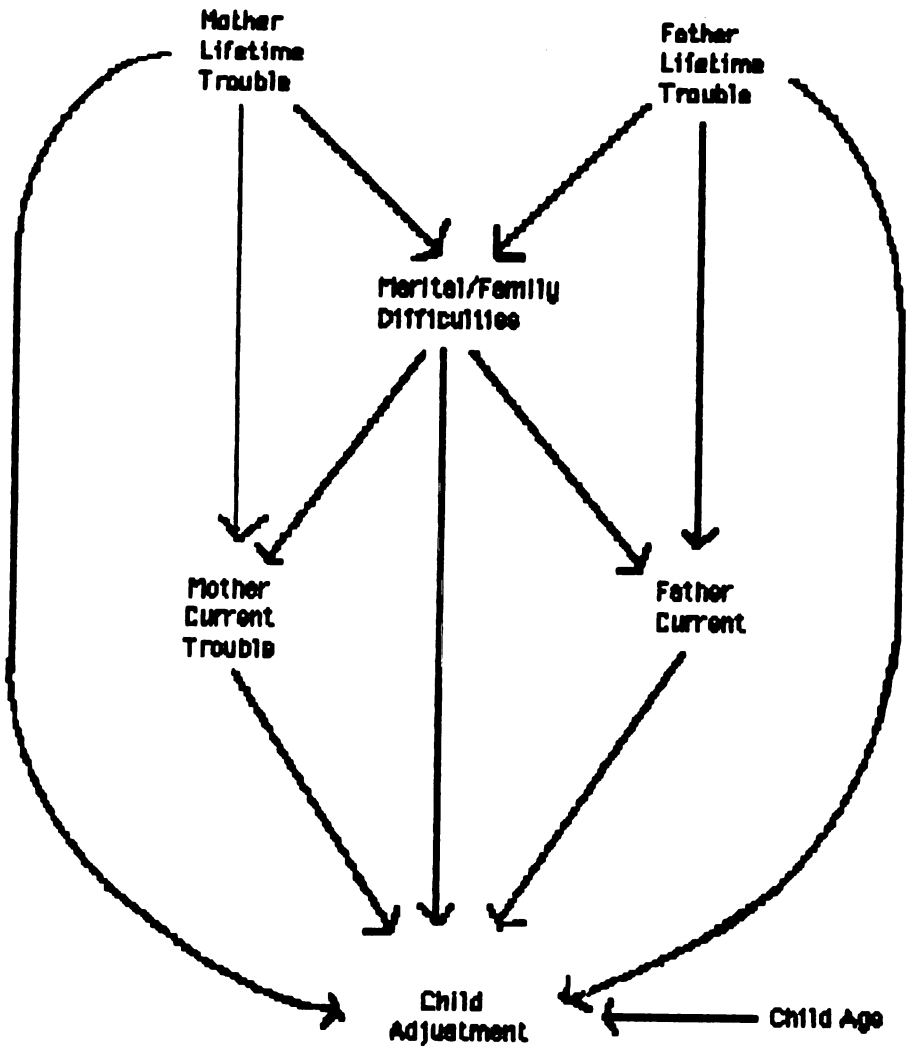


Figure 1

Theoretical Model of Child Adjustment

METHOD

Subjects

Rationale

Research has shown that the sons of male alcoholics are at considerably increased risk to later become alcoholic adults (Cotton, 1979). The Michigan State University Longitudital Study (Zucker et al., 1984) is a prospective study concerned with the factors that may contribute over time to the development of alcoholism, substance abuse, and other behavioral disorders in offspring. The particular focus of the MSU Longitudinal Study is on the male alcoholic family, with current special interest given to male offspring, as the highest probability target children for later alcoholism.

Subjects

Subjects were obtained from the ongoing Michigan State University Longitudinal Study (Zucker, 1987; Zucker et al., 1986). The population net for the study included four adjacent counties in the mid-Michigan area, involving six district courts. Subjects were convicted male drunk drivers with a blood alcohol level (BAL) of 0.15 percent (150mg/100ml) or higher, or 0.12 percent or higher if this was a second or more documented drinking related legal problem. Those recruited into the study of "child development and family health" had

a biological son between the ages of 3-0 and 6-0 currently living with them. Probation officers from the district courts asked men for permission to release their name and telephone number to the project. At this point potential respondents were told that the study had no connection to the courts and that all information collected was confidential. Currently 79% agreed to have their names released; of those contacted by project staff, 91% agreed to participate. The project coordinator visited their families in their homes to screen for suitability if the necessary conditions were met. Mother alcohol use/abuse was irrelevant for selection, and mothers varied on this dimension, all the way between alcoholism and nonuse. Parents were informed that the project focused on families with different kinds of health difficulty, who may vary in health status. Screening questionnaires and interviews were later administered to ensure that the individual met Feighner diagnostic criteria for alcoholism (Feighner et al., 1972). Although the families had in common the element that they had an alcoholic father, the fact is that they both currently and historically varied considerably in their amount of drinking. The larger longitudinal study also includes a matched control group of nonalcoholic families who reside in the same communities, but the present study did not focus upon these families.

Subjects used in the present analyses consisted of 90 alcoholic families. All of the men at minimum made a Feighner diagnosis of probable alcoholism, although the majority made a definite diagnosis (Noll, Zucker, Fitzgerald, & Curtis, 1990). Demographic characteristics of the sample are given in Table 1. Mean age of the

Table 1

Sociodemographic Characteristics of the Study Sample (N=90 Alcoholic Families)

Age in Years	M	SD
Mothers	28.90	4.44
Fathers	30.94	4.71
Target Child	4.35	1.11
Number of Children Living in Home	2.19	.89
Education (Years)		
Mothers	12.58	1.88
Fathers	12.13	1.89
Socioeconomic Status (Duncan)		
Family	27.10	11.46

Religion (%)	Fathers	Mothers
Protestant	40.0	54.4
Catholic	13.3	20.0
Jewish	1.1	1.1
No Religion	43.3	22.2
Other	2.2	2.2

fathers was 30.94 (SD = 4.71), mothers was 28.90 (SD = 4.44), and sons was 4.35 (SD = 1.11). Mean family socioeconomic status, coded using the Revised Duncan TSEI2 Index (Stevens & Featherman, 1981) was 27.10 (SD = 11.46), which put these families at the occupational level of skilled trades and clerical sales that includes some supervisory responsibility. Other occupations within this range included typesetter, apprentice tool and die maker, bar manager, boiler maker, and vehicle dispatcher.

Data collection for each family involved a ten session contact schedule, that included eighteen hours of assessment instruments (some completed by the interviewers after having left the home). The majority of the data collection was done in the family's home. The family received monetary compensation for completing the assessment. It included developmental measures on the target child, questionnaire, interview and self-report data by both parents, and rating data on all study members done by each other and by project staff.

Measures

The particular instruments that were of relevance for this research examined the parents' views (and clinician ratings) of child behavior problems in their sons, measures of family conflict and spousal aggression, as well as current and lifetime levels of drinking, antisocial behavior, and depression (self-report and clinician ratings) in the parents.

Measuring Child Adjustment

Achenbach Child Behavior Checklist. Each parent completed the Achenbach Child Behavior Checklist (CBCL) (Achenbach, 1978), which gives different measures of child behavior problems. This factor-analytically derived parent-report form contains both behavior problem and social competence scales. The CBCL has been normed on children 4 to 16 years of age and yields standardized scores on nine narrow band subscales and two broad band factors, externalizing and internalizing behaviors, as well as a social competence scale (also see pp. 61-62). A Total Behavior Problems score is also provided. Since the CBCL was not standardized for three year olds, the subscale scores of these children were interpreted with a degree of caution. The scales that are of primary interest in this study are Total Behavior Problems, the factors of Internalizing and Externalizing behaviors, and the subscales of Depression and Aggression.

Conflict Tactics: Child Aggression. In a national population survey of family violence, Straus, Gelles, and Steinmetz (1980) used the Conflict Tactics Scale (CTS) to determine the incidence of violence in American families. The CTS examines spousal aggression, parental aggression toward children, child aggession toward parents, and sibling violence. The section on child aggression toward parents was used in this study as an alternative manner of assessing child adjustment.

The CTS measures family aggression by asking about the ways in which conflict is resolved by family members. The internal consistency of the CTS was examined by two techniques; item analysis

and via the alpha coefficient of reliability (Straus, 1979). Based on an earlier pilot study of 385 couples, the mean item-total correlation was .87 for the Husband-to-Wife Violence Index and .88 for the Wife-to-Husband Violence Index (Straus, 1979). The alpha coefficients for the national sample were .83 for Husband-to-Wife Violence Index, .82 for Wife-to-Husband Violence Index and .88 for the Couple Violence Index.

Several items were added to the instrument for use in the MSU Study, as well as regrouping of some already existing items (See Appendex A for a copy of the instrument). For items where there was no reported occurence in the past year, respondents were also asked whether the behavior <u>ever</u> occurred; for all items having any reported occurrence, respondents were also asked for year of first occurrence. Because of time considerations, information regarding violence between siblings was omitted, but follow-up questions were added regarding alcohol consumption at the time of the violent event. Respondents were also asked whether they were exposed to violence or abuse in their homes as children. This revised CTS was administered as part of the Diagnostic Interview Schedule protocol (DIS) (Robins, Helzer, Croughan, & Ratcliff, 1981; Robins et al., 1985), a diagnostic interview that is given to each parent separately. The CTS was given about two-thirds of the way into the protocol, after the respondent had an opportunity to develop considerable rapport with the interviewer (typically one to 1-1/2 hours into the interview). This allowed parents to feel more comfortable in answering questions of a highly personal nature.

Variables in this section pertained to aggression of child toward parent (mother report of child aggression to her and father report of child aggression to him). The variables coded refer specifically to reports of child aggression to parents during the past year. Cumulative Intensity was the score used for these analyses (Reider, Zucker, Noll, Maguin & Fitzgerald, 1988). The computations for this score are detailed in Appendix B. This is a summary index, which is the product of level of violence intensity times frequency of violence, summed across all levels of violence items. Thus, respondents received a higher score for both more frequent violence and for higher levels of it, and the measure reflects this combined influence.

California Child Q-Sort (CCQ). The CCQ (Block & Block, 1980), a child version of the extensively used California Q-sort (Block, 1961, 1978) is an instrument that permits an observer to systematically describe children's personality and behavioral functioning by way of a standardized language. Specifically, 100 statements that portray a variety of behavioral adaptations were used. Brief descriptive statments on cards were sorted by an observer who grouped these statements into a prespecified normal distribution that ranges between items that are the most and least salient descriptors of the child's behavior. A sample of the descriptors that were particularly relevant to the current research are: 1) aggressive behavior-- is aggressive (physically or verbally); is stubborn; characteristically pushes and tries to stretch limits to see what he can get away with; 2) activity level-- is restless and fidgety; is physically active; has a rapid

personal tempo, reacts and moves quickly; 3) negative mood-- cries easily; tends to be sulky or whiny; tends to brood and ruminate or worry; 4) attention span-- is unable to delay gratification; gives up easily, is not persistent in activities; is not attentive and able to concentrate; and 5) coping-- is calm and relaxed; easy going; is warm and responsive; is cheerful.

Validity of the CCQ as an observer-based indice of ego-resiliency and ego-control was obtained from a longitudinal study of approximately 130 children first assessed at age three years (Block, 1971). Estimated internal consistency reliabilities of the Q-items averaged .65 at both ages three and four years. These reliabilities were based on intraclass correlations among the observers. External validity of the concepts of ego-resiliency and ego-control was supported by Schiller's (1978) research, which replicated Block's (1971) findings in three through five year olds from lower SES families than those in the original study. Construct validity is also reflected in the research examining the relationship between attachment behavior at eighteen months (Ainsworth & Wittig, 1969), problem-solving behavior at age two years (Matas, Arend, & Sroufe, 1978), and ego-control and ego-resiliency measured at ages four and five years.

Advantages of the CCQ include allowing for ipsative (within individual) comparison of characteristics since the observer makes within-individual comparisons in performing the Q-Sort; normative comparisons can also be made utilizing individual items and rater constructed sets or "scales" (Block, 1971). The CCQ was completed by

the clinician who conducted the intellectual assessment of the child. The clinician completed the CCQ after having an opportunity to spend about two hours with the child.

Measuring Family Functioning

Family Environment Scale. One measure of family conflict and cohesion was derived from the Family Environment Scale (FES) (Moos & Moos, 1981), which is a questionnaire of family functioning that was completed by each parent. The FES has been used extensively in research on alcoholic as well as other types of families (Moos & Billings, 1982). It is a 90 item, true-false inventory that measures family environment on ten dimensions, which include personal growth emphasized by family members and degree of family structure. The FES assesses the husband's and wife's perceptions of three aspects of family climate: (a) areas of personal involvement and activity emphasized by family members (Independence, Achievement Orientation, Intellectual Orientation, Active Recreational Orientation), (b) quality of interpersonal relationships in the family, (Cohesion, Expressiveness, Conflict) and, (c) the degree of structure in the family (Organization, Control). These subscales have adequate internal consistency, ranging from .64 to .79, good eight-week test-retest reliability, ranging from .68 to .86, and average subscale intercorrelations, around .20, indicating that they measure distinct, though somewhat related, aspects of family social environments (Moos & Moos, 1976). Cohesion and Conflict were the FES scales that were used in analyses for this study. The items detailing the Cohesion and Conflict scales can be found in Appendix C.

Conflict Tactics: Spousal Aggression. An alternative measure of spousal conflict and family functioning was the index of spousal aggression on the Conflict Tactics Scales. Variables used here pertain to spousal violence, which included reports of the respondent's violence to their spouse, as well as their perception of their spouse's violence to the respondent. A parallel Cumulative Intensity index was also generated to scale spousal aggression; this was the measure used for analyses.

Measuring Current and Lifetime Drinking Behaviors

Quantity-Frequency-Variability Index Revised (QFV-R). Several questionnaires were administered individually to husband and wife to determine the nature of their drinking behaviors. Parents were given an extensive Drinking and Drug History (DDH) (Zucker & Noll, 1980a), the Short Form of the Michigan Alcoholic Screening Test (the SMAST) (Selzer, 1975), and were also queried about drinking practices during the Diagnostic Interview Schedule (DIS). Information on the parents' level of alcohol consumption in the last six months was used to determine a score for current drinking. It is an expansion of Cahalan, Cisin, and Crossley's (1969) national survey measure (also see National Institute on Alcohol Abuse and Alcoholism, 1987), the Quantity-Frequency-Variability (QFV) Alcohol Consumption Index, called QFV-R (Zucker & Davies, 1989). This measure uses the basic scoring system, but rather than combining the Quantity-Variability classification with the Frequency classification to yield a five-category classification, the score is obtained by multiplying the QV class times the approximate number of drinking episodes per year

(based on the reported average frequency). This yields a 0 to 21,000 score which is then subjected to a logarithmic transformation (base ten). This revision of the scoring system greatly increases the sensitivity of the measure and so increases the information that the score provides about the relative level of current drinking.

Lifetime Alcohol Problems Score (LAPS) The LAPS (Zucker, in press) incorporates information on the primacy (onset), variety, and life invasiveness of problems associated with drinking; the measure utilizes data from the SMAST, DDH, and DIS. LAPS consists of three component subscores: (a) the primacy component, involving the squared inverse of the age at which the respondent reported first drinking enough to get drunk; (b) the variety component, involving the number of areas in which drinking problems were reported; and (c) the life percent component, involving a measure of interval between most recent and earliest drinking problems, corrected for current age. Scores were standardized separately for males and females within our project sample. This measure is unrelated to current consumption in problem drinking samples and has already been shown to be a valid indicator of differences in long term severity of drinking difficulty in a wide variety of different areas (Zucker, in press).

Measuring Antisocial Behavior

The Antisocial Behavior Checklist is a 46 item inventory of behaviors involving ten different homogenous content subscales, that can be considered either adolescent or adult behaviors. Examples of scales include parental defiance, adolescent delinquent behavior, job related antisocial behavior, etc. (Zucker & Noll, 1980b). The

questionnaire inquires about the frequency of one's "participation in different adventures and activities." This instrument is a revision of an earlier antisocial behavior inventory utilized in the Rutgers Community Study (Zucker & Fillmore, 1968; Zucker & Barron, 1973), that has been modified so that items are salient for adult antisocial activity. A series of reliability and validity studies with populations ranging from college students to jail inmates has shown that the instrument has adequate test-retest reliability (.81 over four weeks), and the cofficient alpha is .84. It differentiates among groups with major antisocial behavior histories (prisoners) vs. individuals with minor offenses in district court vs. university students.

Measuring Depression

Beck Depression Inventory. The Short Form of the Beck Depression Inventory (BDI) was used to evaluate self-reported depression (Beck & Beck, 1972). The BDI has 13-items focusing on various areas of functioning known to be affected by depresssion, such as mood, appetite, sleep, etc. The split-half reliability was 0.93 (Beck & Beck, 1972). Scores on the short form of the BDI correlate between .89 and .97 with the long form and considerable evidence supports the reliability and validity of this measure (Beck, Steer, & Garbin, 1988). A meta-analysis of 25 years of data on the BDI yielded an internal consistency mean coefficient alpha of 0.86 for psychiatric patients and 0.81 for nonpsychiatric subjects (Beck et al., 1988). For psychiatric patients, the mean correlations of the BDI samples with clinical ratings and the Hamilton Rating Scale for Depression

(HRSD) were 0.72 and 0.73, respectively. For nonpsychiatric subjects, the mean correlations of the BDI with clinical ratings and the HRSD were 0.60 and 0.74, respectively. The BDI has also been found to discriminate subtypes of depression and differentiate depression from anxiety (Beck et al., 1988).

Hamilton Rating Scale for Depression. The Hamilton Rating Scale for Depression (HRSD) (Hamilton, 1960), an instrument for the clinical rating of depression, was coded following administration of the DIS, by the clinician who conducts the interview. This rating covers a variety of behavioral, affective, somatic, and psychological dimensions associated with depression, and the score was based on the subject's responses, as well as the clinician's judgments. The clinician made both a current depression rating and a rating of the level of the subject's depression at the point in their life when they were most depressed. Interrater reliabilities have ranged from .80 to .90 (Hamilton, 1969). HRSD interrater reliabilities obtained from the MSU Longitudinal Study, based on a sample size of sixteen individuals, were .78 for current depression and .80 for worst-ever depression.

RESULTS

The design of this study is cross-sectional, and utilizes a series of correlationally based strategies within a sample of alcoholic families, wherein there is large variation in level of alcohol related difficulty, and probably also in level of risk exposure they offer their children. Earlier work with a smaller sample of this data set (Reider, 1987; Weil, 1987) has shown that this is an appropriate strategy, and that the independent variables disperse on a continuum in terms of the severity of the problem in each of the areas, rather than in terms of its simple presence/absence. This work reflects a first effort-- within the limits of the wave one data set-- to begin ordering relationships via a hypothesized causal model. At this point in the longitudinal study, estimates of process are at best crude since all variables assessing earlier influences are based upon retrospective data sources.

The analytic strategy used here was as follows. Utilizing path analysis, a variety of causal models were developed and tested, to examine the relations among lifetime parental psychopathology, current parental psychopathology, and family/marital functioning, as these were predictive of behavior problems. Before testing the causal model, measurement issues were addressed. These included examining

inter-relationships among the various dependent variables of child behavior problems, as well as examining the clustering among the independent variables of lifetime and current parent psychopathology and family/marital functioning. Confirmatory factor analysis was used to cluster or group the variables in a meaningful manner, and to examine the dependent and independent variables with regard to measurement issues.

Path analysis systematically combines the use of partial and multiple correlational techniques to study the causal relationships among a set of variables (Hunter & Gerbing, 1982). It estimates the magnitude of the relationships betwen variables, and uses these estimates to give information about the underlying causal processes. With these techniques, one can measure both direct and indirect effects of one variable onto another (Asher, 1976). Path analysis is an application of multiple regression, in which the entire structure of linkages between independent and dependent variables can be described. It assesses the logical consequences of a structural model designed beforehand from a causal theory. Theory guides and specifies the particular "ordering" of the variables in a model, that reflects a presumed structure of cause-effect relationships. Multiple regression is then used to determine the influence of each variable on other variables that follow it in the hypothesized causal order. Each arrow in the model represents a hypothesized path of causal influence, and regression can estimate the relative strength of each separate path. If a variable has only one antecendent variable, then the path coefficient is the correlation between the dependent variable and its

antecedent. If there are two or more antecedents to a particular variable in the path model, then the path coefficients are beta weights.

For the analyses here, a specialized PATH analysis routine in PACKAGE (Hunter & Gerbing, 1982) was used. This program provides statistics for evaluating the fit of the model which are not provided by a program designed only for regression analyses.

Measurement Issues

As noted already earlier, the theoretical model being tested here is conceptualized as follows: Individuals experiencing lifetime troubles of alcohol abuse, antisocial behavior, and depression will have greater difficulties in their family and marital relationships. These relationship difficulties are likely to contribute to higher levels of current psychopathology in the parents. Higher levels of current family and marital discord are then hypothesized to impact upon child behavior problems directly, as well as indirectly through current parent trouble. Therefore, both greater difficulties in family functioning and increased levels of current parental psychopathology are seen as contributing to larger amounts of behavior problems in their children. The theoretical causal model is illustrated in Figure 1. And although not testable now, the hypothesis also is that these behavior problems are an index of risk for later child behavioral difficulty of the kind that should enhance involvement with alcohol and other drugs, as well as lead to greater risk of conduct disorder, as development proceeds.

It was decided that the analytic strategy would proceed in the following manner: overall level of child problem behavior was the primary dependent variable selected for use in the model. Thereafter, the more specific models relating to child aggression and depression were also to be examined for similarity to the more global problem behavior patterns. The Achenbach Child Behavior Checklist (CBCL) was selected as the principal measure for examining child adjustment. The independent variables included lifetime parental psychopathology, current parent psychopathology, and family/marital difficulties. Lifetime measures of parental psychopathology were to include measures of childhood/adolescent antisocial activity (ASB-C), lifetime alcohol problems (LAPS), and clinician ratings of worst-ever depression (HRSD-W) for each parent. Current measures of parental psychopathology were to include adult antisocial behavior (ASB-A), current drinking (QFV-R), self-report ratings of current depression (BDI), and clinician ratings of current depression (HRSD-C). Current measures of marital/family discord included parent perceptions of family cohesion (Moos FES Cohesion) and conflict (Moos FES Conflict), and parental report of physical aggression to spouse within the last year (CTS). The Moos FES Cohesion scale was reverse scored in all analyses to be congruent with the cluster concept of family discord.

Because of various measurement issues, the above model was revised. The following discussion delineates the measurement issues encountered for both the dependent and independent variables, and describes how they were resolved. In all of the following analyses, missing data were replaced by mean response scores for those items.

Selection of the Dependent Variable: Child Behavior Problems

The following section discusses the issues encountered in determining the dependent variable of child adjustment.

Measuring Overall Child Behavior Problems Versus Measurement of Specific Types of Trouble. An index of general child behavior problems was to be the primary dependent variable of the principal causal model; this variable was the Achenbach Child Behavior Checklist (CBCL) measure of total behavior problems. Examination of these data showed that among both mothers and fathers, there were high correlations between the Total Behavior Problems (TBP) score, the two primary CBCL summary scales of Externalizing and Internalizing Behavior, and the content specific subscales of Aggressive and Depressed behaviors (Table 2).

Two possible explanations for the high degree of relationships among these scales is presented. First, the data are all subject to halo effects, such that if parents experience their children as having problems in one area, they also stereotype and rate them as having problems in other areas. For example, this was seen in the high associations between the two global indices, the Internalizing and Externalizing scales ($r=.78$, $p\leq.001$ for mothers, $r=.90$, $p\leq.001$ for fathers), and also was present in the associations between the Aggressive and Depressed subscales ($r=.56$, $p\leq.001$ for mothers, $r=.68$, $p\leq.001$ for fathers). Second, in addition to age, there may be other characteristics that make this child population unusually homogenous. For example, these children may be developmentally too young for "symptom specialization" (Garber, 1984); i.e., they both

Table 2

Correlations among Achenbach CBCL Scales for Mothers and Fathers (Raw Scores) (N=90 Alcoholic Families)

For Mothers:

	TBP	INT	EXT	DEPR	AGGR
TBP	--				
INT	.94	--			
EXT	.92	.78	--		
DEPR	.87	.93	.69	--	
AGGR	.81	.63	.96	.56	--

For Fathers:

	TBP	INT	EXT	DEPR	AGGR
TBP	--				
INT	.96	--			
EXT	.94	.85	--		
DEPR	.86	.93	.73	--	
AGGR	.89	.79	.98	.68	--

Note. All correlations significantly different than 0 ($p \leq .001$). All two tailed. TBP= Total Behavior Problems. INT= Internalizing Behavior. EXT= Externalizing Behavior. DEPR= Depressed. AGGR= Aggressive.

internalize and externalize and this is age related . Parenthetically it should be noted that a similar pattern has already been found to exist among the parents in this population; that is, among the parents there are also positive and significant relationships noted between externalizing and internalizng symptomatology (cf., Reider et al. 1989) Nonetheless, based on the high associations among the different scales, it was decided that the main dependent variable would be the most general measure of child trouble, the CBCL Total Behavior Problems score.

Validity Issues. The next question examined was whether the mother and father CBCL data should be pooled or kept separate. If both parents tended to perceive their child in a similar fashion, then it would be appropriate to pool their CBCL data. However, if parental perceptions of their children are discrepant, then the mother and father data should be examined separately to gain a better understanding of the parents' divergent experiences. The correlations are given in Table 3.

As shown, the scores are not strongly associated. The highest positive correlation between mother and father ratings was the Aggressive subscale ($r=.41$, $p \leq .001$). In addition, these scores are quite low in comparison to inter-parent reliabilities reported in the CBCL standardization group (Achenbach & Edelbrock, 1983). These data are also presented in Table 3. Fisher's Z-transformations were completed and the interparental correlations of the standardization group were all found to be significantly higher than those in the MSU study ($p < .01$ to $.001$). On these grounds, it is not reasonable to

Table 3

Interparental Agreement of Mother and Father CBCL Data (1) Alcoholic Families (N=90) (Raw Scores), and (2) Achenbach Standardization Group (Boys 4-5 Years) (N=33) (Raw Scores)

	Alcoholic Parent Reports	Standardization Sample Reports	Significance Difference in Rs
CBCL Scale			
Total Behavior Problems	.26**	.75***	<.001
Internalizing	.27**	.75***	<.001
Externalizing	.37***	.74***	.004
Depressed	.31**	.68***	.008
Aggressive	.41***	.72***	.013

** $p \leq .01$, *** $p \leq .001$. All two-tailed.

pool mother and father reports. But low interparent agreement does not provide any guideline for possible differential validity from each of these two reporting sources. For an external validity check, the mother and father CBCL scores were separately compared against other measures of the children's behavior.

Two independent measures were used: 1) child Q-Sort measure of aggression; and 2) Conflict Tactics reports of child aggression to parent. The California Child Q-Sort (CCQ) is an independent measure, based upon a rating of each child that is completed by an experienced child clinician examiner following a two-hour interaction with the child during a developmental assessment. Eight items from the 100 card Q-sort deck were selected to develop a construct of aggression. The items used were as follows:

* 6. Is helpful and cooperative.
20. Tries to take advantage of others.
*44. When in conflict or disagreement with others, tends to yield and give in.
*62. Is obedient and compliant.
85. Is aggressive (physically or verbally).
90. Is stubborn.
93. Behaves in a dominating manner with others.
95. Overreacts to minor frustrations; is easily irritated and/or angered.

(*) indicates reverse scored item.

The standardized item alpha for this eight item cluster was .91, indicating very adequate scale homogeneity. The second measure used for an external validity check was the Conflict Tactics parental report of child aggression to mothers and fathers during the past year. The correlations of the Q-sort measure of child aggression with separate mother and father CBCL reports, and with Conflict Tactics

reports of child aggression are shown in Table 4. Table 4 also reports the correlations among the measures and Table 5 gives the mother-father correlations for these scales.

The Q-sort measure of aggression did not correlate at all with the father CBCL ratings or with father CTS reports of their children's aggression. The Q-sort measure correlated only weakly with mother CBCL reports of aggressive and externalizing behaviors, and not at all with mother CTS reports of child aggression. Comparison of mother and father Achenbach and CTS data showed congruence for mothers in their reports on these two measures, but no relationship was observed for fathers. Thus, the parents have discrepant perceptions of their children's behaviors, and there is only some congruence between mother report and that of independent observers. Some investigators have reported stronger associations between mother reports and those of an independent observer, than is true with father data (Schaughency & Lahey, 1985). However, others have found stronger associations between father reports and that of an independent observer (teacher reports) than with mother data (Webster-Stratton, 1988). Given that mothers of preschoolers are typically much more involved in the parenting role and therefore have more exposure to and better understanding of their children's behaviors, the relationships observed in the present study appear reasonable. However, the mother-observer associations are still quite low. Other analyses of the father data reported in the appendices are additionally confirmatory of this line of reasoning. This issue will be returned to again in the discussion chapter.

Table 4

Intraparent Correlations among Achenbach (CBCL), Conflict Tactics (CTS), Child Aggression, and Child Q-Sort Aggression Measures (N=90)

(A) Separate Mother and Father Intracorrelations

	TBP	EXT	AGGR	CTS	Q-SORT
TBP	--	.94 ***	.89 ***	.12	-.00
EXT	.92 ***	--	.98 ***	.15	.05
AGGR	.81 ***	.96 ***	--	.14	.06
CTS	.31 **	.41 ***	.45 ***	--	-.09
Q-SORT	.09	.21 *	.23 *	.13	--

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. All two-tailed.

Note. Fathers' correlations are listed above the diagonal and mother's are below the diagonal.

TBP= CBCL Total Behavior Problems. EXT= CBCL Externalizing Behavior. AGGR= CBCL Aggressive. CTS= Conflict Tactics Parental Report of Child Aggression to Parent. Q-SORT= Q-Sort Aggression Measure.

Table 5

Correlations between Mother and Father Reports of Child Behaviors on the Achenbach (CBCL), Conflict Tactics (CTS) Child Aggression and Child Q-Sort Aggression Measures (N=90)

	Father Data			
	TBP	EXT	AGGR	CTS
Mother Data				
TBP	.26 **	.29 **	.28 **	-.05
EXT	.29 **	.37 ***	.37 ***	-.05
AGGR	.31 **	.40 ***	.41 ***	-.03
CTS	.23 *	.29 **	.26 **	.04

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. All two-tailed.

Note. TBP= CBCL Total Behavior Problems. EXT= CBCL Externalizing Behavior. AGGR= CBCL Aggressive. CTS= Conflict Tactics Parental Report of Child Aggression to Parent. Q-SORT= Q-Sort Aggression Measure.

More generally, since the mother and father CBCL data failed to correlate highly with one another, and only the mother CBCL was related to the independently rated Q-sort measure of aggression, it was decided to use the mother report CBCL data as the primary measure of the dependent variables. This allows comparability with a very large literature which only uses mother CBCL data. At the same time, to hold open the possibility that father data reflects another legitimate aspect of child functioning that has not yet been adequately captured in the literature, these analyses were also run, and are presented in Appendices E-G.

Use of CBCL Raw Scores Versus T-Scores in Data Analyses.

In the data analyses, Achenbach CBCL raw scores were used instead of T-scores. The reasoning was as follows: the CBCL was normed on children 4 to 16 years of age. Since there are three year olds in this study and there is no available standardization information for this age group, it was decided to use raw scores in the correlational and path analyses. Besides, the raw and T-scores are quite congruent. Data presented in Table 6 give an example of the congruence of the CBCL raw and T-scores when correlated with Conflict Tactics parent reports of child aggression.

Percentage of CBCL Protocols Rated in the "Clinical Range".

Before discussing the independent variables, let us first examine the percentage of families in the sample whose reports of problems in their children are considered to be in the "clinical range". For the Total Behavior Problems (TBP) score, Achenbach and Edelbrock (1983) stated that the 90th percentile in their nonclinical sample was a

Table 6

Correlations between Achenbach CBCL Data (Raw and T-Scores) and Conflict Tactics (CTS) Parent Reports of Child Aggression

	Conflict Tactics- Cumulative Intensity	
CBCL	Aggression to Mother	Aggression to Father
Total Behavior Problems		
Raw Score	.31 **	.12
T-Score	.30 **	.16
Externalizing		
Raw Score	.41 ***	.15
T-Score	.34 ***	-.02
Aggressive		
Raw Score	.45 ***	.14
T-Score	.42 ***	.13

** $p \leq .01$, *** $p \leq .001$. All two-tailed.

desirable cutoff for users to discriminate in a more categorical fashion between children likely to resemble their clinical sample and those more likely to resemble their nonclinical sample. Their clinical sample was derived from children referred to mental health agencies; their nonclinical sample consisted of children obtained from community homes selected from the same census tracts to approximate the demographic characteristics of the clinical sample. They discovered that the TBP score is a good index of differences between children whose reported behavior problems are in the "clinical" versus "normal range" because it generally showed stronger associations with clinical status than did any other scores, and because the total score includes all the items of the other behavior problem scales.

For 4-5 year old boys, TBP raw scores of 42 mark the limits of the "normal range" and raw scores of 43 and above are considered in the "clinical range" (Achenbach & Edelbrock, 1983). For Internalizing and Externalizing scores, a T-score of 63 represents the 90th percentile as the limit of the "normal range"; for the narrow band behavior or specific behavior scales, a T-score of 70 represents approximately the 98th percentile, which demarcates the most extreme 2% of the normative samples. Achenbach and Edelbrock (1983) related that the smaller number of items comprising each scale in comparison to the TBP score argues for a more conservative standard for judging deviance. A T-score of 63 (90th percentile) was selected for the Internalizing and Externalizing scores because of the larger number of items on these scales than the narrow band behaviors, their global

nature, and the use of the same procedure in assigning T-scores as was done with the total score.

The scores used by Achenbach & Edelbrock (1983) in classifying children in the "clinical range" were applied to the present sample. T-scores were used here for the Internalizing/Externalizing and Depressed/Aggressive scores in determining the number of children considered to be functioning in the "clinical range". The 4-5 year age range was used as the base group in computing standardized scores. The actual percentage of children in the present study who fall in the "clinical range" as defined by Achenbach and Edelbrock (1983) are given in Table 7; the percent of children who were rated in the clinical range for 4-5 year olds in Achenbach and Edelbrock's clinical and nonclinical standardization samples are also given for comparison.

For each scale in the present study, fewer parents rated their children in the clinical range than did parents in the clinical standardization sample (X^2 =15.95 to 31.10, $p \leq .001$). However, in comparison to the nonclinical CBCL sample, parent ratings placed between two and five times as many MSU longitudinal study children in the clinical range. Except for the depression subscale (for mothers, X^2 =1.99, n.s.; for fathers, X^2 =1.36, n.s.) all chi-square analyses showed that parent ratings of the MSU study children were significantly different from parent ratings of the nonclinical CBCL sample (X^2 = 4.22 to 17.85, $p \leq .05$ to .001). Thus, children in the present study were seen as having difficulties at a substantially higher rate than those of a nonclinical sample, but at a lower rate than those in a bona fide clinical population. For the TBP and

Table 7

Achenbach CBCL Data

(7A) Means and Standard Deviations of Mother and Father CBCL T-Scores Among Alcoholic Families- MSU Longitudinal Study (N=90)

	Mother T-scores		Father T-Scores	
	Mean	Standard Deviation	Mean	Standard Deviation
CBCL Index				
Total Behavior Problems	58.9	10.8	57.1	11.0
Internalizing	56.6	9.9	54.9	10.3
Externalizing	58.0	11.6	56.9	11.1
Depressed	58.9	6.6	58.6	6.3
Aggressive	62.6	9.9	61.9	9.2

Table 7 (cont'd)

(7B) Percentage of Children Rated in the Clinical Range in the MSU Longitudinal Study (N=90) and in the CBCL Clinical (N=100) and Nonclinical (N=100) Standardization Samples

	MSU Longitudinal Study Ratings by:		Standardization Samples	
CBCL Index	Mothers	Fathers	Clinical[a]	Nonclinical[b]
Total Behavior Problems	33	32	72	10
Internalizing	22	22	59	11
Externalizing	32	33	62	10
Depressed	9	8	37	4
Aggressive	29	21	61	6

Note. Total Behavior Problems Raw Score in Clinical Range $\geq$ 43 (90th percentile). Internalizing/Externalizing T-Score in Clinical Range > 63 (90th percentile). Depressed/ Aggressive T-Score in Clinical Range > 70 (98th percentile).

a Total clinical sample includes 83% mothers, 11.5% fathers, and 5.6% others (relatives and foster parents) (Achenbach & Edelbrock, 1983).

b Total nonclinical sample includes 83.1% mothers, 13.5% fathers, and 3.5% others (relatives and foster parents) (Achenbach & Edelbrock, 1983).

Table 7 (cont'd)

(7C) Percentage of Children in the Clinical Range in the MSU Longitudinal Study and the CBCL Clinical and Nonclinical Standardizaiton Samples: Chi-Square Tests of Differences

CBCL Index	Mother/ Clinical	Mother/ Nonclinical	Father/ Clinical	Father/ Nonclinical
Total Behavior Problems	28.96***	15.16***	30.43***	14.11***
Internalizing	26.72***	4.22*	26.72***	4.22*
Externalizing	17.09***	14.11***	15.95***	15.16***
Depressed	20.52***	1.99	22.32***	1.34
Aggressive	19.54***	17.85***	31.10***	9.36**

* $p<.05$, ** $p<.01$, *** $p<.001$.

Note. All MSU vs. CBCL clinical sample contrasts show the CBCL sample to be more symptomatic. All MSU vs. CBCL nonclinical sample contrasts show the CBCL sample to be less symptomatic (except for ratings of depressed behaviors, n.s).

Externalizing scores, three times as many parents in the present study rated their children in the clinical range when compared with the nonclinical standardization sample; and for the Aggression score, between three and five times as many children were targeted. For the Internalizing and Depressed scales, twice as many parents in the MSU study rated their children in the clinical range when compared with the nonclinical standardization sample.

More generally, one-third of the parents in this study rated their children in the "clinical range" in the areas of total behavior problems and externalizing behaviors. Also, about one in four of the parents rated their children to be in the clinical range in the more specific area of aggressive behavior. Parents reported almost three times as much clinical level difficulty with aggression as compared to depression. There were two reasons to anticipate that these children would experience more difficulty with externalizing than with internalizing behavior. First, the sample consisted solely of boys and the literature indicates that males are more likely to respond to difficulty by externalizing, while females are more likely to respond with more internalizing behavior (Achenbach & Edelbrock, 1981). Second, the fathers in this sample tend to be antisocial and therefore provide their sons with enhanced models for aggressive activity.

Independent Variables

Regarding the independent variables, three clusters were initially formed. Two clusters consisted of parental symptomatology, one dealing with lifetime parental trouble and one dealing with current parental trouble. The third cluster consisted of family and

marital difficulties. These clusters were formed because they were considered meaningfully similar measures of the same underlying construct. However, because of measurement difficulties, changes were made in each of the clusters. These issues will now be discussed in further detail.

Parental Symptomatology: Lifetime and Current Trouble. The cluster of Lifetime Parental Trouble originally included the measures of childhood/adolescent antisocial activity (ASB-C), lifetime alcohol problems (LAPS), and clinician ratings of worst-ever depression (HRSD-W). The cluster of Current Parent Trouble originally consisted of adult antisocial activity (ASB-A), current alcohol use (QFV-R), clinician ratings of current depression (HRSD-C), and parental report of current depression (BDI). Because of various measurement difficulties, these clusters were altered. The Lifetime Parental Trouble cluster ended up consisting of LAPS and a total antisocial behavior activity score (ASB) and the Current Parental Trouble cluster consisted solely of the BDI. The data regarding these relationships can be found in Table 8.

Prior work using the ASB checklist showed that the two scales of Childhood/Adolescence and Adult Antisocial Behavior were highly associated and therefore were appropriately considered to assess only one factor (for mothers, $r=.56$, $p\leq.001$; for fathers, $r=.72$, $p\leq.001$). Therefore, a total antisocial behavior score (ASB), considered to be a lifetime measure of antisocial activity, was used in these analyses.

For both mothers and fathers, it was expected that there would be higher separate correlations among the measures consisting of lifetime

Table 8

Intrapersonal Relationships of Measures of Fathers and Mothers Lifetime and Current Problems-- Pearson R's (N=90 Families)

Mothers:	Lifetime			Current		
	LAPS	ASB	HRSD-W	BDI	HRSD-C	QFV-R
Lifetime						
LAPS	--					
ASB	60 ***	--				
HRSD-W	41 ***	30 *	--			
Current						
BDI	30 **	38 ***	24 *	--		
HRSD-C	11	-00	64 ***	13	--	
QFV-R	32 **	30 **	13	13	13	--
Fathers:	Lifetime			Current		
	LAPS	ASB	HRSD-W	BDI	HRSD-C	QFV-R
Lifetime						
LAPS	--					
ASB	54 ***	--				
HRSD-W	37 ***	23 *	--			
Current						
BDI	35 **	25 *	41 ***	--		
HRSD-C	23 *	20 +	72 ***	27 **	--	
QFV-R	-19 +	03	-08	13	10	--

+ p≤.10, * p≤.05, ** p≤.01, *** p≤.001. All two-tailed.

Table 8 (cont'd)

Note. LAPS= Lifetime Alcohol Problems Scores. ASB= Total Antisocial Behavior. HRSD-W= Hamilton Rating for Depression- Worst Ever. BDI= Beck Depression Inventory. HRSD-C= Hamilton Rating for Depression- Current. QFV-R= Quantity- Frequency- Variability Index of Current Drinking- Revised.

and current parental trouble. It was also expected that there would be lower intercorrelations between lifetime and current parental difficulties. As well, it was expected that there would be similar patterns of correlations for mothers and fathers.

The high intracorrelations among the clusters of lifetime and current parental trouble were not found and neither were the expected lower intercorrelations between the two clusters. The problems with the clusters were as follows. First, clinician ratings of worst-ever and current depression (HRSD-W and HRSD-C) were removed from their respective clusters of lifetime and current parent trouble because of their high correlation with each other (r=.64 for mothers, r=.72 for fathers). These relationships yielded higher intercorrelations between cluster measures than among cluster measures. Second, in conjunction, there were low correlations between the self-report and clinician ratings of current depression (BDI and HRSD-C) (r=.13 for mothers, r=.27 for fathers). These relationships yielded lower correlations among the current cluster than between the lifetime and current clusters. Therefore, with regards to the HRSD-W and HRSD-C, the lifetime and current parent measure intracorrelations were not higher than the intercorrelations of these measures.

Although a stronger association was expected between both the BDI and HRSD-C (see Beck et al., 1988), and a lower one between HRSD-C and HRSD-W, the Hamilton scale includes items pertaining to vegetative signs of major affective disorder while the Beck index only scales subjective depressive experience. Some relationship would be anticipated between these two measures, but they are nonetheless not

assessing the same construct, nor were they designed to be. In addition, the fact that the present study population is a more externalizing and denying one than is true of traditional psychiatric inpatient and outpatient populations would make these lower level correlations understandable. Finally, there is a very simple explanation why a significant correlation between the clinician ratings of worst-ever and current depression exists. This will occur when a substantial subset of individuals are currently experiencing their worst-ever depression.

Third, the current drinking measure (QFV-R) was removed from the current cluster. This was done because QFV-R was found to have low correlations with the other two current parent variables and because there was a different pattern of relationships for fathers than mothers for QFV-R with LAPS and ASB (r=.32 and r=.30 respectively for mothers; r=-.19 and .03 for fathers). The men in the sample were arrested for DUI during the months prior to the assessment process and many of them quit drinking following their arrests. This rapid change to low levels of consumption, or to no consumption, may explain the lack of relationships to the current drinking measure for fathers. It is believed that the mothers' correlations more accurately reflect the nature of these relationships. QVF-R was also found to have no relationship with virtually every other variable used in this study. This pattern of relationships is consistent with earlier findings from this data set (Reider et al., 1988; Reider, Zucker, Maguin, Noll & Fitzgerald, 1989).

In looking further at the pattern of correlations, LAPS and ASB were found to have the highest correspondence among the variables in the lifetime cluster (as compared to LAPS-HRSD-W and ASB-HRSD-W) and thus became the measures for this cluster. For the lifetime parental cluster, a similar pattern of correlations were observed for both mothers and fathers. For the current parental trouble cluster, a similar pattern of low correlations were found for mothers and fathers.

In summary, the Lifetime Parental Trouble cluster now consists of total lifetime antisocial behavior (ASB) and lifetime alcohol involvement (LAPS). The Current Parental Trouble score consists of the BDI. Thus, instead of examining a more global measure of current parent trouble, the measure to be used is specifically one of reported subjective discomfort and depressive experience.

Cluster of Current Family and Marital Difficulties.* The cluster of Current Family and Marital Difficulties originally included the variables of perceived family Conflict (CON) and Cohesion (COH) from the Moos Family Environment Scale (FES), and reports of aggression to spouse during the past year (CTS). The Cohesion scale was reverse scored to place it in the discord direction. The data were examined in terms of two different models, which can be found in Figure 2. In Model 1, it is posited that mothers and fathers

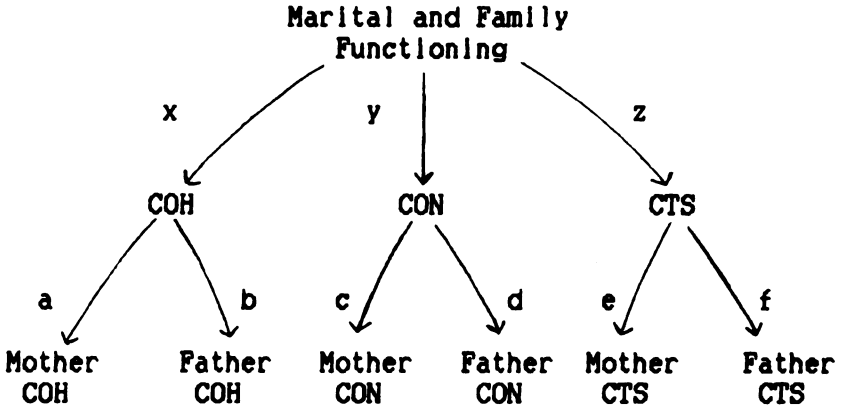
---

* This and the next section benefited greatly from the advice and consultation of Professor John E. Hunter.

Figure 2

Models of Marital and Family Functioning

Model 1 [Content Specific - Across Parent Concordance]

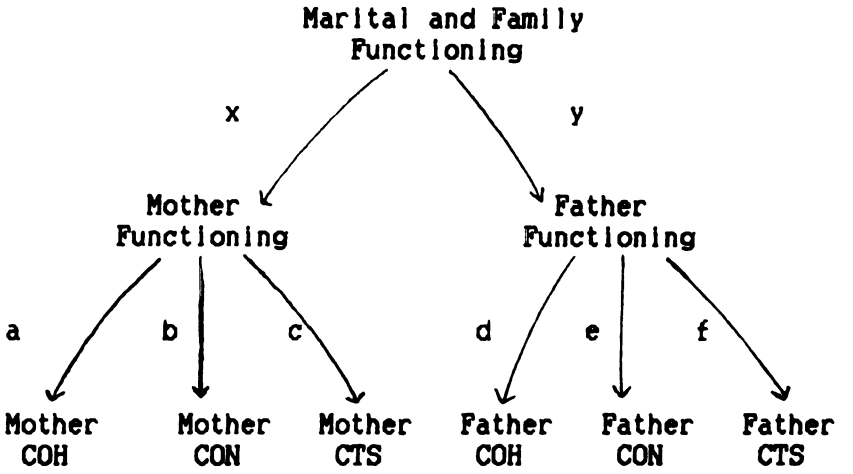


Assume: a=b, c=d, e=f

M D = xab; M D = ycd; M D =zef; M M =xayc;
COH, COH CON, CON CTS, CTS COH, CON

M D = xayd.
COH, CON

Model 2 [Within Parent - Across Content Concordance]



Assume: x=y

M M = ab; F F = de; M F = xayd; M F = xaye.
COH, CON COH, CON COH, COH COH, CON

Figure 2 (cont'd)

Note. COH= Moos FES Perceptions of Family Cohesion. CON= Moos FES Perceptions of Family Conflict. CTS= Conflict Tactics Report of Respondent Aggression to Spouse.

M = Mother Cohesion; M = Mother Conflict;
COH CON

M = Mother Marital Aggression;
CTS

F = Father Cohesion; F = Father Conflict;
COH CON

F = Father Marital Aggression;
CTS

correlate highly when they examine the same aspects of family functioning. This would be seen in mothers' and fathers' agreement in their perceptions of family cohesion and conflict, and spousal aggression. In Model 2, it is posited that mothers and fathers do not correlate highly when examining the same aspects of family functioning. Instead, mothers' and fathers' own ratings of different aspects of family functioning correlate more highly. This would be seen in agreement between parents at the level of a composite measure-three aspects of a global perception. Data regarding these relationships can be found in Table 9.

If Model 1 was true, there are two expectations that would be fulfilled. First, there would be high correlations between parents on the same measures (the principal diagonal). Second, within parent correlations would be low and parallel (separate mother and father COH, CON, and CTS scores).

If Model 2 was true, three expectations would be fulfilled. First, within parent correlations would be high. Second, between parent correlations (the principal diagonal) would be lower and parallel to each other. Third, correlations between parents on the same measures (the principal diagonal) would not be higher than the off diagonal correlations.

The expectations for Model 1 were not fulfilled. First, high correlations were not found between parents on the same measures (.29, .43, and .41 for COH, CON, and CTS). Second, within parent correlations were high and not parallel (.53, .26, and .26 for mothers; .33, .31, and .14 for fathers).

Table 9

Intrapersonal and Interpersonal Relationships of Mothers and Fathers Perceptions of Moos Family Conflict and Cohesion, and CTS Spousal Aggression-- Pearson R's (N=90 Alcoholic Families)

	Mothers' Perceptions			Father's Perceptions		
	COH	CON	CTS	COH	CON	CTS
Mothers						
COH	100			29	16	05
CON	53	100		32	43	07
CTS	26	26	100	21	03	41
Fathers						
COH	29	32	21	100		
CON	16	43	03	33	100	
CTS	05	07	41	31	14	100

Note. COH= Moos FES Perceptions of Family Cohesion. CON= Moos FES Perceptions of Family Conflict. CTS= Conflict Tactics Report of Respondent Aggression to Spouse.

Underlined diagonals represent inter-parent correlations on the same measure.

Likewise, the expectations for Model 2 were not fulfilled. First, within parent correlations were relatively high for mothers (.53, .26, and .26), but less so for fathers (.33, .31, and 14). Second, between parent correlations were not low or parallel (.29, .43 and .41). Third, the principal diagonal correlations were higher than the off diagonal correlations.

As a result, both Model 1 and Model 2 were rejected. Mothers and fathers did not share the same perceptions in examining the same aspects of family functioning. Nor did they they agree at the level of a global perception. Model 3 will now be presented as an alternative and final model that fits the data.

Final Model

Model 3

In Model 3, each of the three family functioning variables were treated as separate and distinct. This model focuses on the contribution of bias to functioning. It presupposes the existence of a bias term, which assumes that each parent brings a perceptual bias to how they categorize or remember events. It is assumed in this model that bias is a characteristic of the person and therefore uncorrelated between parents, but is shared across instruments, and therefore accounts for the higher correlations with adjacent measures within parents. Model 3 takes two issues into consideration. First, there are high within parent correlations between adjacent measures (e.g., COH and CON correlate highly). Second, within parent correlations for the same cluster are relatively small (e.g., Mother

COH and Mother CON), but larger than the between parent correlations (e.g., Mother and Father COH and CON).

Given these considerations, True Score (Actual) and Perceived components for each family functioning variable were composed. For each variable (COH, CON, CTS), the Actual (or True) score represents the shared perceptions between mothers and fathers. For each variable, there exists a mother and father Perceived score. The Perceived score consists of the Actual component plus parent bias plus error. Error terms between the different terms are considered unrelated; the bias terms between mothers and fathers are considered unrelated. Table 10 details the assumptions used in Model 3.

Computations of Correlation Matrix

The final correlation matrix contains true score (actual) and perceived components of family functioning. The rules used for calculating these correlations can be found in Appendix D. The data regarding these relationships can be found in Table 11. The correlations used in Table 11 were corrected for reliability. The reliability figures can be found in Table 12. The reliabilities used for the perceived family functioning variables, CBCL variables, and BDI were the published reliabilities. The reliabilities for the actual family functioning variables and parent lifetime cluster (ASB and LAPS) were computed from the MSU data. Corrections for attenuation were completed because path or regression analyses completed on uncorrected correlations misrepresent the true relationships between variables.

Table 10

Assumptions Used in Estimating Actual and Perceived Family Functioning Variables

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TC = Actual Conflict

MPC = Mother Perceived Conflict

DPC = Father Perceived Conflict

TA = Actual Aggression (CTS)

MPA = Mother Perceived Aggression (CTS)

DPA = Father Perceived Aggression (CTS)

MPC = TC + MBC + e1 (e= error)

DPC = TC + DBC + e2

MBC = Mothers' bias on Conflict \
Assume r = 0
DBC = Fathers' bias on Conflict /

Both MBC and DBC are computed as residuals, i.e.,

$r_{TC,MBC} = r_{TC,DBC} = 0$

$$\sigma_{TC,MPC} = \sigma_{TC,TC} + \sigma_{TC,MBC} + \sigma_{TC,e1} = \sigma^2_{TC}$$
$$\sigma_{TC,MPC} = \sigma_{TC,TC} + 0 + 0 = \sigma^2_{TC}$$

$$\sigma_{TC,DPC} = \sigma_{TC,TC} + \sigma_{TC,DBC} + \sigma_{TC,e2} = \sigma^2_{TC}$$
$$\sigma_{TC,DPC} = \sigma_{TC,TC} + 0 + 0 = \sigma^2_{TC}$$

$$\sigma_{TC,MPA} = \sigma_{TC,TA} + \sigma_{TC,MPA} + \sigma_{TC,e3} = \sigma^2_{TC,TA}$$
$$\sigma_{TC,MPA} = \sigma_{TC,TA} + 0 + 0$$

Table 11

Correlation Matrix of Variables for Final Path Analyses

	Mother		Father		Actual			Mother Perceived		
	Life	BDI	Life	BDI	COH	CON	CTS	COH	CON	CTS
Mother LIFE	--									
Mother BDI	47	--								
Father LIFE	16	28	--							
Father BDI	18	40	44	--						
Actual COH	22	52	13	16	--					
Actual CON	22	38	21	46	68	--				
Actual CTS	29	42	17	32	38	12	--			
Mother PER COH	26	72	07	09	58	39	22	--		
Mother PER CON	24	50	15	33	48	71	08	62	--	
Mother PER CTS	24	38	12	23	27	08	71	31	31	--
Father PER COH	13	30	32	44	58	39	22	34	28	15
Father PER CON	15	27	34	42	48	71	08	28	51	06
Father PER CTS	21	30	56	56	27	08	71	15	06	50
Mother TBP	39	51	13	45	37	23	15	25	32	02
Mother AGGR	50	57	24	46	27	45	13	31	36	01
Mother DEPR	32	56	05	60	42	15	38	16	30	00
Father TBP	10	16	30	48	-28	16	-03	-16	11	-02
Father AGGR	07	25	34	49	-21	21	02	-12	15	01
Father DEPR	11	11	17	42	-24	27	-16	-14	19	-11

Table 11 (cont'd)

	Father Perceived			Mother CBCL			Father CBCL		
	COH	CON	CTS	TBP	AGGR	DEPR	TBP	AGGR	DEPR
Mother LIFE									
Mother BDI									
Father LIFE									
Father BDI									
Actual COH									
Actual CON									
Actual CTS									
Mother PER COH									
Mother PER CON									
Mother PER CTS									
Father PER COH	--								
Father PER CON	39	--							
Father PER CTS	37	13	--						
Mother TBP	22	16	11	--					
Mother AGGR	16	32	09	90	--				
Mother DEPR	25	11	27	117	75	--			
Father TBP	13	33	22	29	33	35	--		
Father AGGR	10	41	23	33	45	32	99	--	
Father DEPR	12	30	03	35	32	50	116	91	--

Note. All correlations are corrected for attenuation-- see text and Table 12.

Table 11 (cont'd)

Note. LIFE= LAPS (Lifetime Alcohol Problems Scores) + ASB (Total Antisocial Behavior). BDI= Beck Depression Inventory. Actual COH= Actual Cohesion. Actual CON= Actual Conflict. Actual CTS= Actual Conflict Tactics Report of Respondent Aggression to Spouse. Perceived COH= Perceived Cohesion. Perceived CON= Perceived Conflict. Perceived CTS= Actual Conflict Tactics Report of Respondent Aggression to Spouse. TBP= CBCL Total Behavior Problems. AGGR= CBCL Aggressive Behavior. DEPR= CBCL Depressed Behavior.

Table 12

Reliability of Each Variable Used in Corrections for Attenuation

Variables	Reliability
Mother LIFE (Lifetime Trouble: ASB, LAPS)	.75
Father LIFE (Lifetime Trouble: ASB, LAPS)	.70
BDI (Beck Depression Inventory)	.86
Actual COH (Moos Cohesion)	.29
Actual CON (Moos Conflict)	.43
Actual CTS (Spousal Aggression)	.41
Parent Perceived COH (Moos Cohesion)	.86
Parent Perceived CON (Moos Conflict)	.85
Parent Perceived CTS (Spousal Aggression)	.82
Parent Ratings: CBCL TBP (Total Behavior Problems)	.89
Parent Ratings: CBCL AGGR (Aggressive Behavior)	.91
Parent Ratings: CBCL DEPR (Depressed Behavior)	.62

Path Analysis

Summary of Cluster Revisions

Because of the various measurement issues discussed above, revisions were made in cluster composition. The final model included the following clusters or variables. The dependent variables consisted of the Achenbach Total Behavior Problems score, as well as separate scales for Child Aggressive and Depressed behaviors. The independent variables were as follows: Parental long-term difficulties included the lifetime measures of drinking-related troubles (LAPS) and lifetime antisocial behavior involvement (ASB). The index of Parental current difficulties was composed solely of the self-report depression measure, the BDI. The variables used for Marital and family functioning consisted of separate Actual and Perceived Moos family conflict (CON) and cohesion (COH), and spousal aggression (CTS). It was decided to use Actual Conflict (CON) in the final path model because of its higher correlations with the child variables.

Path Model

Although child age was originally hypothesized to be a potentialy important variable in the model, it was not included in the final model because it failed to contribute any significant information. The revised model is shown in Figure 3. The structure of the original model is largely retained. Parental lifetime trouble (LAPS-R and ASB) contributes to increased actual family conflict, which in turn contributes to increased current parental depression. Both actual family conflict and current parental depression contribute to parent

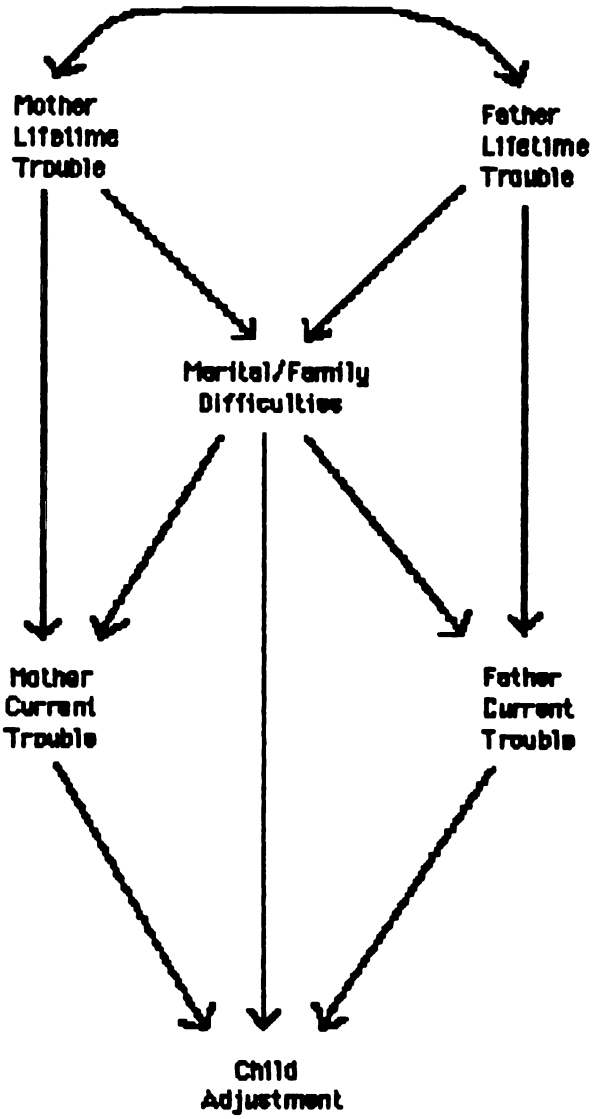


Figure 3

Revised Theoretical Model of Child Adjustment

report of child behavior problems. In the original model, links were posited between parent lifetime trouble and child behavior problems, but later removed because they were generally found to be nonsignificant in the actual data analysis. In addition, a connection between maternal and paternal psychopathology was posited.

Three path models were completed. The dependent variables in the three models were: 1) parent report of child total behavior problems, 2) parent report of child aggressive behavior, and 3) parent report of child depression. The models are shown on the following pages. As previously mentioned, the dependent variable used was mothers' reports of child adjustment; fathers' reports of child adjustment can be found in Appendices E-G.

For each of the models, information provided in each figure presents path coefficients (which are beta weights), the level of their significance, percent of variance accounted for; and a test of overall fit of the model. Overall fit was assessed by using the chi-square goodness-of-fit test (Hunter, 1983). This was done to compare the observed matrix to the reproduced matrix for each of the path models, based upon the paths specified by each model. This test determines how well the observed matrix approximates the reproduced matrix. If the goodness-of-fit test was not significant, it meant that there were no significant deviations of the observed correlations from the reproduced correlations. Information regarding reproduced correlations and actual minus reproduced correlations can be found in Appendices H and I.

Model Predicting Child Total Behavior Problems

The model for the child total behavior problems dependent variable can be found in Figure 4. The goodness-of-fit test was not significant (X^2=3.16), indicating that the model adequately fit the data. Information regarding path coefficients is presented. The path coefficient between mother and father lifetime trouble was not significant (.16). As expected, for both mothers and fathers, parental lifetime trouble contributed significantly to current parent depression (.41, $p \leq .01$ for mothers; .36, $p \leq .05$ for fathers). Unexpectedly, parental lifetime trouble did not contribute to actual family conflict (.19, for mothers; .18, for fathers), but actual family conflict contributed significantly to father current depression (.38, $p \leq .05$) and there was a trend for mother current depression (.29, $p \leq .10$). Both mother and father current depression had significant paths to total child behavior problems (.41 ($p \leq .01$) for mothers; .32 ($p \leq .05$) for fathers); however, actual family conflict did not contribute directly. Rather, it appears that actual family conflict contributes to child behavior problems indirectly by way of its contribution to current parental depression.

Amount of variance accounted for at different steps of the model are also given in Figure 4. Overall, the model accounts for 31 percent of the variance.

Model Predicting Child Aggressive Behavior

The model for child aggression is shown in Figure 5. The goodness-of-fit test was not significant (X^2= 4.12), indicating that the model adequately fit the data. Since this model is identical with

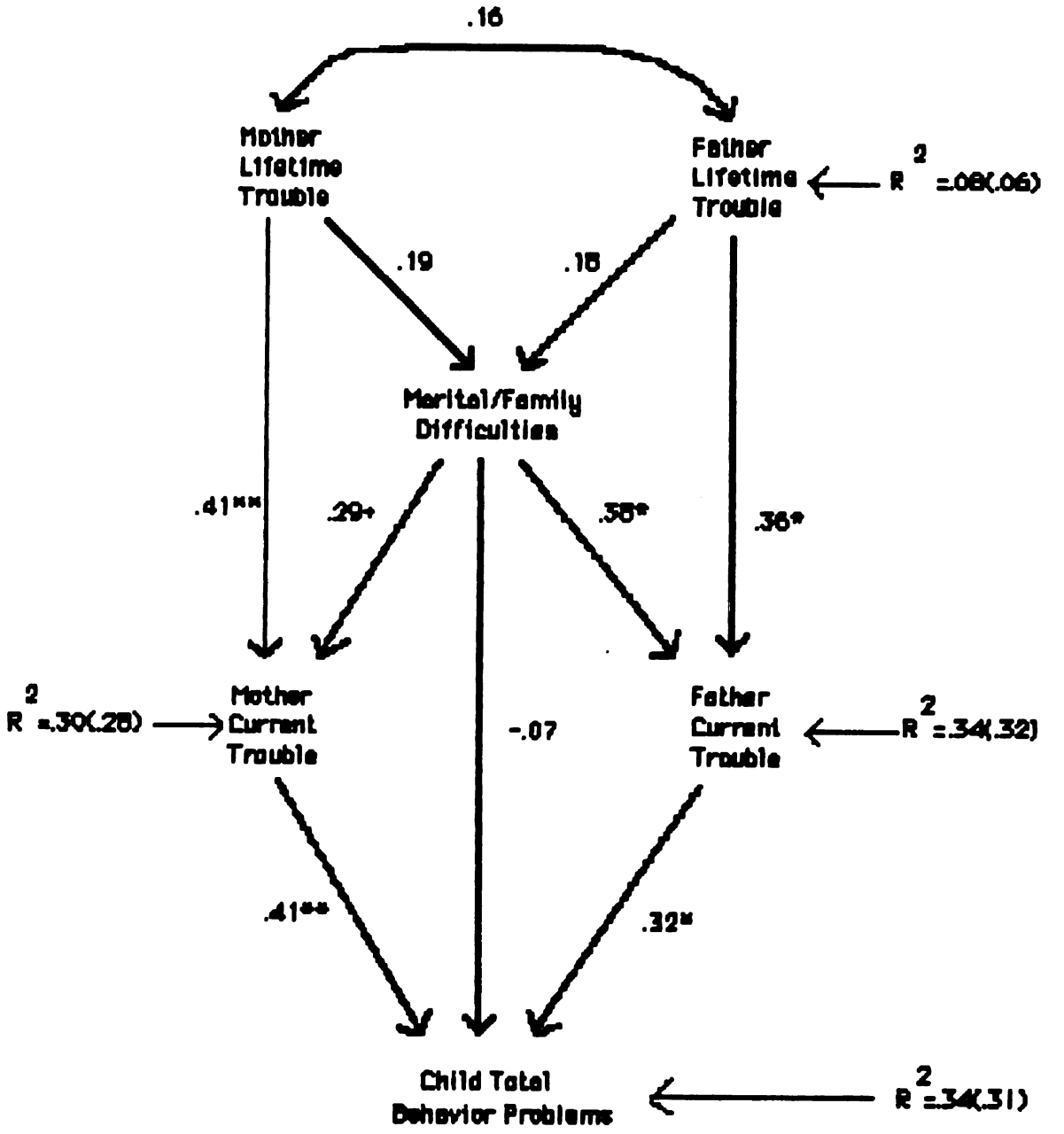


Figure 4

Final Path Model of Child Total Behavior Problems (Mother CBCL Reports)

Each path coefficient gives a beta weight.

+ p<.10, *p<.05, **p<.01, ***p<.001

Variance information: (Adjusted R^2) in parentheses.

Overall Chi Square= 3.16; df=5, n.s.

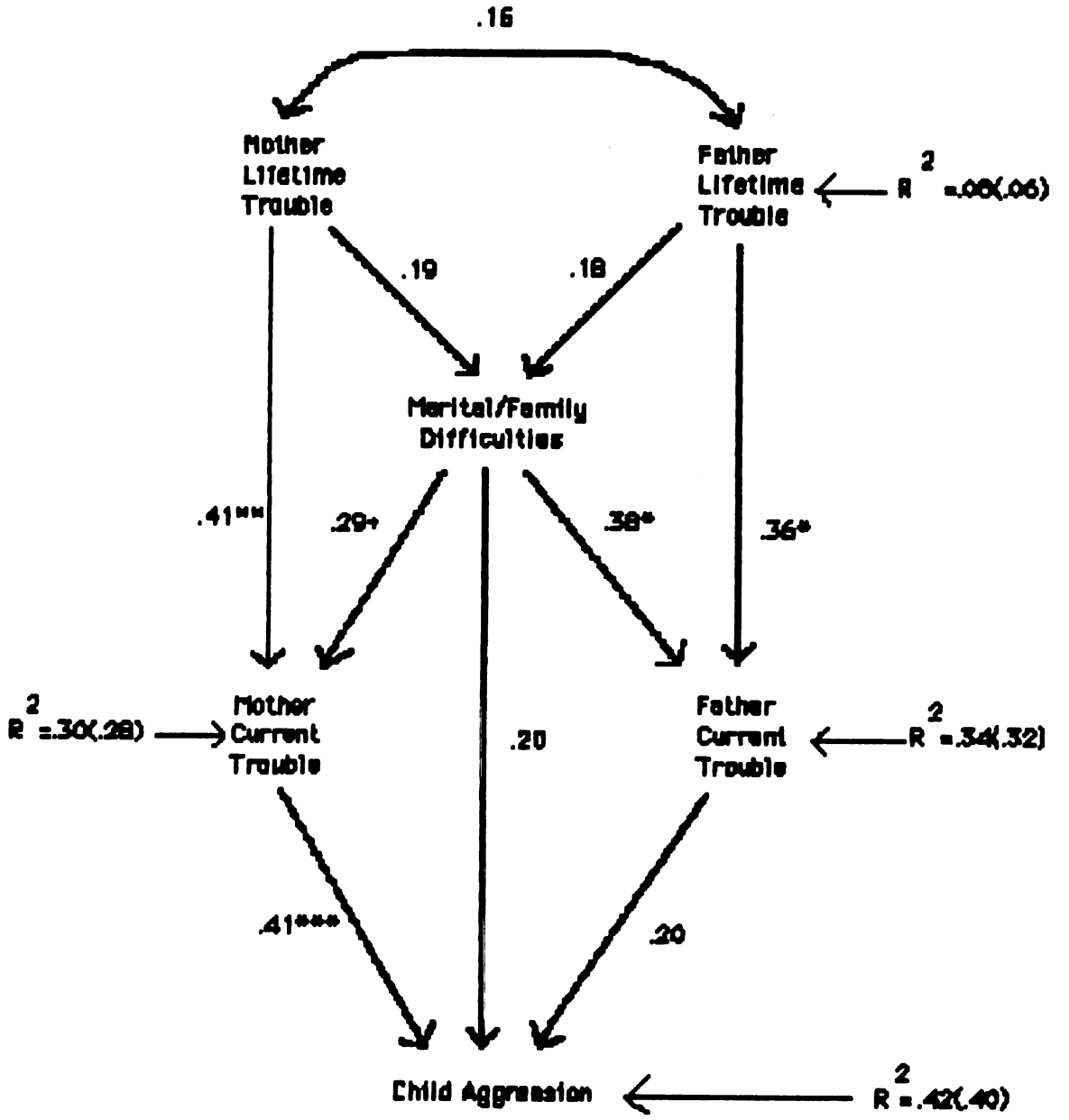


Figure 5

Final Path Model of Child Aggression
(Mother CBCL Reports)

Each path coefficient gives a beta weight.

+ p <.10, * p<.05, ** p<.01, *** p<.001.

Variance information: (Adjusted R^2) in parentheses.

Overall Chi Square= 4.12; df=5; n.s.

the one for total behavior problems up through parental depression and actual family conflict, all path coefficients to that point remain unchanged. Thereafter, current maternal depression strongly contributed to the dependent variable of child aggressiveness (.41, $p \leq .001$), but paternal depression did not (beta= .20, ns). Also, there was no significant link of family conflict to child aggressiveness. Overall this model accounts for 40 percent of the variance pertaining to child aggression.

Model Predicting Child Depression

The model for child depression can be found in Figure 6. The goodness-of-fit test was not significant ($X^2 = 3.12$), again indicating that the model adequately fits the data. As already noted, the only variations in path coefficients occur in the later stages of the model. Actual family conflict still makes no contribution to child outcome, but both mother and father current depression contributed strongly to level of child depression (.44, $p \leq .01$ for mothers; .55, $p \leq .05$ for fathers). These data suggest that actual family conflict contributes to child depression indirectly, by way of its impact upon parental level of depression. This model accounts for 52 percent of the variance pertaining to child depression.

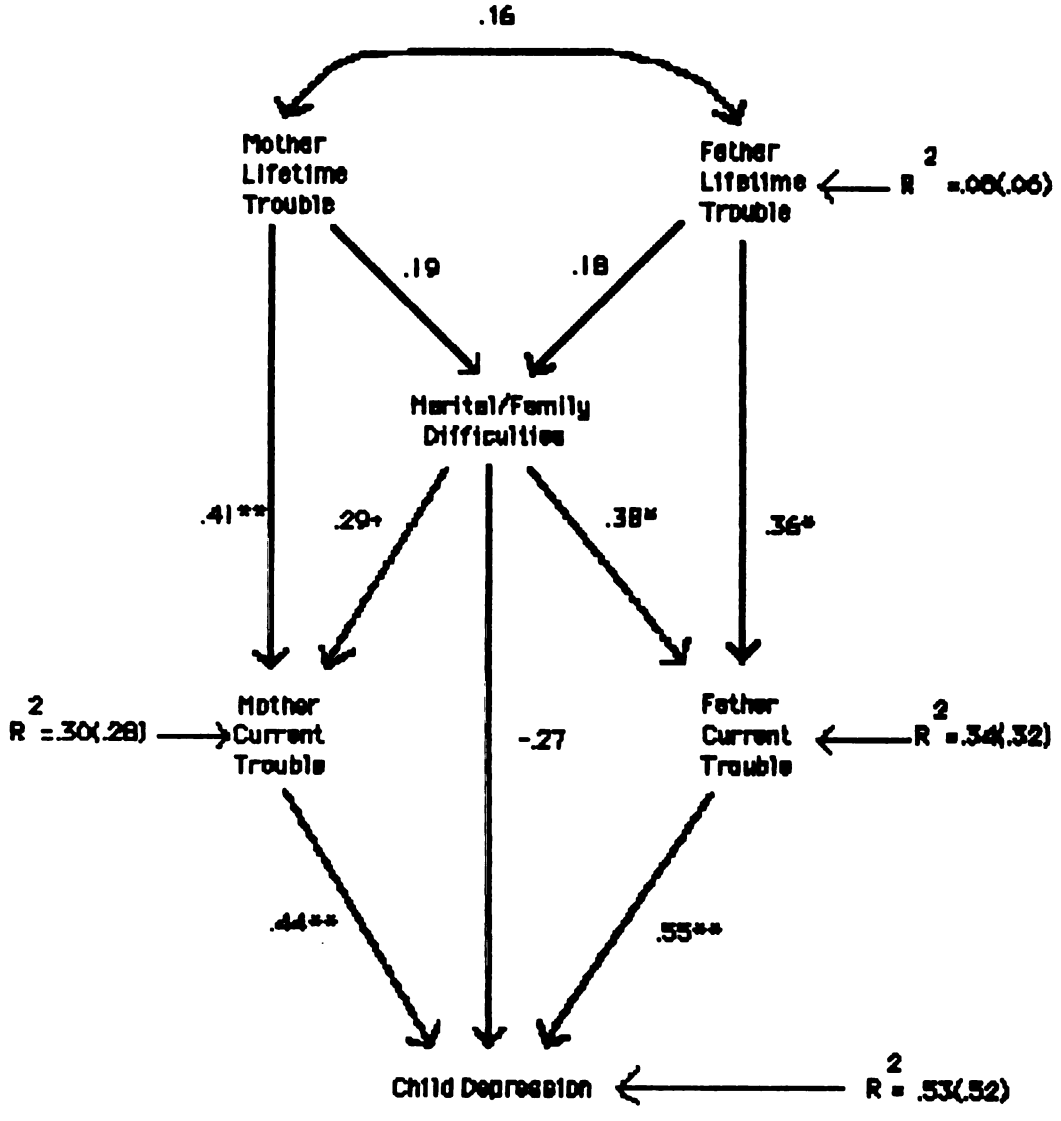


Figure 6

Final Path Model of Child Depression
(Mother CBCL Reports)

Each path coefficient gives a beta weight.

+p<.10, *p<.05, **p<.01, ***p<.001

Variance information: (Adjusted R^2) in parentheses.

Overall Chi Square= 3.12, df=5; n.s.

DISCUSSION

There has been a burgeoning of interest in the past several years in examining the relationships between parental psychopathology and family risk factors, and their impact upon child adjustment. Journals have even dedicated special volumes to this subject (e.g., Developmental Psychology, 1990, vol. 26). Researchers believe these relationships are significant, whether the type of parental symptomatology being studied is depression, schizophrenia, or substance abuse and antisocial behavior. Jacob Sines (1987) aptly states:

> Most clinical as well as developmental psychologists believe that, regardless of genetic, biological, or constitutional factors that may be involved, home and family social-environmental conditions have a significant causal influence on the appearance and maintenance of children's dysfunctional behavior. (p. 1)

Even though clinicians and researchers have widely held this belief for several years, the literature documenting these relationships is still in its infancy. According to Sines (1987):

> On close examination of the available literature, however, one finds that we have remarkably little evidence to support the belief that children's dysfunctional behavior is causally influenced by home and family environmental conditions as we presently measure environment. (p. 2)

In a recent review of several studies examining these relationships, particularly focusing on parental depression, Michael

Rutter (1990) noted that there were many discrepant findings between studies, but he also cited the methodological reasons that would account for contradictory results. They included heterogeneity among the samples studied, the methods used, and the styles of statistical analysis. There was also social heterogeneity, with samples varying in the extent to which they may have been biased by reliance on volunteers and by nonparticipation. Findings were also likely to be affected by differences in how parental psychopathology was established, e.g., diagnoses based upon psychiatric care, or confirmed by standardized interview instruments, versus diagnoses based upon deviant scores on a screening questionnaire. Child outcome measures were similarly heterogenous. They included standardized psychiatric diagnoses versus utilization of a general latent construct of child disorder, versus establishing variations in social behavior, versus establishing variations in the expressions of guilt, empathy, and social responsibility, versus establishment of differences based upon transient expressions of affect by the infant. Rutter points out that the studies are "scarcely likely" to give rise to the same conclusions because they were designed for different purposes. Nevertheless, he indicated that it may be possible to derive some general principles, or at least hypotheses, from the set of investigations.

In looking at the children of alcoholics (COA) literature, Johnson and Rolf (1990) discuss how the dynamic process of development further complicates researchers efforts to develop a clearer understanding of these individuals.

> Not surprisingly, the emerging findings of psychosocial studies of children of alcoholics have yet to present a consistent picture of collective risk and individual vulnerabilities. Thus, a unified concept of psychosocial maladaptation for children of alcoholics has not yet emerged. To be fair, part of this lack of clarification about psychosocial maladaptation in children of alcoholics is due to the many ways children can develop and change across time and circumstances... The developmental process confounds most simple explanations of why some behaviors of children of alcoholics are either different from or identical to the behaviors of children of nonalcoholics. For the researcher and the clinician, recognizing the dynamic process of development creates special problems, such as understanding the stability and instability of salient behavior traits across time or the continuity and discontinuity of developmental changes. Intraindividual variations in quantitative (e.g., hormonal fluctuations of puberty) and qualitative (e.g., increases in cognitive capacity) developmental changes also complicate explanations of psychosocial maladaptation in children of alcoholics. (pp. 162-163)

Many of the methodological concerns noted above, were addressed in the present study, and some of them will be discussed in the following section, along with unique aspects of the study.

Unique Aspects of the Study

The families in this study were identified as at-risk because of the father's DUI as well as by way of subsequent confirmation of alcohol problems. These fathers all met the Feighner criterion for alcoholism, but were not involved in the study because they were seeking any help or treatment. Thus the sample represents a very different group of people than do studies who select respondents that are in outpatient or inpatient treatment facilities, whether it be for alcoholism or another type of difficulty. Because the study sample was not based upon self identification or clinical involvement, and because child age inclusion criteria only blanketed the 3 to 5 year old age range, these families tended to be younger (with parents

largely in the 25 to 35 year age range) and with alcoholic parents less advanced in stage of the alcoholism process.

In many ways this sample is quite different from other studies of COAs. Leonard (1990) described the typical alcoholic families studied:

> Since couples do not usually resort to treatment at the first sign of an alcohol problem, and, in particular, those that divorce relatively quickly may not ever present as an intact family, studies that rely on clinical samples of intact families tend to tap into a very selective time frame in the development of the family. As a result, many of the results from studies are most generalizable to those between the ages of 35 and 50 who have adolescent children. (p. 277)

Leonard then noted what is missing in the COA literature with respect to subject population; what he noted is precisely the focus of the present study.

> In particular, young alcohol abusers in their early 20s, in the early years of their first marriage, and having infants and young children are not typically sampled as part of research protocols. Thus, with the obvious exception of fetal alcohol effects, the impact of heavy alcohol consumption on infants and young children is virtually unstudied. To the extent that alcohol and marital processes manifest different relationships over the life span, research needs to examine the relationship across a broader age range than has been typically the case. (p. 277)

Besides looking at younger families, another unique feature of this study was that it focused on one homogenous age group of male children, preschoolers. Because this study is part of a larger longitudinal project, they will then be followed through young adulthood. Johnson and Rolf (1990) discussed the importance of considering children of different age ranges, both sexes, and developmental stages when completing this type of research:

> In much of the psychosocial research on children of alcoholics normal developmental differences and predicted changes in

> children's performance are often ignored. Thus, subjects of wide age ranges, both sexes, and differing cognitive developmental stages are combined into a single group. Developmental research shows that children of different ages are qualitatively different; they think and feel and act according to differences in cognitive and affective stages of development. (p. 184)

As well, it is unusual to have a study that includes information about both mothers and fathers, in terms of their own adjustment, and their perceptions of family functioning and child behavior. Many studies in the past only obtained information from and about mothers, with few examining father's role in child adjustment. It is critical to have information from both sources, particularly since we have learned in the present study that mothers and fathers have very different perspectives regarding family functioning and their children's behaviors. Barnes (1990) addressed the need for future research to examine the influence of both mothers and fathers upon their children in alcoholic families:

> Similarly, numerous studies have examined the development of alcoholism in males, drawing heavily upon the father's history of alcoholism. On the other hand, childhood socialization research has focused primarily on mothers' influences on children, often ignoring fathers' roles in this process. There needs to be a more balanced examination of mothers' and fathers' influences on both sons and daughters. (p. 155)

Another special feature of this study was that different types of parental psychopathology were examined, including alcohol involvement, antisocial activity, and depression. Clearly, the inter-relationships among these factors is a complex process, and it would be simplistic to say that parental alcohol use directly leads to and accounts for all child maladjustment. Likewise, differentiations were made between lifetime and current parental symptomatology. Thus, study data speak

to Rutter's (1990) concern that risk conditions need to extend beyond the circumstances of the moment. In fact the complexity of these processes is only beginning to be touched by the process models examined here.

As well, Leonard (1990) noted the importance of a family developmental perspective, which takes into account alcohol use and family functioning in different phases of family development, with particular emphasis on the earlier years of marriage. This study examines these relationships in young alcoholic families.

> A family developmental perspective suggests a variety of novel research possibilities. The influence of alcohol on family functioning, as well as the influence of family functioning on the development of alcohol problems, may differ across different phases of family development. In particular, the early years of marriage, in which many young men moderate their drinking behavior and in which marital patterns may be established, is one particularly important area for future research. (p. 279)

In the same vein, Windle and Searles (1990) discuss the need for investigating interlevel relations.

> Rather, we propose that there are emergent properties at various levels of analysis that do not yield to explanation by sole reference to constituent elements at a lower level in the hierarchy. What we are saying is that such interlevel relationships are related to varying degrees, depending on the specific behavior selected for study, and that a more comprehensive understanding of the expression of alcoholism in COAs and nonCOAs may be facilitated by investigating these interlevel relationships. (p. 235)

In examining individual parental symptomatology, family relationships, and child adjustment in a causal manner, analyses of interlevel relations were investigated in the present study.

In sum, unique features of the present research included the use of families that neither identified themselves as having alcohol

problems, nor were they seeking treatment for their alcohol troubles. The studies included younger families who had preschool aged boys, who were therefore of one gender and one developmental period. Information regarding parental symptomatology, family functioning, and child behavior was obtained from both mothers and fathers, allowing cross checks both for divergence of perspectives as well as independent checks of validity. Parental symptomatology was examined with a broad range of measures which included alcohol involvement, antisocial behavior, and depression; in addition differentiations were made between lifetime and current parental trouble. As well, interlevel relations were investigated, including individual parental functioning, family relationships, and child adjustment. Although there were many unique aspects to the study, some limitations were also present. They are discussed in the next section.

Limitations of the Study

First, although causal relationships were putatively under investigation here, all such conclusions must remain highly tenative since they are based upon retrospective and cross-sectional data. In future waves of the longitudinal study, it will be possible to replicate this study with prospective data. Second, although the larger study contains a community control group, these data were not available for the present analyses; therefore it was not possible to compare the relationships within a community control sample of approximately similar socioeconomic background. Thus study findings pertain to the range of variability within the alcoholic population, and are not necessarily generalizable to both alcoholic and troubled

but nonalcoholic families. Third, it should be noted that the sample used was of alcoholic men who were obtained from the courts because of their drunk driving. All of these families were initially intact, and all had preschool aged sons. This is a specific population, and one needs to be careful in not generalizing the results to all alcoholic families, and to all developmental age groups. As well, because the men were arrested for drunk driving, it is likely that this group of alcoholics is most representative of the specific subgroup of antisocial alcoholics (cf., Barbor & Lauerman, 1986; Zucker, 1987), although other subtypes with internalizing symptoms (cf., Kushner, Sher, & Beitman, 1990) are also present to some degree (Zucker, Wynblatt, Fitzgerald, & Noll, 1991).

The following sections discuss the specific study results. The initial research question was to examine the impact of parental symptomatology and family discord upon child behavior problems in young alcoholic families. In examining study findings, results will be grouped in four areas: 1) establishing the dependent variable of child adjustment; 2) building clusters of lifetime and current parental symptomatology; 3) establishing clusters pertaining to marital and family functioning; 4) path models of the overall process. Each section will examine difficulties encountered, results, and possibilities for future research.

Child Adjustment as a Dependent Variable

Many difficulties were encountered with the dependent variable of child adjustment. As already noted, they included low interparental agreement on the Achenbach CBCL, weak agreement between independent

Q-sort ratings and mother CBCL scores, and no agreement between mother and father CBCL scores. In a review of the literature on children of alcoholics, Johnson and Rolf (1990) discuss this issue:

> Separate sources of information on children include peer ratings, parental reports (both mother and father), teacher reports, self-reports, clinical observations, and experimenter performance evaluations (e.g., laboratory testing). It is likely that some differences in children's behaviors may depend on who fills out the report, and some differences may not. Disagreements between mother's and father's reports of their child's behavior, for example, provide important clinical information about both the child and the parent. Reports about children's behaviors may vary because the child may vary his or her behavior toward different individuals. On the other hand, reports may vary because different individuals may elicit the problem behavior themselves or alternatively, have a lower tolerance for it. (p. 177)

Another difficulty included high intercorrelations among CBCL subscales for both mothers and fathers. At this point in time, it is unclear whether the difficulties with poor interparental correlations and high subscale intercorrelations are endemic to alcoholic families, to at-risk families in general, or to the particular developmental stage of the families being studied here.

Despite these problems, it was found that that many of the children were already experiencing difficulties that can be appropriately be considered in the clinical range. One-third of the parents rated their children in the clinical range in the areas of total behavior problems and externalizing behaviors; one-fourth of the parents rated their children to be in the clinical range in the more specific area of aggressive behavior. Parents reported almost three times as much clinical level of difficulty with aggression as compared to depression.

These findings indicate that the children in the MSU study are experiencing only slightly greater difficulty than those reported in the sample of Jacob and Leonard (1986). The children in the Jacob and Leonard study were 10 to 18 years old and the children in the MSU study were 3 to 6 years old. Jacob and Leonard found that sons and daughters of alcoholic and depressed fathers were rated by both parents as experiencing more troubles than the controls, but the mean CBCL values of the alcoholic and depressed groups were within the normal range. Those COAs rated with greater behavioral disturbances had parents with elevated measures of psychopathology and/or had fathers with more alcohol-related difficulty. All of the findings are consistent with the present data set. Given that the children in the MSU study are considerably younger it is plausible that over the long term they may become more symptomatic, but only time will tell.

Given the difficulties encountered, the following suggestions are made for avenues of future research. First, in terms of the longitudinal study, it should be noted that these children will soon be starting school, and difficulties with low parental CBCL agreement can be examined further and possibly resolved by using the teacher report data to be obtained at T2. Teachers will provide alternative, well-informed observations of the children's behaviors. Second, available observational data of parent-child play interactions will also provide another opportunity to observe the children's behaviors. Both of these approaches will yield additional data points that will be helpful in figuring out what transpires between these children and their parents.

Building Clusters of Lifetime and Current Parental Symptomatology

It should be pointed out that there is little information in the literature that differentiates between lifetime and current parental symptomatology. Many studies examining at-risk children merely discuss the presence/absence of parental psychopathology, and fail to look at it on a continuum of difficulty. In this study, not only did we look at problems of alcohol use and abuse, but at antisocial behavior and depression as well. In addition, we differentiated these problems in terms of lifetime and current difficulty. Even though some of the lifetime data was retrospective information, and other of it was purely cross-sectional, by separating parental difficulty into lifetime and current symptomatology, one can begin to look at these problems in a causal manner through the use of path models.

These results are very different from the time-series analysis studies completed by Jacob and his colleagues, which demonstrated that the drinking patterns of the alcoholic father can be an important moderator of family relationship functioning (Sellhamer & Jacob, 1990). According to Sellhamer and Jacob (1990), Sellhamer (1987) found that for 6 of 8 families in her time-series analysis study, the child's daily satisfaction rating with the father-child relationship was causally related to father's level of daily alcohol consumption. Also, when the parent-child relationship was negatively affected by the father's drinking, the marital relationship was also negatively affected. However, the different levels of analyses used in measuring current alcohol consumption in the two studies (time-series microlevel analyses in the Jacob study and macrolevel analyses in the MSU study)

may account for the differences in results. Also, it is difficult to compare the two studies because the parents and children in Jacob's sample were older and criteria for inclusion of the adults in the study excluded individuals with psychopathology other than alcohol abuse-- for fathers, and excluded other psychopathology as well as alcohol involvement for the mothers.

Given the discrepancies observed between the present findings and earlier work, the following suggestions should be considered. First, one should use alternative sources of information to substantiate some of these variables. For example, additional information available on lifetime and current drinking, antisocial behavior, and depression can be obtained from the DIS; the contribution of these additional sources of variance should help to strengthen the estimation of the latent variables being modelled here. Second, information pertaining to these variables is currently being collected in a prospective manner from the longitudinal study. Overtime, this would allow a much clearer distinction between lifetime and current levels of symptomatology, and of their relative contributions to the etiology of child troubles.

Clustering Marital and Family Discord

The family and marital discord cluster originally consisted of the perceived Conflict and Cohesion variables from the Moos Family Environment Scale, and a measure of spousal physical aggression during the past year obtained from the Conflict Tactics Scale. The data did not fit any of the originally proposed cluster models and were best explained in terms of the contribution of bias to parental perception.

It was assumed in this model that bias was a characteristic of the person and therefore uncorrelated between parents, but shared across instruments. Also, each of the three family functioning variables were treated as separate and distinct.

It is important to examine some of the reasons why these variables could not be coalesced into a cluster of family functioning. The spousal aggression measure was only very weakly associated with the two Moos FES Cohesion and Conflict scales. There are a few possible explanations for these results. First, the Conflict Tactics Scale of spousal aggression was derived from one instrument, and the Conflict and Cohesion measures were from a different instrument. Therefore, there were across instrument dissimilarities in time of administration, method of administration, and content. Second, the Conflict Tactics Scale dealt with reports of actual numbers of behaviors, and the Moos scales dealt with perceptions of environment, in other words family behavior was not necessarily the referent for a respondent's ratings. Third, the Moos scales pertained to family functioning in general, while the Conflict Tactics spousal aggression scores pertained only to spousal functioning.

Given the findings of a contribution of bias to parental perceptions, True Score (or Actual) and Perceived family functioning variables were composed. For each variable, the Actual score represented the shared perceptions between mothers and fathers. The separate mother and father Perceived scores included the actual score plus bias plus an error term. Error and bias terms between parents were considered unrelated. The three variables of Family Conflict,

Family Cohesion, and Family Spousal Aggression were then examined separately, by way of components pertaining to their Actual and Perceived scores. Even with these measurement adjustments, the family functioning variables were still not strongly related to the other variables in the study. In the final path model, parental lifetime difficulty did not contribute to Actual Family Conflict. Actual Family Conflict contributed significantly to father current depression, and at the level of a trend, to mother current depression. Cronkite, Finney, Nekich, and Moos (1990) reported that spouses in low cohesion families reported more physical symptoms, while those in highly conflicted families experienced more depression and physical symptoms. In the present study Actual Family Conflict did not contribute directly in any of the models to child behavior problems, although it appears to play some role by way of an indirect effect through parental depression.

Given these generally weak findings, using observational/ interactional data may be a better method of documenting these marital and family relationships. It would also be important to separately examine the impact of marital and family relationships in determining their unique contributions to child behavior problems. In addition, given that the present sample is fairly homogenous, the results for family functioning are also possibly truncated. If both alcoholic and nonalcoholic families were included in the analyses, a greater distribution of responses would likely be seen in these family functioning variables, and the path models might then conceivably show different patterns of relationship.

Path Models of the Influencing Structure for Child Symptomatology

The original hypothesis was that individuals experiencing higher amounts of lifetime trouble relating to alcohol abuse, antisocial behavior, and depression would have greater difficulties in their family and marital relationships. These difficulties in interpersonal relationships would likely contribute to higher levels of current symptomatology in the parents. Higher levels of current family and marital discord would impact upon child behavior problems directly as well as indirectly through current parent trouble. Therefore, both greater difficulties in family functioning and increased levels of current parental symptomatolgoy were hypothesized to contribute to higher levels of behavior problems in the children. It was also hypothesized that child age would be associated with child behavior problems.

For each of the final models, the goodness-of-fit test was not significant, indicating that all of the models adequately fit the data. For both mothers and fathers, greater lifetime trouble (LAPS and ASB) contributed to higher levels of current depression. However, greater lifetime trouble failed to contribute to greater actual family conflict. Actual family conflict significantly contributed to father current depression, and was at the level of a trend for mother current depression. In each of the models (total behavior problems, aggressive behavior, and depessed behavior), actual family conflict did not directly contribute to child behavior problems. In all three models, mother current depression contributed to each of the child behaviors (TBP, aggressive, and depressed behaviors). Father current

depression contributed to total behavior problems and depressed child behaviors, but not to aggressive child behaviors. Although actual family conflict did not directly contribute to child behaviors, it did indirectly through current depression. Each of the three models were found to be fairly similar.

Parenthetically, it is appropriate to make a brief comment about models based only on father ratings of the dependent variable (Appendices E-G), and compare with results of the mothers. In the models with mother ratings (Figures 4-6), both parents' current depression contributed to child behavior problems. In contrast, only father current depression led to child difficulties in the father models (Appendices E-G). It is possible that fathers' subjective experiences may color their perceptions of the child because they typically have less exposure than mothers to children.

The findings of this study are compared with those of Cronkite et al. (1990):

> In general, the indices of parental and family dysfunction were related to children's depression and emotional problems, but not to their physical problems. Aside from the expected influence of the alcoholic parent's drinking problems, the emotional dysfunction (especially depressed mood) of both parents and their use of avoidance coping were associated with more emotional problems among their children. The alcoholic parent's physical symptoms and occupational functioning were predictably related to children's adaptation. Stressful life events and family conflict, spouses' disagreement, and lack of family cohesion and organization also predicted children's emotional symptoms. (p. 326).

The findings of the present study are also compared with the summary of the COA literature presented by Sellhamer and Jacob (1990):

> In summary, although empirical reports are limited, several outcome studies have demonstrated that children of alcoholics

> vary widely with regard to psychosocial adjustment and that many exhibit adequate to superior functioning. Moreover, studies of children of recovered alcoholics suggest that maladjustment is situation- related rather than an irreparable injury, as many descriptive reports have contended. Several factors that influence outcome have been suggested, including individual characteristics of the child (sex, temperament, intellectual level) and parent (extent of alcohol problems, emotional stability, coping style), as well as features of the family environment (cohesiveness, conflict). Again, interpretation of results is hampered by biased sampling, indirect child assessment, unsubstantiated global ratings, and insufficient life-span assessment. The most critical gaps are conceptual; that is, there is a lack of theoretical perspectives that offer explanations and of rationales that link specific processes to child outcome. (p. 175)

Given the findings of the present study, let us discuss areas of future research. First, this study was not designed to cover all of the factors contributing to child behavior problems in alcoholic families. It represented a first effort in mapping and understanding the parental and family influences in predicting difficulties in these children. It is understood that there are other variables that could be added to the model to make it more comprehensive. At the parental level, a clearer understanding is desired of each parent's level of functioning, and how it impacts upon the spouse. Gomberg & Lisansky (1984) depicted their understanding of alcoholic etiology most eloquently:

> It is our assumption that events leading to alcohol problems in adult life are myriad, that causation is indeed complex and interactional. Nonetheless, ... it is not random selection or blind fate that determines problem drinking, but events in certain combinations and sequences that lead a person into problem drinking. (p. 234)

At the parental level, it may also be desireable to consider subtypes of alcoholism. For example, Zucker (1987) has suggested the consideration of four alcoholic subtypes. They include:

1) antisocial alcoholism, 2) developmentally cumulative alcoholism, 3) developmentally limited alcoholism, and 4) negative affect alcoholism. These subtypes will likely prove useful in developing a more comprehensive understanding of the relationship between alcohol, individual parental psychopathology, and family processes.

At the level of family relationships, it may be important to differentiate between overall family functioning, marital relationships, issues of parenting alliance, and parent-child relationships. For example, O'Connor, Sigman and Brill (1987) found in a sample of white, highly educated women over 35 years of age, that the majority of the infants of mothers who had consumed more alcohol were insecure in their attachment in comparison with a minority of insecure infants of mothers who had been abstinent or light drinkers. Another tack in examining the role of family environment in predicting child adjustment includes the work of Wolin and Bennett (1990), who described how the preservation versus disruption of family rituals is associated with the subsequent drinking-related difficulties in their children. They hypothesized that those families who were able to maintain family rituals, despite a parent's alcohol problem, were less likely to have children with alcohol problems. Although their results need to be replicated on demographically broader and larger samples, their data thus far are supportive of their initial hypotheses. It would be fascinating to see if this same line of thinking applied to other types of parental psychopathology. For example, one could examine whether the preservation or disruption of family rituals when

there is a depressed parent can similarly predict whether their children will have subsequent difficulties with depression as adults.

At the child level, temperament has been considered a potentially important variable in predicting child adjustment. However, Cronkite et al. (1990) point out that the family environment may also play an important role in shaping a child's temperament.

> Because it helps to shape a child's temperament, the family environment may increase susceptibility to alcoholism in adulthood. Tarter, Alterman, and Edwards (1985) have suggested that the risk for alcoholism is increased by high emotionality, short attention span, and sustained arousal after stimulation. These characteristics of temperament are more likely to develop among infants in families that are highly conflicted and that lack, cohesion, expressiveness, and an emphasis on independence and intellectual and recreational pursuits (Plomin & DeFries, 1985). As we have noted, these are the qualities that characterize families of alcoholic parents, especially those with ongoing serious drinking problems. By fostering a climate that promotes certain temperament characteristics, parental alcoholism may increase a child's risk for alcohol abuse and other behavioral dysfunctions. (p.325)

Given this discussion, the model used in the present study also appears to be an appropriate one for predicting difficult temperament in alcoholic families.

The present study represents one model for the prediction of child behavior problems in alcoholic families. It should be noted that there are other possible models one could use, that warrant further exploration (e.g., Downey & Coyne, 1990). For example, the causal model used in the present study did not include bidirectional influences; it would be important in future work to examine the child's role upon current parental symptomatology, and upon family functioning. It is highly likely that difficult children can exacerbate an already stressed system. Parents may respond with

increased drinking and depression, and an already troubled marriage and poor parenting alliance can be worsened. Since the present study examined the combined influences of mother and father functioning, it would also be important for future research to consider the mediating influence of mothers (or the nontargeted spouse) in predicting child adjustment. Another important variable to consider in a comprehensive model is that of life stressors, which encompasses another large literature.

In concluding this discussion it is imperative to address the flip side of the coin, which pertains to individual and family processes as they create resilience or adaptation in the family and in the child. The literature suggests that many children of alcoholics manage to lead lives with adequate to superior functioning (Seilhamer & Jacob, 1990). For example, predictors of resiliency for the children of alcoholics in one longitudinal study of Hawaiian children (Werner, 1986) included sex (being female), competency of the mother (particularly with regard to drinking status), quality of early caregiving, degree of family conflict in early childhood, academic performance, and intelligence level. It is essential to examine the processes of both <u>risk</u> and <u>resilience</u> in the search to develop a better understanding of these families.

APPENDICES

APPENDIX A

Conflict Tactics Scale-Revised

Appendix A

Conflict Tactics Scale- Revised

(57A)

TO BE COMPLETED FOLLOWING DIS QUESTION 209- p. 56

1a) In raising children, all of them are troublesome some of the time. At those times, parents and children sometimes use different ways of trying to settle these differences. I'm going to read a list of some things that (_____) might have done when you had a dispute or disagreement. For each one, I want to ask you about (_____)'s behavior with you. Tell me how how often in the past year when you had a disagreement with (_____), he:

	1a How often?	1b Age	1c Ever?
a) Discussed the issue calmly with you.			
b) Got information to back up his side of things.			
c) Brought in or tried to bring in someone to help settle things.			
d) Insulted or swore at you.			
e) Sulked and/or refused to talk about it.			
f) Stomped out of the room or house(or yard).			
g) Cried.			
h) Did or said something to spite you.			
i) Threw or smashed or hit or kicked something, but not at you.			
j) Threatened to hit or throw something at you.			
k) Hit you or actually threw something at you.			
l) Pushed, grabbed, shoved, slapped you or spanked you.			
m) Used a belt on you.			
n) Kicked, bit, hit or beat you up.			
o) Threatened to or used a knife or gun.			

(If Once or More than once answered to 1a, ask 1b):

1b) How young was (_____) the first time he used this manner to settle things?

(If Never answered to 1a, ask 1c):

1c) During a disagreement with you, had (_____) ever done the following things, and if so, when was the earliest time?

Scale of frequency:

Never, once, twice, 3-5 times, 6-10 times, 11-20 times, >20 times.

(578)

2a) We've just talked about the ways your child is with you when the two of you have had a dispute or disagreement. Now I want to ask you about the way you are and what you do during these times. I am going to read a list of some things that you might have done. For each one, I would like you to tell me how often in the past year you did this with ( ):

	2a How often?	2b Age?	2c Ever?
a) Discussed the issue calmly.			
b) Got information to back up your side of things.			
c) Brought in or tried to bring in someone to help settle things.			
d) Insulted or swore at your child.			
e) Sulked and/or refused to talk about it.			
f) Stomped out of the room or house(or yard).			
g) Cried.			
h) Did or said something to spite your child.			
i) Threw or smashed or hit or kicked something, but not at your child. 2d) Bruises?			
j) Threatened to hit or throw something at your child. 2d) Bruises?			
k) Hit or actually threw something at your child.			
l) Pushed, grabbed, shoved, slapped or spanked your child. 2d) Bruises?			
m) Used a belt on your child. 2d) Bruises?			
n) Kicked, bit, hit or beat up your child. 2d) Bruises?			
o) Threatened to or used a knife or gun. 2d) Bruises?			

(If 2a answered Once or More than once, ask 2b):

2b) How young was ( ) the first time it was necessary to settle things this way?

(If 2a answered Never, ask 2c):

2c) During a disagreement with ( ), had you ever done the following things, and if so, when was the earliest time?

(For items i-n answered Yes, ask 2d and 2e): [see next page for 2e]

2d) Did this activity cause any bruises? Were they hard enough so that he had to stay in bed or see a doctor?

Scale of frequency:

Never, once, twice, 3-5 times, 6-10 times, 11-20 times, >20 times.

(57C)

2e1) (If any item of i-m answered as yes on 2a, ask the following at the end):

Let me ask a little more about some of the disagreements that occurred in the last year. (Interviewer: List items from i-m). Was any alcohol or any other drug used during the most recent time that this happened?

2e2) What was the drug?

2e3) How much did you have?

2e4) How long was it consumed before the disagreement with ( )?

2e5) What was the nature of the disagreement after you had _____(drug)? What did you do?

3a) Now to a different area. About your own childhood, do you recall ever being physically punished or abused by your parents when you were a child or teenager?

3a) _____

(If question 3a was answered as yes, ask 3b):

3b1) By whom?

_____

3b2) For what kind of disagreement?

_____

3b3) How? What happened?

_____

3b4) How often did this occur? (once or twice, monthly, weekly?)

_____

3b5) What was your earliest age at which this occurred?

_____

3b6) What was your oldest age at which this occurred?

_____

3b7) Were there any typical circumstances for these occasions? (probe for alcohol or other drug use)

_____

(57D)

4a) Even if you weren't(or were) physically abused, were you ever sexually abused by someone in your family, or by a neighbor or friend?

(If question 4a was answered as yes, ask 4b):

4b1) By whom?

4b2) How ? What happened?

4b3) How often did this occur?

4b4) What was your earliest age at which this occurred?

4b5) What was your oldest age at which this occurred?

4b6) Were there any typical circumstances for these occasions? (probe for alcohol or other drug use)

(57E)

5a) Now I would like to ask you a few questions about your relationship with your (wife/husband). No matter how well a couple gets along, there are times when they disagree on major decisions, get annoyed about something the other person does, or just have spats or fights because they are in a bad mood or tired, or for some other reason. They also use many different ways of trying to settle their differences. I am going to read a list of of some things that you and your spouse might have done when you had a dispute. I would like you to tell me, for each one, how often your spouse did it in the past year:

	5a How often?	5b How long?	5c Ever?
a) Discussed the issue calmly.			
b) Got information to back up (his/her) side of things.			
c) Brought in or tried to bring in someone to help settle things.			
d) Insulted or swore at you.			
e) Sulked and/or refused to talk about it.			
f) Stomped out of the room or house(or yard).			
g) Cried.			
h) Did or said something to spite you.			
i) Threw or smashed or hit or kicked something, but not at you.			
j) Threatened to hit or throw something at you.			
k) Hit you or actually threw something at you.			
l) Pushed, grabbed, shoved, slapped or spanked you.			
m) Used a belt on you.			
n) Kicked, bit, hit or beat you up.			
o) Threatened to or used a knife or gun.			

(If 5a answered Once or More than once, ask 5b):

5b) How long ago was the first time ( ) needed to settle things in this manner?

(If 5a answered Never, ask 5c):

5c) During a disagreement with you had your spouse ever done the following things, and if so, when wass the earliest time?

Scale of frequency:

Never, once, twice, 3-5 times, 6-10 times, 11-20 times, >20 times.

(57F)

5d1) (If any item of i-m answered as yes on 5a, ask the following at the end):

Let me ask a little more about some of the disagreements that occurred in the past year). (Interviewer: List items from i-m). Had your spouse used any alcohol or any other drugs during the most recent time that this happened?

5d2) What was the drug?

5d3) How much did your spouse consume?

5d4) How long did your spouse consume it before the disagreement?

5d5) What was the nature of the disagreement after your spouse had _____(drug)? What did your spouse do?

(57G)

6a) We have just talked about the way your spouse is with you when the two of you have had a dispute or disagreement. Now I want to ask you about the way you are and what you do during these times. Tell me how often in the past year, when you and your spouse had a dispute or disagreement, you:

	6a How often?	6b How long?	6c Ever?
a) Discussed the issue calmly.			
b) Got information to back up your side of things.			
c) Brought in or tried to bring in someone to help settle things.			
d) Insulted or swore at your spouse.			
e) Sulked and/or refused to talk about it.			
f) Stomped out of the room or house(or yard).			
g) Cried.			
h) Did or said something to spite your spouse.			
i) Threw or smashed or hit or kicked something, but not at your spouse.			
j) Threatened to hit or throw something at your spouse.			
k) Hit or actually threw something at your spouse.			
l) Pushed, grabbed, shoved, slapped or spanked your spouse.			
m) Used a belt on your spouse.			
n) Kicked, bit, hit or beat up your spouse.			
o) Threatened to or used a knife or gun.			

(If 6a answered Once or More than once, ask 6b):

6b) How long ago was the first time you used this manner to settle things?

(If 6a answered Never, ask 6c):

6c) During a disagreement with your spouse, had you ever done the following things, and if so, when was the earliest time?

Scale of frequency:

Never, once, twice, 3-5 times, 6-10 times, 11-20 times, >20 times.

(57H)

7a1) (If any item of i-n answered as yes on 4a, ask the following at the end):

Let me ask a little more about some of the disagreements that occurred in the last year. (Interviewer: List items from i-n). Was any alcohol or other drug used during the most recent time that this occurred?

7a2) What was the drug?

7a3) How much was consumed?

7a4) How long was it consumed before the disagreement with your spouse?

7a5) What was the nature of the disagreement after you had _____(drug)? What did you do?

8) Now to a different subject. As you were growing up, were there ever occasions when your parents hit each other, or threw things at each other or used violence with each other?

(If 8 is answered yes, ask 9a-9e):

9a) For what kind of disagreements?

9b) How often did this occur?(once or twice, monthly, weekly?)

9c) What was your earliest age at which this occurred?

9d) What was your earliest age at which this occured?

9e) Were there typical circumstances for these occasions? (probe for alcohol or other drug use)

Now I'm going to ask you about your sexual experience. (To DIS p. 63- Q. 219)

APPENDIX B

Cumulative Intensity Index Score of the Conflict Tactics Scale

Appendix B

Cumulative Intensity Index Score of the Conflict Tactics Scale

---

Cumulative Intensity =

Indirect Physical Aggression + 4 * (Physical Aggression) +

9 * (Severe Physical Aggression)

Indirect Physical Aggression:

i) Threw or smashed or hit or kicked something, but not at you.

j) Threatened to hit or throw something at you.

Physical Aggression:

k) Hit you or actually threw something at you.

l) Pushed, grabbed, shoved, slapped you or spanked you.

Severe Physical Aggression:

m) Used a belt on you.

n) Kicked, bit, hit, or beat you up.

o) Threatened to or used a knife on you.

APPENDIX C

Moos Family Environment
Conflict and Cohesion Scales

Appendix C

Moos Family Environment Conflict and Cohesion Scales

Moos Conflict:

3. We fight a lot in our family.

*13. Family members rarely become openly angry.

23. Family members sometimes get so angry they throw things.

*33. Family members hardly ever lose their tempers.

43. Family members often criticize each other.

53. Family members sometimes hit each other.

*63. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.

73. Family members often try to one-up or out-do each other.

Moos Cohesion:

1. Family members really help and support one another.

*11. We often seem to be killing time at home.

21. We put a lot of energy into what we do at home.

31. There is a feeling of togetherness in our family.

*41. We rarely volunteer when something has to be done at home.

51. Family members really back each other up.

*61. There is very little group spirit in our family.

71. We really get along well with each other.

81. There is plenty of time and attention for everyone in our family.

---

* means reverse scored

APPENDIX D

Determination of True Score (Actual) and Perceived Components of Family Functioning: Rules for Computing Correlations in the Model 3 Matrix

Appendix D

Determination of True Score (Actual) and Perceived Components of Family Functioning: Rules for Computing Correlations in the Model 3 Matrix

---

1) True score correlation between family variables:

r(MPCon,MBCts) = covariance(TCon,TCts) + covariance(MBCon,MBCts)

r(T-Con,Coh) = r(MPCon,FPCoh) + r(MPCoh,FPCon)/2

2) Correlations between true score and perceived family variables:

r(TCon, MPCon)= r(Tcon, FPCon)= r(TConTCts)= r(TConMCts)=r(TConFCts)

r(MPerceived, FPerceived)= MPerceived X Actual (because their bias is uncorrelated).

3) Correlations between family variable true score, life problems, and child behavior:

r (Mom Life, Actual Coh)= Mom Life + Father Coh.

Actual Conflict and Mom's Beck= Father's Conflict and Mom's Beck. (This is done beause father's bias in conflict is not correlated with mother's Beck score).

r(Father BDI, MPCoh)= F BDI + Actual Coh

True Cohesion and mother's child aggression= father's perceived cohesion and mother's child aggression.

4) Correlations between perceived family variables, life problems, and child behavior.

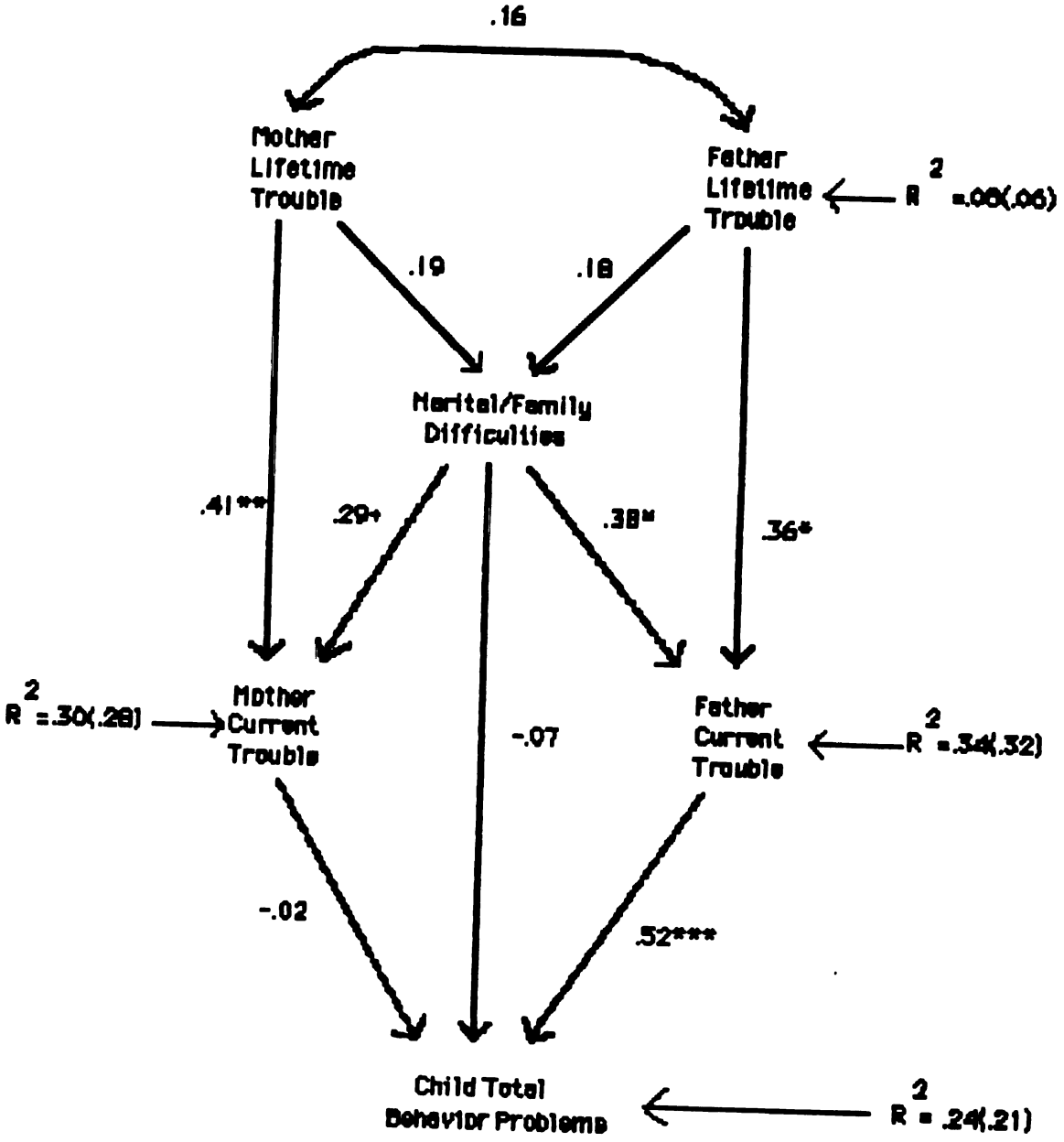
Mother's perceived cohesion and mother's Beck= Raw score correlation between mother's cohesion and mother's Beck.

APPENDIX E

Final Path Model of Child Behavior Problems (Father CBCL Reports)

Appendix E

Final Path Model of Child Total Behavior Problems
(Father CBCL Reports)



Each path coefficient gives a beta weight.

+ p<.10, * p<.05, ** p<.01, *** p<.001.

Variance information: (Adjusted R^2) in parentheses.

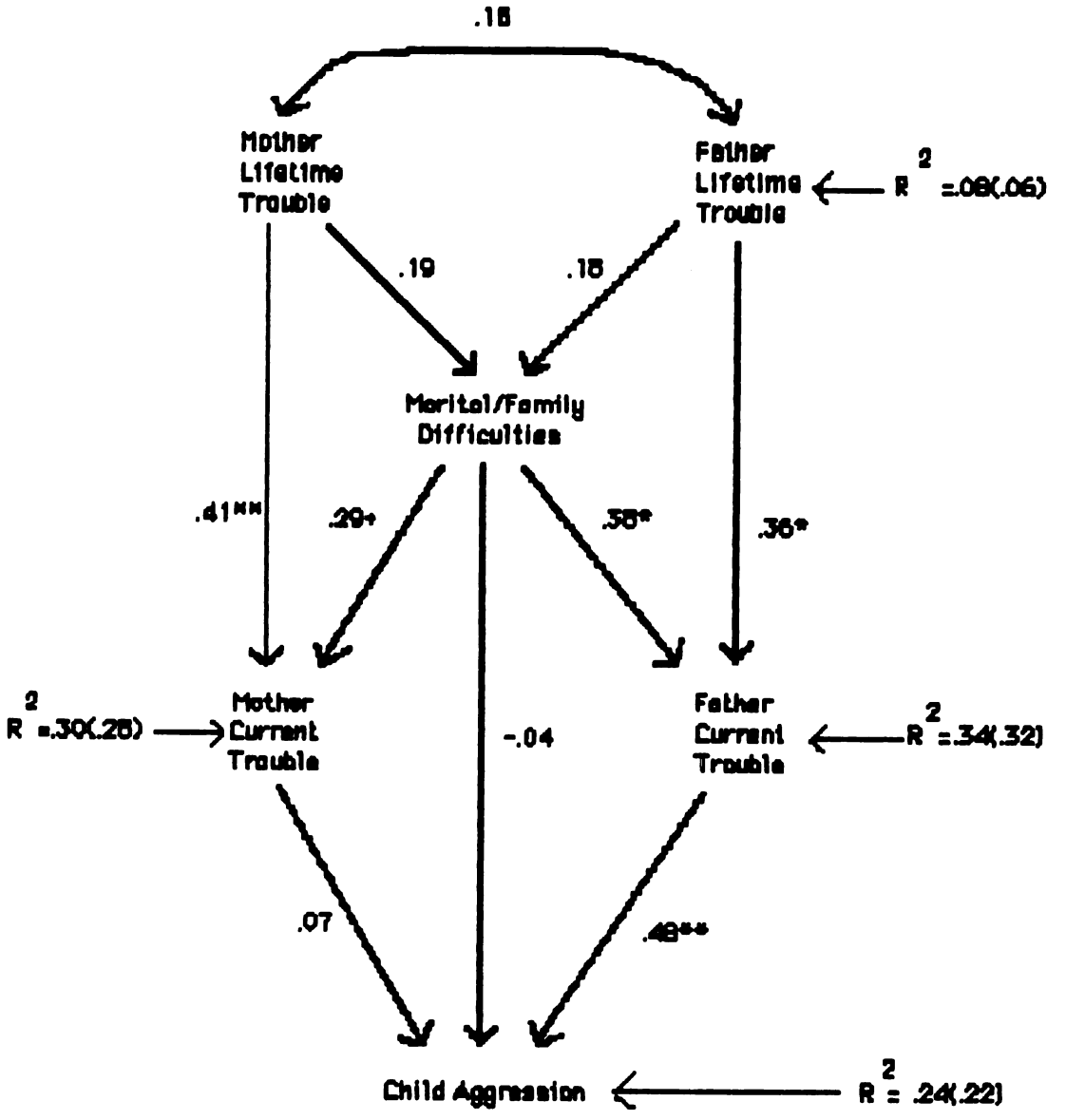
Overall Chi Square= 2.51; df=5; n.s.

APPENDIX F

Final Path Model of Child Aggression
(Father CBCL Reports)

Appendix F

Final Path Model of Child Aggression (Father CBCL Reports)



Each path coefficient gives a beta weight.

+ p<.10, * p<.05, ** p<.01.

Variance information: (R^2 Adjusted) in parentheses.

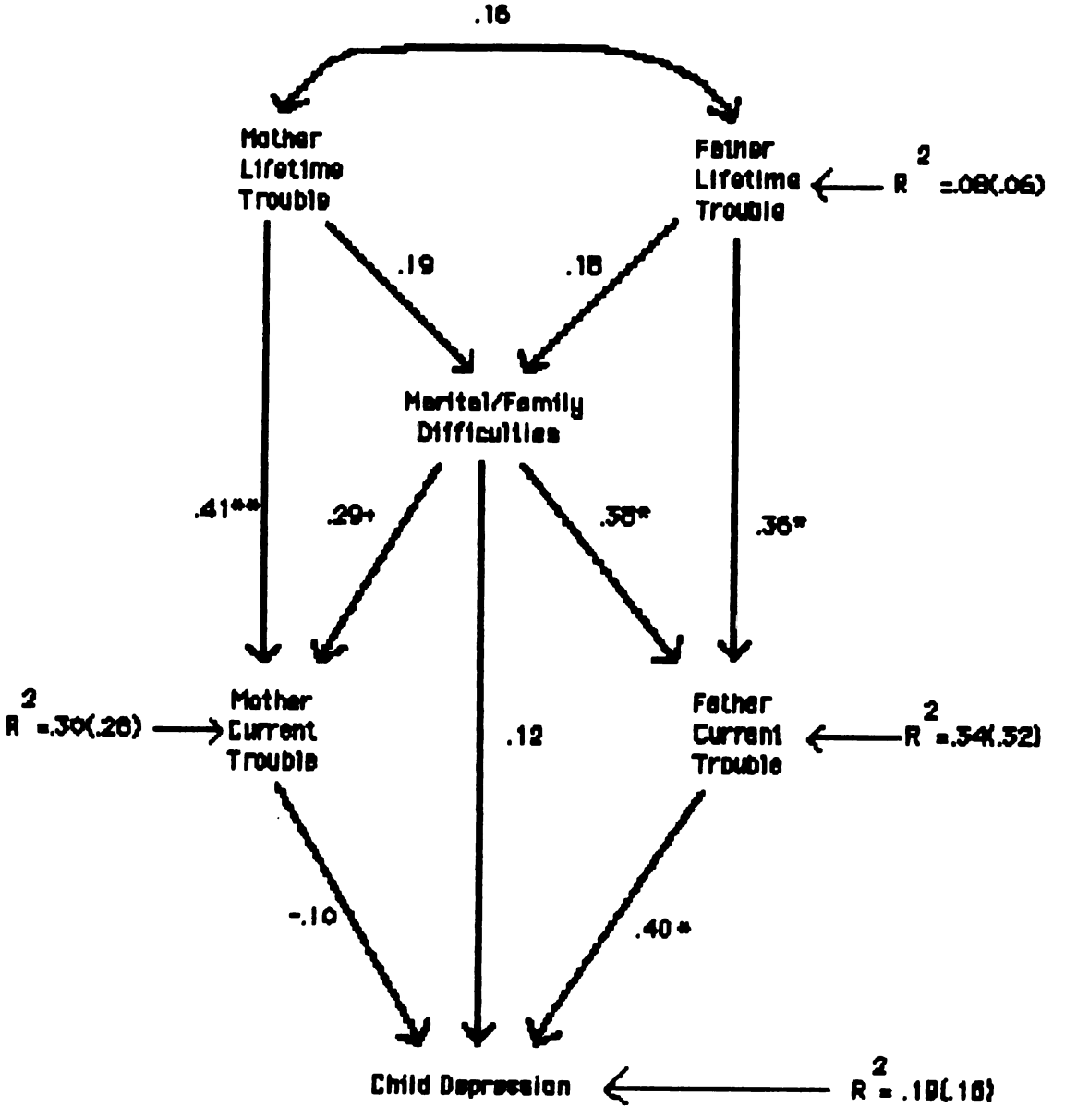
Overall Chi Square= 4.12; df=5; n.s.

APPENDIX G

Final Path Model of Child Depression (Father CBCL Reports)

Appendix G

Final Path Model of Child Depression
(Father CBCL Reports)



Each path coefficient gives a beta weight.

+ p<.10, * p<.05, ** p<.01.

Variance information: (Adjusted R^2) in parentheses.

Overall Chi Square=2.32; df=5; n.s.

APPENDIX I

Father CBCL Total Behavior Problems (TBP), Aggressive, and Depressed Child Behavior: Assessment of the Path Analyses

Appendix H

Mother CBCL Total Behavior Problems (TBP), Aggressive, and Depressed Child Behavior: Assessment of the Path Analyses

	Reproduced Correlations						Errors(Actual-Reproduced)					
TBP Model (see Figure 4):												
	1	2	3	4	5	6	1	2	3	4	5	6
1) Mother LIFE	--						00					
2) Father LIFE	16	--					00	00				
3) Actual CON	22	21	--				00	00	00			
4) Mother BDI	47	13	38	--			00	15	00	00		
5) Father BDI	14	44	46	19	--		04	00	00	21	00	
6) Mother TBP	22	18	23	44	36	--	17	-05	00	07	09	00
Aggressive Behavior Model (see Figure 5):												
	1	2	3	4	5	6	1	2	3	4	5	6
1) Mother LIFE	--						00					
2) Father LIFE	16	--					00	00				
3) Actual CON	22	21	--				00	00	00			
4) Mother BDI	47	13	38	--			00	15	00	00		
5) Father BDI	14	44	46	19	--		04	00	00	21	00	
6) Mother AGGR	27	18	45	53	37	--	23	06	00	04	09	00
Depressed Behavior Model (see Figure 6):												
	1	2	3	4	5	6	1	2	3	4	5	6
1) Mother LIFE	--						00					
2) Father LIFE	16	--					00	00				
3) Actual CON	22	21	--				00	00	00			
4) Mother BDI	47	13	38	--			00	15	00	00		
5) Father BDI	14	44	46	19	--		04	00	00	21	00	
6) Mother DEPR	23	24	15	45	51	--	09	-19	00	11	09	00

Appendix I (cont'd)

Note. LIFE= LAPS (Lifetime Alcohol Problems Scores) + ASB (Total Antisocial Behavior). Actual CON= Actual Conflict. BDI= Beck Depression Inventory. TBP= CBCL Total Behavior Problems. AGGR= CBCL Aggressive Behavior. DEPR= CBCL Depressed Behavior.

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