THE RELATIONSHIP OF ALCOHOLIC MOTHERS AND THEIR CHILDREN: DESCRIPTION AND EVALUATION

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Submitted to the Faculty of the Graduate College
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in partial fulfillment of the requirements
for the Degree of
DOCTOR OF PHILOSOPHY
December, 1984

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ACKNOWLEDGMENTS

I wish to express my sincere appreciation to my major adviser, Pam Dorsett. I would also like to acknowledge committee members, Vicki Green, Jim Phillips, and Chuck Edgley, for their valuable contributions to this study.

Special thanks go to treatment center coordinators across the state for their efforts in locating participants, as well as to the personnel at the Oregon Social Learning Center for their assistance in the coding and analysis of videotapes. I would also like to acknowledge John Digiammo and the staff of the Chemical Dependency Rehabilitation Program at the Albany VA for stimulating my interest in this topic. I am especially indebted to the alcoholic mothers and their children who so gladly participated in this study.

Finally, I would like to express my love and thanks to my mother and father for their encouragement and support; and to Larry for his faith in me. The Gestalt has emerged!

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CHAPTER I

INTRODUCTION

Alcoholism

Definition

Most definitions of the term alcoholism emphasize the problematic consequences of alcohol use and the individual's tolerance and/or physical dependency on the drug. The American Psychiatric Association (APA, 1980), in its Diagnostic and Statistical Manual of Mental Disorders (DSM-III), defines alcoholism as alcohol dependence, and problem drinking as alcohol abuse. The diagnostic criteria for alcohol dependence include a pattern of pathological use of alcohol, or alcohol-related impairment in social or occupational functioning, and either physiological tolerance or withdrawal, and a duration of at least one month. Alcohol abuse is defined by the above except for tolerance and withdrawal symptoms. Continuous and episodic courses are also differentiated: continuous refers to regular or sustained maladaptive use, and episodic refers to repeated distinct episodes of maladaptive use.

There are those who espouse the view that such a definition is too restrictive. Pattison (1980) acknowledges different kinds of alcoholism syndromes characterized by multiple patterns of alcohol-related problems, consequences, and prognoses. Wanberg and Horn (1983) question the usefulness of a unitary model which defines alcoholism as a discrete

entity evolving from a single process. Results of factor-analysis of self-report data derived from an extensive clinical sample led Wanberg and Horn to conclude that alcoholism is composed of various distinct factors with separate etiologies. Recognition that there are different kinds of alcohol-related syndromes which contain diverse phenomena contributes to more complete understanding and treatment planning.

Epidemiology

Most adult Americans drink alcohol socially and in moderation. Two-thirds of the population drink beverage alcohol once a year or more, and approximately 50% are classified as regular drinkers. One-third are abstainers (Cahalan & Cisin, 1976; Finn & O'Gorman, 1981). Per capita alcohol consumption has increased since World War II, although there is no evidence of a marked change in the incidence of alcohol problems (Clark & Midanik, 1982; Malin, Coakley, Kaelber, Munch, & Holland, 1982). Nevertheless, alcoholism research, treatment, and prevention are national priorities. An estimated 13 million people abuse alcohol or are alcoholics (Califano, 1982).

Alcohol use, nonuse, and abuse vary as a function of ethnicity, socioeconomic status, region, age, and sex. Findings support Ullman's (Cahalan & Cisin, 1976) hypothesis of a high rate of alcoholism in ethnic groups with ambivalent drinking practices and values. In a 40-year prospective study, Vaillant (1983) found that symptomatic drinkers came from groups which condone adult intoxication, but discourage their young from learning to drink responsibly. Cultures which ritualize drinking and drunkenness have lower rates of alcohol abuse.

Socioeconomic status is also related to alcohol use. Members of high income groups are more likely to be drinkers, but less likely to be problem drinkers than middle and lower income individuals. Low educational and economic status is related to abstinence as well. The highest proportion of teetotalers is found in the lower socioeconomic strata (Finn & O'Gorman, 1981; Clark & Midanik, 1982).

Geographic locale is clearly associated with substance use. New England and the Middle Atlantic and Pacific Coast states have the highest proportion of Americans who drink beverage alcohol. Yet there is less drinking and problematic drinking in rural areas than in urban and suburban areas. The East South Central and the South Atlantic states have the highest rates of abstention. This reflects the high proportion of religious groups which proscribe alcohol use, and the rural character of the southern states (Cahalan & Cisin, 1976; Clark & Midanik, 1982). However, the rate of problems associated with alcohol use among drinkers in southern areas is high. The highest rates of loss of control drinking or alcohol dependence among drinkers occur in the East South Central, West South Central, and Mountain regions (Clark & Midanik, 1982).

Drinking patterns vary with age as well. There is no evidence that teenage alcoholism has risen, but the increased incidence among youth of acute alcohol-related problems (hangovers to fatalities) is cause for concern (O'Gorman & Lacks, 1979). Adolescents are binge drinkers, not social drinkers, and alcohol may affect them differently than older people because of their weight, inexperience, and lack of psychological tolerance (Finn & O'Gorman, 1981; O'Gorman, 1983). Nevertheless, experimentation is common and most youngsters do not experience chronic

alcohol problems. Indeed, most of those who are influenced by their peers to drink heavily, later assume the alcohol use practices of their parents (Finn & O'Gorman, 1981).

Results of the 1979 National Institute on Alcohol Abuse and Alcoholism (NIAAA) national survey of alcohol use and alcohol problems (Clark & Midanik, 1982) indicate that young adults report more heavy drinking, problematic social consequences of alcohol use, and alcohol dependence than older adults. Whereas it is recognized that there are three linked stages in the development of alcoholism (heavy social drinking, alcohol abuse, and chronic alcohol dependence), recovery, episodic, and continuous courses are all common. Approximately one-quarter of alcohol abuse cases lead to chronic alcohol dependence--a stage which is much less pliable and takes 5 to 30 years to develop (Vaillant, 1983). Consequently, many individuals who are treated for alcoholism are middle aged. In general, alcohol use, abuse, and dependence decrease with age, and abstinence increases with advancing years. Among elderly drinkers, however, alcoholism is increasing (Finn & O'Gorman, 1981; Clark & Midanik, 1982).

Males and females differ in their use and abuse of alcohol, although the gap may be narrowing. Given that the proportion of female drinkers has increased during the past 40 years, men still report more alcohol consumption, alcohol-related problems, and alcoholism than women (Gomberg, 1982; Johnson, 1982; Clark & Midanik, 1982; Malin et al., 1982). Alcoholic males may outnumber females 3 or 4 to 1 (Vaillant, 1983), and the proportion among drinkers of men reporting signs of alcohol dependence is 20% versus 10% for women (Califano, 1982). More females than males abstain from alcohol use and are lighter drinkers. Yet among

adult female drinkers, those aged 41 to 50 years have the highest proportion of heavy drinkers, and those 18 to 25 years old report more symptoms of loss-of-control drinking and alcohol dependence (Clark & Midanik, 1982).

Etiology

No one cause or origin has been found to explain the development of alcoholism. This is not surprising given the definition of alcoholism as a multivariate syndrome. It is likely that composite models, which weigh the relative contributions of various etiological risk factors, provide a more accurate account (Cahalan & Cisin, 1976; Nathan, 1980). Vaillant (1983) concluded, for example, that alcoholism can reflect both a conditioned habit and a disease.

The disease model of alcoholism holds wide sway. The prototype is Jellinek's concept of gamma alcoholism which is characterized by loss-of-control drinking due to a postulated addictive biophysiological mechanism (Marlatt, 1983). Alcohol dependence as such is an involuntary and progressive disease for which recovery is possible only through lifelong abstinence (Wanberg & Horn, 1983). Other proponents of the disease model hypothesize that alcoholics differ in the rate or route by which they metabolize alcohol. Research to date has not documented such differences (Nathan, 1980, 1983). Nevertheless, there is strong evidence that genetic factors contribute to the etiology of alcoholism and that transmission is probably polygenic (Schuckit, Goodwin, & Winokur, 1972; Swinson, 1980; Vaillant, 1983).

Sociological models emphasize the role of the environment and non-genetic factors in the development of alcohol-related disorders. Whether

a person drinks alcohol at all is determined primarily by sociological factors (Ablon, 1976; Vaillant, 1983). Cahalan and Cisin (1976) combined the 1967 to 1969 national survey data on alcohol use for men aged 21 to 59 years old. Multiple correlation analysis of all 51 intervening and demographic variables with overall problem-drinking scores was performed. Cahalan and Cisin found that environmental factors such as socioeconomic status, ethnic background, and the permissiveness of one's family were the leading correlates of problem drinking.

It is evident that there is a multiplicity of risk factors involved in alcoholism. Genetic and nongenetic factors contribute to alcohol use, nonuse, and abuse. Etiology may also vary as a function of the population sampled. National surveys generally do not sample clinical populations of alcoholics or others not living in households. Yet genetic effects are primarily demonstrable only in the most severe and chronic cases of alcoholism. These alcoholics may be transients or in hospitals (Cahalan & Cisin, 1976; Clark & Midanik, 1982). Not surprisingly, environmental factors are found to be more etiologically significant in the general population of alcoholics than in the clinical population. Etiology may vary with sex as well. There have been few studies of women alcoholics, however, and evidence of the genetic and social transmission of alcoholism in women is lacking (Swinson, 1980).

Women and Alcohol

Sex Bias

Drinking alcohol is less acceptable behavior for women than for men. Intoxicated women are subjected to social ostracism. Such censorship has been reported by both sexes in all socioeconomic classes as well as

by women alcoholics (Corrigan, 1980; Cotton, 1979; Gomberg, 1976, 1982; Langone & Langone, 1980).

There appears to be a double standard in which men, not women, have positive social norms for drinking or heavy drinking (Estes, Smith-DiJulio, & Heinemann, 1980; Ferrence, 1980; Gomberg, 1976). This standard extends to women heroin addicts as well (Colten, 1982), but not to women who use prescribed and over-the-counter drugs. Gomberg (1979) suggests further that the observed sex differences in drug usage are a function of the legal and social acceptability of the drug. Indeed, men report more alcohol consumption and use of illegal drugs, whereas women make more use of prescription medication and over-the-counter drugs (Gomberg, 1979; Clark & Midanik, 1982).

Researchers link the censure of women drinkers to certain preconceived ideas. Included is the perception that alcohol use and abuse result in impaired effectiveness in the nurturant or mothering role. Due to a lack of research on the marital and familial relationships of women who drink, it is not possible to draw conclusions (Gomberg, 1982). Furthermore, it is widely believed that alcohol use and abuse by women is associated with increased sexual promiscuity. Although one of alcohol's most common effects is a reduction of inhibitions (Finn & O'Gorman, 1981), the claim of increased promiscuity is undocumented (Corrigan, 1980; Gomberg, 1979, 1982).

It is important to consider, nonetheless, the political implications of these ideas. Increased sexual activity and neglect of spouse and children pose a threat to the status quo. Perpetuation of the double standard and social proscription may reduce such a threat by controlling women's alcohol consumption. Indeed, Knupfer and Room (1964)

have noted that those least likely to drink in American society are the most underprivileged and powerless: the old, the poor, and women.

Bias is also reflected in the small number of scholarly publications on the topic of women and alcohol (Burns, 1979). Consequently, most of what is known about alcoholism derives from study of male samples. Sampling bias may be associated with the higher incidence of alcohol use and alcohol-related problems among males, and the assumption that the sexes are more similar than dissimilar in their drinking patterns and sequelae (Burtle, 1979; Swinson, 1980). Evidence is accumulating, however, which documents sex differences (Boothroyd, 1980; Corrigan, 1980; Gomberg, 1979).

Women Drinkers

The stereotypical female drinker has been characterized as lone and secretive, unemployed outside the home, and hidden from public view (Burns, 1979; Corrigan, 1980). Data do support the notion that women tend to drink at home and alone, although younger women are more likely to drink in public places (Corrigan, 1980; Gomberg, 1976). This drinking pattern may be more a reflection of public censure than a preference for isolation (Gomberg, 1979).

Data do not support the notion that the American housewife in significant numbers is misusing alcohol (Ferrence, 1980). Although those classified as keeping house are the most likely to be lighter drinkers, they are also more likely to be abstainers and least likely to be heavier drinkers (Malin et al., 1982). Johnson (1982) confirms, in a secondary analysis of NIAAA survey data, that married women employed outside

the home have higher rates of alcohol problems than married women employed inside the home.

Drinking practices vary according to marital status. Widows are the group least likely to drink or misuse alcohol. Women who have never married, followed by divorced or separated women, have the highest probability of heavy drinking, problem drinking, and alcohol dependence. However, married and divorced or separated women report virtually identical rates of alcoholism (9 vs. 10%) when nondrinkers are excluded from analysis (Clark & Midanik, 1982).

Beverage preference also varies with sex and marital status. Among drinkers the majority of men prefer beer, and the majority of women prefer liquor or distilled spirits (Corrigan, 1980; Malin et al., 1982). Notable exceptions include separated women who prefer beer, and women under age 17 who prefer beer and wine (Malin et al., 1982). In general, women drink beverage alcohol which by volume contains more ethyl alcohol (Finn & O'Gorman, 1981), and men drink beverage alcohol which has less. Yet men drink more alcohol more often with a resultant higher consumption of absolute alcohol (Clark & Midanik, 1982).

Alcohol metabolism is also influenced by sex differences (Vaillant, 1983). When equivalent doses of alcohol per unit of body weight are administered, women show higher blood alcohol levels and become more intoxicated than men (Estes et al., 1980). Alcohol metabolism is affected by sex hormone levels as well (Gomberg, 1979).

Alcohol is oxidized by the liver, and it appears that the female liver is more susceptible to alcoholic cirrhosis than the male liver (Finn & O'Gorman, 1981; Gomberg, 1979). Although the incidence of cirrhosis morbidity and mortality is more than twice as high among men

than women, alcohol affects the female liver in a different manner and more adversely (Malin et al., 1982; Wilkinson, 1980). Additionally, the Wernicke-Korsakoff syndrome and alcoholic dementia are more common in women (Wilkinson, 1980). On the average, women alcoholics die at an earlier age than men alcoholics (Estes et al., 1980). Thus, it could be postulated that proscription of alcohol use for women is related to physiological differences and serves a protective function.

Women Alcoholics

There are similarities and differences between men and women who abuse alcohol or are alcoholic. Male and female members of Alcoholics Anonymous (A.A.), the largest and most effective self-help organization for alcoholics (Vaillant, 1983), report that increased tolerance, rationalization, periods of abstinence, and blackouts appear relatively early. Both sexes also report binges, morning drinking, tremors, and loss of tolerance as late-stage phenomena (James, 1975). As such, early- and late-stage alcoholism corresponds to alcohol abuse and alcohol dependence, respectively (APA, 1980).

Comparisons between hospitalized alcoholics reveal sex differences. Men more often than women show younger age at first drink, earlier onset of alcohol-related problems, more daily and morning drinking, and fewer suicide attempts. Additionally, more history of binge drinking, delirium tremens (DTs), loss of job and friends, school problems, and trouble with the law is noted (Gomberg, 1979; Rimmer, Reich, & Winokur, 1971). Horn and Wanberg (cited in Gomberg, 1970) found that hospitalized alcoholic women, when compared to a male sample, usually drank at

home, alone, or with a spouse; and claimed they used alcohol to improve their job performance.

It has often been noted that the progression of alcoholism is more rapid for women than for men. The intervals between social, problem, and alcoholic drinking appear to be telescoped (Boothroyd, 1980; Gomberg, 1976; 1979). Not only do women begin to drink at a later age (Corrigan, 1980; Johnson, 1982), but the duration between social and problem drinking is shorter (Boothroyd, 1980; Gomberg, 1979), and women appear for treatment after fewer years of problem drinking (Lisansky, 1957).

Corrigan (1980) did not report a rapid progression of alcoholism in her study of over 100 alcoholic women in treatment. By retrospective report, sample women began drinking at an average age of 21 years followed by onset of problem drinking at 33 years, and presentation for treatment at 39 years. Although the interval between recognition of problem drinking and treatment is relatively short, Corrigan concluded that the telescoping hypothesis could not be verified because there was no male control group.

Conjoint alcohol and drug use appears to be more widespread among women alcoholics than men alcoholics (Gomberg, 1979). Half of Corrigan's (1980) sample women used drugs and alcohol together. And among alcoholics, women use more tranquilizers and sedatives (Curlee, 1970). Dual addiction also appears to be more common among female alcoholics. Curlee (1970) found, for example, that among those at an alcoholism treatment center, 10% of the males and 25% of the females were dependent on other drugs. Although it may not be possible to generalize from cases in treatment to alcoholics in the general population (Heller, Sher, &

Benson, 1982), the potential danger to women alcoholics due to synergistic effects of drugs should not be ignored. At least one researcher attributes the higher death rate in accidents for alcoholic women to conjoint abuse of alcohol and barbiturates (Corrigan, 1980).

A further striking sex difference frequently documented in the literature is the higher rate of alcoholism in the family histories of women alcoholics (Boothroyd, 1980; Cotton, 1979; Gomberg, 1979). Alcoholic women are more likely than male alcoholics to have at least one alcoholic parent (Boothroyd, 1980) and to have a higher proportion of alcoholic siblings (Cotton, 1979). This conforms to Vaillant's (1983) finding that more etiological risk factors are usually associated with alcohol abuse in women than in men.

Alcoholic women also tend to marry men who are heavy drinkers, whereas alcoholic men are less likely to marry heavy-drinking women (Boothroyd, 1980; Corrigan, 1980). It has been postulated that a man married to an alcoholic woman, especially if there are young children, will be more likely to end the marriage than if the situation was reversed (Ackerman, 1983; Deutsch, 1982; Fox, 1963). The fact is that a higher proportion of women than men in treatment for alcohol problems are divorced or separated (Gomberg, 1979), but among drinkers in the general population there are just as many married alcoholic women as there are divorced or separated alcoholic women (Clark & Midanik, 1982). It may not necessarily be the case that husbands have less staying power. Rather, divorced or separated women may be more likely to seek treatment for alcoholism than married women.

It is widely believed that the alcoholic woman is less likely to seek treatment, and has a poorer prognosis than her male counterpart.

There is evidence that women are seeking treatment for alcoholism in increasing numbers. Information available from the National Center for Health Statistics Hospital Discharge Summary shows that women are using short-stay non-Federal hospitals for treatment of alcoholism at an increasing rate (Malin et al., 1982). As awareness grows of the unique treatment needs of women alcoholics and treatment programs are designed to meet these needs, women may be more likely to seek treatment.

Once the woman has entered treatment her prognosis is no poorer than that for the alcoholic man (Fox, 1979). Annis and Liban (1980) reviewed 23 studies published since 1950 which report outcome data by sex of alcoholic. The studies encompassed a broad range of outcome criteria and treatment lengths. It was found that two-thirds of the studies reported no significant differences in remission rates or treatment outcome. Twenty-two percent showed more successful outcome for women and 13% more successful outcome for men. In addition, most of the alcoholic women treated through NIAAA-funded programs in a recent year showed greater improvement than men after six months of treatment (Annis & Liban, 1980).

Stable recovery from alcoholism takes years, not months. Vaillant (1983) concludes that hospital treatment does not alter the natural history of alcoholism. Recovery is related to the alcoholic's ability to heal himself or herself over time. Recent studies support this. Treatment outcome is most strongly related to the presenting characteristics of the alcoholic and is independent of treatment variables. Treatment variables such as length of treatment, type of treatment or treatment facility, and number of outpatient visits are unrelated to treatment outcome in alcoholic women. Pretreatment patient characteristics

associated with poor treatment outcome for women include alcoholism or mental illness in one's parents or siblings, abuse of drugs other than alcohol, psychopathy, and unemployment. Membership in a single club or organization, introversion, and underlying neurosis relate positively to treatment outcome. Most studies do not show a relationship between treatment outcome and marital status, alcoholism in one's spouse, marital problems, and number of children (Annis & Liban, 1980).

Children of Alcoholics

At-Risk Status

Whether transmitted genetically or socially, it is well-documented that alcoholism runs in families (Cotton, 1979; Vaillant, 1983). Alcoholics are more likely to be related to other alcoholics than are nonalcoholics, and children of alcoholic parents have a higher probability of developing alcoholism than offspring of nonproblem-drinking parents (Deutsch, 1982; NIAAA, 1974, 1981). Nonetheless, most offspring of alcoholics do not become alcoholic (Heller et al., 1982). Many become lifelong abstainers (Vaillant, 1983).

There are an estimated 15 million school-age children with an alcoholic parent (Deutsch, 1982). Referred to as the "neglected majority" (Sauer, 1976) or the "forgotten children" (Cork, 1969), until recent years their adjustment status has been largely overlooked. Attention was focused mainly on the alcoholic parent (NIAAA, 1974).

Children of alcoholics have now become the focus of primary preventative efforts. Primary prevention aims at reducing the impact of parental alcoholism so as to permanently forestall the development of alcohol problems in offspring (O'Gorman, 1981). NIAAA is implementing this

policy by funding research, disseminating information, and promoting alcohol education which aims at the development of constructive and consistent attitudes toward alcohol use, nonuse, and abuse (Finn & O'Gorman, 1981; NIAAA, 1974, 1981).

It has been assumed that children with alcoholic parents also are more at-risk to develop a variety of other mental health problems. They are often viewed as victims with few resources and little control over their circumstances (Chafetz, 1979; Haberman, 1966; Wegscheider, 1981). Some researchers have even concluded that there is no healthy way to adapt to life with a chemically-dependent parent (Wegscheider, 1981), and there are no well-adjusted offspring of alcoholic parents (NIAAA, 1974). Risk research indicates, however, that most children at-risk due to parental psychopathology do not become clinical cases (Garmezy, 1974; Heller et al., 1982; Morrison, 1983).

Adjustment Status

Parental alcoholism is a psychosocial stressor which can potentially contribute to child disorder (APA, 1980). The severity of stress experienced by the child, and thus the risk, is a function of the parent's specific patterns of alcohol-related problems and consequences (Pattison, 1980; Wilson & Orford, 1978). For example, it is possible for an alcoholic parent to experience impairment in occupational but not social or familial functioning (APA, 1980; Steinhauer, 1983). Stress severity is also a function of the number of stressors or risk factors present. Rutter found that children exposed to more than one risk factor were more likely to develop psychiatric disorders than children exposed to one or no risk factors (cited in El-Guebaly & Offord, 1979).

Children's adjustment status cannot be entirely explained by parental functioning. Children exposed to the same risk factor often turn out differently (Anthony, 1974; Benson, 1980). For example, not all children of alcoholics become alcoholic. Murphy (1970, p. 85) phrased it well when she said development is "a complex outcome of interactions between the balance of vulnerabilities and strengths and their interaction with the sequential patterns of stress and support from the environment."

Children differ in their ability to survive stressful environments. The question of what differentiates the vulnerable from the invulnerable child at-risk is still an open one. One approach emphasizes the ability to ward off stress while defending against excessive exposure. Epstein states that dealing with threat in small doses is actually a strengthening experience and provides innoculation against increasing levels of stress (cited in Meichenbaum, 1979). Additional evidence suggests that healthy adult adjustment is related to a detached and objective attitude toward parental illness and a supportive relationship with someone else (Anthony, 1974).

Results of a 40-year prospective study reported by Vaillant (1983) shed more light on the parameters of adjustment status. This study traced the development of alcoholism and mental health and illness in a large group of subjects from childhood to middle age. Over 450 males, economically underprivileged and selected from Boston inner-city schools, were extensively examined with multiple measures between 1940 and 1980. The criteria used for alcoholism correspond to the DSM-III diagnosis. Mental health was assessed by clinicians' ratings on Luborsky's Health Sickness Rating Scale (HSRS), and interrater reliabilities of .89 were

obtained. The HSRS measures dependence-independence, anxiety, and social and occupational functioning.

The childhood variables that best predicted positive adult mental health were: boyhood competence (part-time jobs, chores, extracurricular activities, grades in school, friendships, and ability to plan for the future); childhood environmental strengths (child's physical health, family cohesiveness, warm and nurturant parent-child relations, positive sibling relations, and school adjustment); and freedom from emotional problems (prosocial behaviors). Interestingly enough, parental alcoholism did not predict eventual mental health. The best predictors of alcoholism were ethnicity, family history of alcoholism, and school behavior problems and truancy. Premorbid family and personality instability did not predict alcoholism when ethnicity and familial alcoholism were controlled (Vaillant, 1983).

These results provide strong support for the hypothesis that children of alcoholics are at increased risk for the development of alcoholism but not for the development of other mental health problems in adulthood. Whether these results hold true for female and male offspring of alcoholic mothers has yet to be determined. In the sample, only 36 out of 185 alcoholic parents were mothers, and alcoholic mothers not married to alcoholic fathers were not analyzed separately (Vaillant, 1983).

Vaillant (1983) also provides significant information about the childhood environments of children of alcoholics. The study showed that parental alcoholism was associated with an increased rate of environmental weaknesses (lack of family cohesiveness, maternal and paternal supervision, and affection), but less so with the absence of childhood

environmental strengths. In other words, both strengths and weaknesses can be present in the environments of children of alcoholics.

Methodological and Conceptual Biases

Much of the children of alcoholic literature is flawed by conceptual and methodological problems. These include pathology, sampling, and sex biases which make it difficult to draw conclusions about the effects of parental alcoholism. Evidence suggests that the mental health of adult children of alcoholics is not related to parental alcoholism (Benson, 1980; Miller & Jang, 1977; Vaillant, 1983), but little is known about intermediate outcome or adjustment in childhood.

Despite the methodological problems in the design of studies of offspring of alcoholics, a pattern of behavior emerges for some children in comparison to normal controls which is suggestive of conduct or attention deficit disorders (APA, 1980). Some of these problematic behaviors cited in the literature include: overt and directed social aggression, temper tantrums, loss of control over anger, difficulty concentrating, truancy, poor school performance, unethical behavior, and hyperactivity (El-Guebaly & Offord, 1977, 1979; Jacob, Favorini, Meisel, & Anderson, 1978; Wilson & Orford, 1978). More research is needed to delineate the processes by which parental alcoholism can contribute to these behaviors. One interesting lead derives from preliminary prospective data which links hyperactivity to the fetal alcohol syndrome (El-Guebaly & Offord, 1979).

Nevertheless, pathology bias is evident throughout the literature. Normal functioning is often ignored (El-Guebaly & Offord, 1977, 1979). This may derive from the unsubstantiated conjecture that parental

alcoholism is inevitably damaging to offspring (NIAAA, 1974; Wegscheider, 1981). The result is a long list of problems which may be experienced by some children with alcoholic parents. These include: low self-esteem, external locus of control, psychophysiological disorders, depression, social isolation, and developmental disorders (Jacob et al., 1978; NIAAA, 1974; Wilson & Orford, 1978).

A study of children of active and recovered alcoholic parents illustrates some of the shortcomings of the literature. Moos and Billings (1982) compared children whose parents had been treated for alcoholism two years previously, with matched controls from the community. No information was reported on sex of alcoholic parent, sex of children, or age of children except that they were adolescent or younger. Child functioning was measured by mother's response to Yes/No questions about her child's physical and emotional problems. Results indicated that children of relapsed alcoholics showed more symptoms of emotional disturbance than controls, and children of recovered alcoholics were functioning as well as control children.

Child adjustment was measured by a problem-checklist which sampled pathology alone and defined adjustment as the absence of problems (Moos & Billings, 1982). The incidence of healthy adjustment or prosocial behavior among the children was not considered. Given that childhood competence and prosocial behaviors are major predictors of adult mental health (Vaillant, 1983), they should not be ignored. In addition, the absence of information about subject characteristics such as sex and age makes it difficult to compare findings. The results of the study are questionable. Parents' global judgments of child behavior have been found to be generally unreliable and invalid (Patterson, Reid, & Maerov,

1978a). Objective, standardized, and multimodal techniques are needed in the assessment of child functioning, yet are rarely used in this literature (Heller et al., 1982).

A recent study is noteworthy because it employed such techniques in an investigation of the strengths of children of alcoholics (Keane, 1983). Forty children aged 14 to 18 years old with alcoholic parents participated in the study. Unfortunately no information was given on the sampling procedures, the diagnostic criteria for alcoholism, or the sex of alcoholic parents and children. Instruments included the California Test of Personality Personal Adjustment Scale, the Family Concept Test, the Nowicki-Strickland Locus of Control Scale, and the FIRO-B. The results indicated a normal distribution of adjustment scores among children of alcoholics.

Alcoholic mothers have been less well-studied than alcoholic fathers, and female offspring of alcoholic mothers or fathers have been largely overlooked (Heller et al., 1982). Frequently, sex of subjects is not reported, and when it is, males are overrepresented. Much remains to be learned about the relationship between sex of alcoholic parent and childhood adjustment of sons and daughters. Alcoholic mothers may be less well-studied in part because there are fewer of them and therefore they are less accessible. Presumably there is an equivalent number of sons and daughters of alcoholics. Yet daughters may have been excluded from analysis because they are less well-represented in the clinical samples of children of alcoholics, and they are less at-risk for the development of alcoholism (Benson, 1980; El-Guebaly & Offord, 1979; Heller et al., 1982).

The diagnosis of parental alcoholism is also problematic. Research which defines child vulnerability on the basis of parental alcoholism is dependent upon the validity and reliability of the parent's diagnosis (Morrison, 1983). In some cases, diagnostic criteria are not reported. Diagnosis is often made by clinical record review, by children, and by others unqualified to make a diagnosis (Benson, 1980; Jacob et al., 1978; Kammeier, 1971). In addition, alcoholism is frequently associated with depressive and antisocial disorders, but few studies acknowledge this (Benson, 1980; Nathan, 1983; Whittiers, Troughton, Cadoret, & Widmer, 1984). Finally, the multiplicity of definitions of alcoholism used makes it difficult to compare research findings and to discriminate between parental alcohol abuse and alcohol dependence (Boyd, Derr, Grossman, Lee, Sturgeon, Lacock, & Bruder, 1982; Jacobson, 1980).

Another methodological problem is sampling bias. There are three ways in which children of alcoholics are sampled: (1) children in treatment are located and parents are identified as alcoholic; (2) parents in treatment for alcoholism are located and children are identified; and (3) children are drawn from the general population and parents are identified (El-Guebaly & Offord, 1977). Parents and children in treatment, in comparison with those not in treatment, may be more pathological and more risk factors may be associated with clinical status (Heller et al., 1982). Sampling from the general population may reduce this bias.

Nevertheless, diagnosis of parental alcoholism in the general population becomes more problematic because clinical status does not provide the necessary diagnosis. Some recent studies, in which children were drawn from public or parochial schools, indicate that children of alcoholics performed normally on indices of school, social, and personality

adjustment (Kammeier, 1971; Pilat & Jones, 1983). Perhaps many children of alcoholic parents are well-adjusted, yet methodological and conceptual biases lead to reporting of greater psychopathology. It has also been noted that any adjustment problems shown by young children may reflect their current family turmoil and not permanent deficits in functioning (Heller et al., 1982; Miller & Jang, 1977).

Parent-Child Relationship

Family Systems

Parental alcoholism is defined by a variety of concomitants and is often associated with other drug abuse, psychiatric problems, and low socioeconomic status. Such individual differences have made it difficult to clarify the processes by which alcoholism in a parent can contribute to child adjustment or maladjustment. Few studies have attempted to do so. Increasingly, however, researchers are applying the findings of family systems theory and the social learning perspective to the study of interactions between alcoholics and family members.

Interactionist approaches focus on the interdependent elements of a social system and the reciprocal relationships between individual members. The family is a social unit comprised of interacting persons each with a particular status, position, or role related to the functioning of the entire system (Ablon, 1976). To the extent that an alcoholic family member is unable to fulfill his or her customary role, there will be an imbalance in the functioning of the total system (Bowen, 1973). Roles may be reversed, with an accompanying shift in the power structure.

Homeostatic mechanisms serve to maintain the equilibrium of the system and thus its functioning (Ablon, 1976; Wegscheider, 1981).

Each family member is also said to contribute to the dysfunction of an impaired member (Bowen, 1973). Hersen, Miller, and Eisler (1973) conducted a study of four alcoholic husbands and their wives in which they videotaped and coded verbal and nonverbal behaviors. Results showed that wives looked at their husbands more when drinking was discussed than when it was not. Hersen et al. (1973) concluded that attention may reinforce the drinking behavior of an alcoholic husband. Correlation does not prove causation or maintenance of a behavior. Nonetheless, the study was among the first to employ videotape in naturalistic observations of the alcoholic. It introduces a valuable methodology which enables in-depth evaluation of family processes (Jacob et al., 1978).

Another group of researchers has hypothesized that alcoholism has adaptive consequences for family functioning. Studies of intoxicated and sober alcoholics indicate that drinking can stabilize the family system by permitting the expression of conflict in a nonthreatening manner. Experimentally-induced intoxication of an alcoholic father has also been found to increase the animation and interaction between family members (Davis, Berenson, Steinglass, & Davis, 1982; Steinglass, 1981).

Many clinicians concur, however, that alcoholism has maladaptive consequences for family functioning and contributes to childhood disorder (Ackerman, 1983; Benson, 1980; Black, 1981). This conclusion may derive from clinicians' experience with more severe and chronic cases. Nevertheless, based upon nearly 10 years of family therapy experience and herself the adult child of an alcoholic, Wegscheider (1981) has conceptualized the alcoholic family as riddled with pathology. The family

is considered to be the social unit which exerts the most powerful--perhaps unparalleled--influence upon its members (Moore & Arthur, 1983; Patterson, 1982). According to Wegscheider, the alcoholic has lost control over his or her own life yet greatly influences the lives of family members. Spouse and children develop symptomatic behaviors in the process of maintaining family functioning. This conceptualization, although not yet tested or verified by prospective study, may overpredict risk to family members due to pathology bias.

Family Management Skills

The socialization and nurturance of children is one of the primary responsibilities of parents in a family unit (Ablon, 1976). Impaired learning of parenting skills, or crises, marital conflict, and parental illnesses including alcoholism may result in disruptions in child-rearing practices. When parents do not perform the caretaker role, parental neglect and/or permissiveness may result (Patterson, 1982).

Child-rearing practices or family management skills are the parents' tools for maintenance of the family system. According to Patterson (1982) and his co-workers at the Oregon Social Learning Center, effective family management includes: (1) clearly-stated house rules; (2) monitoring and supervision; (3) problem-solving skills; and (4) providing consequences contingently. Based upon home and clinic observations of over 500 families with normal, antisocial, and abused children, Patterson hypothesizes that the practice of family management techniques by parents of at-risk children may mediate between child adjustment and maladjustment.

Derived from social learning theory, Patterson's (1982) social-interactional theory of family process postulates that in most social

interactions, events are correlated with one another. The relationship between behaviors is best described by conditional probability. Behavior patterns are reciprocal, and parent and child influence each other.

There is evidence that styles of parenting are associated with child adjustment. Permissive child-rearing is typically inconsistent, and punishment and reinforcement are noncontingent upon the child's behavior (Patterson, 1982). Permissive as well as physically-punitive parenting styles are related to antisocial and delinquent behaviors in childhood and adulthood (Moore & Arthur, 1983; Patterson, 1982; Patterson, Reid, Jones, & Conger, 1975). Furthermore, Sawin and Parke (1979) have demonstrated that inconsistent punishment, as opposed to consistent punishment, results in more aggressive behavior in young boys. On the other hand, prosocial adjustment in childhood is related to parenting style as well. Parental behaviors which are contingent upon child behaviors and accompanied by appropriate affect, are related to children's social competence (Zahn-Waxler, Radke-Yarrow, & King, 1979).

Baumrind (1967) has identified three general styles of child-rearing. These include the permissive, authoritarian, and authoritative styles. The permissive parent exercises the least amount of power or control over the child and has a laissez-faire attitude (Patterson, 1982). The authoritarian parent is overcontrolling and is likely to use coercive techniques and physical punishment. Lastly, the authoritative parent uses consistent and contingent rewards and punishment. Baumrind's research shows that the authoritative style, and not the permissive or authoritarian, is associated with social competence in children.

Alcoholic Parents and Children

It is reasonable to predict, therefore, that the social competence or adjustment status of children of alcoholics is related to the child-rearing practices of their parents. Vaillant's (1983) longitudinal study shows that childhood environmental strengths and weaknesses are major predictors of adult adjustment. Family management techniques may fall under the rubric of environmental strengths. Cross-sectional study of adult males indicates that family permissiveness is one of the leading correlates of problem drinking (Cahalan & Cisin, 1976). Perhaps parenting style differentiates alcoholic parents with and without problem-drinking children. To the extent that an alcoholic parent is able to use effective family management techniques, the impact, risks, and stresses associated with parental alcoholism may be reduced.

As mentioned previously, family management skills include: rule setting, monitoring and supervision, problem solving, and contingent responsiveness (Patterson, 1982). Each of these skill areas will be examined in reference to parent-child relationships in alcoholic homes.

First, although there are little data available about the rule setting or supervision of children in alcoholic homes, much of it suggests that the alcoholic parent is permissive. Parents usually have rules about the scheduling of time, shared activities, and what is or is not acceptable behavior. Furthermore, parental supervision involves attention to or interest in the child's activities and monitoring of child compliance or noncompliance (Moore & Arthur, 1983; Patterson, 1982).

Cork (1969) interviewed 115 children of alcoholics aged 10 to 16 years old. Their 53 alcoholic fathers and 19 alcoholic mothers were selected from patients in two programs. Lacking objective assessment

techniques, Cork nevertheless concluded that there was a considerable amount of rejection and virtual neglect of the children by both parents. The children reported that both parents were inconsistent and unpredictable, and those from homes with a recovered alcoholic parent reported similar circumstances. Cork noted no instances of shared planning for the home or children.

Wilson and Offord (1978) conducted informal and unstructured interviews with 11 families, 5 with an alcoholic mother and 6 with an alcoholic father. Their findings parallel Cork's (1969). Few families reported having an organized routine or frequent activities involving all family members. Many families described changes in the alcoholic's mood and behavior accompanying drinking as inconsistent and unpredictable. Many children felt neglected and resentful. However, drinking was said not to interfere with the alcoholic mothers' ability to care for the children and provide meals.

Both the Cork (1969) and Wilson and Offord (1978) interview studies lacked control groups, an interviewer blind to the children's status as offspring of alcoholics, and valid and reliable assessment procedures. The study of family processes requires precision and objectivity, and cannot be based exclusively upon global ratings and impressions. Although the interview data present a number of testable hypotheses, the results are inconclusive.

Another group of investigators examined the rules and rituals of 25 alcoholic families through unstructured interviews. In this case, blind coders were used to rate transcripts of the interviews and inter-rater reliabilities of 83 to 88% agreement were obtained (Wolin, Bennett, Noonan, & Teitelbaum, 1980). The coders differentiated between

rituals and patterned behavior during periods of light and heavy parental drinking. Scores were given in six areas of family life including dinner, holidays, evenings, weekends, vacations, and visitors in the home. The investigators differentiated transmitter from nontransmitter families. The former are families in which both the parent and offspring generations are alcohol abusers, alcohol dependent, or married to someone with an alcohol problem. Nontransmitter families are those in which only the parental generation shows alcohol abuse or dependence.

Wolin et al.'s (1980) results indicate that family rules or customs related to mealtime, holidays, and shared activities were more likely to be disrupted or omitted altogether due to heavy parental drinking in transmitter families. Transmitter family members typically accepted the alcoholic's intoxicated behavior or did not condemn it. Nontransmitter families were more likely to set limits, monitor, and label intoxicated behavior. The authors concluded that family rituals, such as Christmas dinners, serve to stabilize family life by clarifying roles, rules, and limits. This study provides support for the notion that effective family management is related to adjustment in offspring of alcoholics. However, the study does not provide information on the management techniques of the alcoholic per se.

O'Gorman examined child perceptions of family environment (as cited in Jacob et al., 1978). Adolescent children of active alcoholic fathers, normal controls, and children of recovered alcoholic fathers, whose mean length of sobriety was three years, were compared on standardized measures of parent-child relations, locus of control, and self-concept. The instruments included the Piers-Harris Children's Self-Concept Scale,

the Roe and Siegelman Parent-Child Relations Questionnaire, and the Nowicki and Strickland Personal Reaction Survey for Children.

The children of unrecovered alcoholics had significantly lower self-esteem and perceptions of paternal attention and affection, and more external locus of control than the normal group. The children of recovered alcoholic fathers perceived more paternal affection and had a more internal locus of control than offspring of unrecovered alcoholics. They also perceived more paternal demands than the controls (Jacob et al., 1978).

These results suggest that children from active alcoholic homes experience less parental control and supervision than children from families without an alcoholic father. It also suggests that the recovery of an alcoholic father has beneficial effects for children: more affection, rule setting, and parental monitoring. The perceptions of children of active and recovering alcoholics, however, may not correspond to actual changes in parental family management. An obvious omission in the literature is the analysis of parental attitudes and the interactions between alcoholic mothers and their children.

There is one investigation which examined the alcoholic mother and child relationship, parental attitudes, and mother and child intelligence and personality. Krauthamer (1973) compared 30 chronic inpatient alcoholic mothers of upper-middle socioeconomic status to 30 nonalcoholic mothers of the same status who were private psychotherapy patients. The age range of the children was 8 to 18 years old, and the alcoholic women were more likely to be unemployed and have fewer years of education. All participants were administered the Rorschach and either the Wechsler Intelligence Scale for Children (WISC) or the Wechsler Adult

Intelligence Scale (WAIS). Mothers completed the Minnesota Multiphasic Personality Inventory (MMPI), Roth's Mother-Child Relationship Evaluation, the Maryland Parental Attitude Survey, and a Life History Questionnaire. Children completed the age-appropriate 16-PF Questionnaire.

Results of Krauthamer's study (1973) include the following: the mean IQ of all participants was in the Bright Normal range; the MMPI profiles for alcoholic mothers peaked on the F and Pd scales, and the control mothers had significantly higher ego strength, dominance, and control scores. Children of alcoholic mothers were significantly more submissive, withdrawn, and lower on ego strength. The relationship between alcoholic mother and child was characterized by ambivalence and confusion, whereas the nonalcoholic mother was more dominant in relationship to her children. Also, maternal alcoholism and ambivalence were found to be related to poor adjustment in the youngest children. These results support the premise that alcoholic mothers exercise less power or control over their children and have a laissez-faire attitude. And the younger the child, the more detrimental the consequences, although the effect upon children younger than 8 years is unknown. Krauthamer's study is noteworthy because of its rigorous experimental design.

However, there may be a discrepancy between what mothers report and their actual performance. No studies to date have compared alcoholic mothers' perceptions of child behavior and child-rearing practices with behavioral observations of mother and child in the home or clinic. Such research is needed.

Supplemental data from comparisons of the mothering attitudes and experiences of women in treatment for heroin addiction and matched

controls, indicate that heroin-addicted mothers doubted their ability to control or influence their children (Colten, 1982). They were more likely to report that others have a greater influence. These mothers described themselves as less strict, and reported employing less physical punishment. These results appear to be related to the fact that only 49% of the addicts had all their children living with them. Conversely, 88% of the nonaddicted mothers had all their children. Clearly, others, usually relatives did have control over the children of heroin-addicted mothers.

In addition to lack of skill in rule setting and supervision, Patterson (1982) has hypothesized that distressed families may be less skilled in problem-solving than normal families. Evidence indicates that one reason distressed couples do not resolve their problems is because they engage in a high rate of coercive behavior (Jacob et al., 1978; Patterson, 1982). Gorad, McCourt, and Cobb (1971) examined the problem-solving abilities of 20 alcoholic husbands and their spouses and 20 nonalcoholic couples. The alcoholic couples were less likely to cooperate and more likely to compete with each other. They were described as more rigid in their response patterns with a resultant escalation of aversive behavior.

Jacob, Ritchey, Cvitkovic, and Blane (1981) videotaped interactions of alcoholic families and normal controls and assessed their problem-solving skills in drinking and nondrinking conditions. Eight active alcoholic and eight nonalcoholic fathers, spouses, and their children were recruited through newspaper advertisements. Two natural children from each family aged 10 to 17 years old were eligible to participate. Controls were matched for age, family size, religion, years married,

education, and occupation. Diagnosis of alcoholism was obtained by scores on the Michigan Alcoholism Screening Test, the Quantity-Frequency Index, and the Impairment Index. The Marital Interaction Coding System, developed at the Oregon Social Learning Center, was used to assess agreement and problem-solving or instrumental behavior. Raters blind to the purpose of the study coded the videotapes. An interrater agreement level of 70% was maintained by extensive training.

Participants were asked to reach a consensus on five separate problems derived from the Revealed Differences Questionnaire, and parents were additionally asked to discuss two problems which they wanted to change. Analysis of mother-father sessions indicated that: wives of alcoholics expressed more disagreement than wives of nonalcoholics in the drinking versus the nondrinking conditions; and nonalcoholic husbands engaged in more problem solving than their wives, whereas alcoholics and their wives engaged in equivalent rates of instrumental behavior.

Analysis of mother-children and father-children sessions indicated that: mothers and fathers were more instrumental than their children; mothers married to alcoholic fathers tended to be more instrumental than their children, but alcoholic fathers and their children did not differ in the rates of instrumental acts; there was greater agreement between alcoholic fathers and children in the drinking versus nondrinking condition; and mothers married to nonalcoholic fathers and their children had equivalent rates of problem-solving behavior, whereas nonalcoholic fathers engaged in much more problem-solving than their children.

In summary, the results indicate that alcoholic fathers engaged in less problem-solving and were less instrumental than normal fathers

(Jacob et al., 1981). The relationships between alcoholic father and children, as well as that between alcoholic husband and wife, were characterized by symmetry. In other words, in these alcoholic families there was no clearly defined leader, problem solver, or rule maker, although there was a tendency for the nonalcoholic parent to take charge. A session involving all family members might have clarified this issue further. The study answers some questions while raising others: How do single alcoholic parents or alcoholic mothers manage their families?

Lastly, Patterson (1982) has stressed the importance of providing contingent consequences for behavior as a family management skill. Evidence indicates that parents of antisocial children are more noncontingent in their responses to both prosocial and deviant child behavior than are parents of normal children (Patterson et al., 1975). These parents infrequently reinforce prosocial behaviors and the reinforcers given are unrelated to the child's behavior. They also use punishment and commands more often than parents of nonclinical groups, yet the punishment is noncontingent because they often do not follow through on their threats.

There have been no studies which specifically explore the manner in which alcoholic parents discipline their children or provide rewards and punishments. Bauman and Dougherty (1983) assessed the parenting behavior of 15 mothers on methadone maintenance and 15 non-drug-addicted mothers. The children ranged in age from 2 to 6 years old, and the mothers were matched for race, income, and marital status. Two play sessions per family were videotaped and 30 minutes of data per family were collected. The tapes were coded by blind raters at the Oregon Social Learning Center using the Interactional Coding System (Moore, Forgatch, Mukai, &

Toobert, 1979). Reliability checks were done on 25% of the tapes and the average interrater reliability was 80%. Frequency rates for prosocial, neutral, and aversive behavior categories were obtained. Drug-addicted mothers used a higher frequency of aversive behaviors than non-drug-addicted mothers. Non-drug-addicted mothers used more requests--a prosocial behavior. Children of drug-addicted mothers used more aversives and fewer prosocial behaviors than children of normal controls. These results suggest that the relationship between addicts and their children is characterized by coercion and aggression. There were highly significant correlations between mother and child aversive behaviors, and mother and child prosocial behaviors which indicated reciprocity. Unfortunately, dyadic interchanges were not analyzed and this limited understanding of the use of contingent consequences by parents. Research which examines the sequential behavior patterns of alcoholic parents and their children may provide crucial information concerning the processes which mediate between parental alcoholism and child adjustment or maladjustment.

Purpose of the Study

Review of the literature concerning alcoholic parents and their children reveals multiple shortcomings. The diagnosis of parental alcoholism is problematic. Research which defines child vulnerability on the basis of parental alcoholism is dependent upon the validity and reliability of the parent's diagnosis (Morrison, 1983). In some cases, diagnostic criteria are not reported. Diagnosis is often made by clinical record review, by children, and by others unqualified to make a diagnosis (Benson, 1980; Jacob et al., 1978; Kammeier, 1971).

Most of what is known about alcoholism derives from study of male alcoholics. It is commonly believed that alcoholism results in impaired effectiveness in the parenting role. Nonetheless, the little research that has been done in this area is mainly inconclusive. In two studies, alcoholic mothers as well as alcoholic fathers were found to be neglectful, rejecting, inconsistent, and unpredictable (Cork, 1969; Wilson & Orford, 1978). The results are questionable, however, because the investigators in both studies used informal and unstructured interviews alone to make their determinations. The study of parent-child relationships requires objectivity and standardized procedures and cannot be based exclusively upon global ratings and impressions.

This measurement problem also characterizes investigations of the adjustment status of children of alcoholics. Although objective and standardized measures of child functioning are essential to a comprehensive and unbiased understanding of children of alcoholics, few studies have employed such instrumentation. Additionally, most research on children of alcoholics is focused on negatives and often ignores normal functioning. Moos and Billings (1982), for example, measured the adjustment of children of alcoholic fathers by a problem-checklist which sampled pathology alone and defined adjustment as the absence of problems.

It does appear that some offspring of alcoholic fathers develop a pattern of behavior which is suggestive of conduct or attention deficit disorders (El-Guebaly & Offord, 1977, 1979). However, very little is known of the adjustment status of children of alcoholic mothers. One study of alcoholic mothers and their children is noteworthy because of its rigorous experimental design. Krauthamer (1973) used valid and reliable instruments to evaluate alcoholic mother and child adjustment

and parental attitudes. In comparison with nonalcoholic mothers, alcoholic mothers had more ambivalent and confused attitudes toward their children. The children of alcoholic mothers were significantly more submissive, withdrawn, and lower on ego strength than the control children as measured by the 16-PF Questionnaire. Yet little more than this is known about the relationship between alcoholic mothers and their children or the children's adjustment based upon self-report instruments alone.

Observational studies would provide information about the social interactions and reciprocal behavior patterns of alcoholic mothers and their children. Although behavioral measures have not been obtained for alcoholic mothers and their offspring, observational studies have been done with other substance abusers and their families. Hersen et al. (1973) were among the first to employ videotape in naturalistic observations of alcoholic husbands and their wives. This study introduced a valuable methodology which enables in-depth evaluation of family processes (Jacob et al., 1978). Verbal and nonverbal behaviors were coded for four couples. Results showed that wives looked at their husbands more when drinking was discussed than when it was not. The authors concluded that attention may reinforce the drinking behavior of an alcoholic husband.

More recently, Jacob et al. (1981) videotaped interactions of eight active alcoholic men, their wives and children, and normal controls and assessed problem-solving skills in drinking and nondrinking conditions. Blind raters coded the videotapes using the Marital Interaction Coding System developed at the Oregon Social Learning Center. Interrater

agreement of 70% was obtained. Results indicated that alcoholic fathers engaged in less problem-solving and were less instrumental than normal fathers. The relationships between alcoholic father and children, as well as that between alcoholic husband and wife, were characterized by symmetry. In other words, in these alcoholic families there was no clearly defined leader or problem solver.

Focusing specifically on mother-child interactions, Bauman and Dougherty (1983) assessed the parenting behavior of 15 mothers on methadone maintenance and 15 non-drug-addicted mothers with children ranging in age from 2 to 6 years. Two play sessions per family totaling 30 minutes in duration were videotaped and coded using the Interactional Coding System developed at the Oregon Social Learning Center. Results indicated that drug-addicted mothers used a higher frequency of aversive behaviors than non-drug-addicted mothers and that children of drug-addicted mothers used more aversives and fewer prosocial behaviors than children of normal controls. There were highly significant correlations between mother and child aversive behaviors, and mother and child prosocial behaviors which indicated reciprocity. The relationship of mothers on methadone maintenance and their children was characterized by coercion and aggression. Unfortunately, dyadic interchanges were not analyzed which limited evaluation of the consistency of appropriate consequation for child behaviors by the parents.

It is clear that basic descriptive information about the relationship of alcoholic mothers and their children, their effectiveness as parents, and the adjustment of their children is lacking. The purpose of this study was to provide such information and to address some of the methodological shortcomings in the literature.

In order to achieve these goals, the present research involved multimodal assessment of the alcoholic mother's relationship with her son or daughter and the adjustment of the child. This included: (1) standardized assessment of child adjustment; (2) objective and standardized measurement of parental attitudes; and (3) direct observations of mother-child interaction in the home. In addition, clinical status and scores on a standardized alcohol inventory provided the diagnosis of maternal alcoholism.

A number of hypotheses were formulated based upon the variables of interest. It was predicted that: (1) the adjustment of children of alcoholic mothers would be within the normal range; (2) alcoholic mothers would have confused attitudes toward their children rather than one dominant attitude; (3) alcoholic mothers, as evaluated by naturalistic observations, would use inappropriate rewards and punishment; and (4) alcoholic mothers and their children would not differ significantly in comparison with normal families, but would be more prosocial and less aversive than families with socially aggressive children.

CHAPTER II

METHOD

Subjects

Ten alcoholic mothers and 10 of their children, aged 4 to 10 years old, served as subjects. The subjects were recruited through three alcoholism treatment centers in Oklahoma. The mothers had completed month-long inpatient alcoholism treatment programs witin the past 12 months ($\underline{M}$ = 7 months; range = less than 1 month to 11 months). Participation was voluntary and confidential, and all mothers consented to participate with their children. (Refer to Appendix A for copies of the Introductory Statement and Informed Consent Form.)

All children participating in the study were the biological offspring of, and were living with and reared by their alcoholic mothers. Three of the children had alcoholic biological fathers as well. The mean age of the participating children was 8.4 years, with a range of 4.0 to 10.9 years. Among the children were six boys and four girls. Mothers reported that none of the children had received a diagnosis of Fetal Alcohol Syndrome. Additionally, none of the children themselves were using alcohol or other drugs, although three children had received counseling for situational, emotional, or learning problems.

There were equal numbers of married and single (divorced and never married) mothers. Mothers had an average of at least two children, with a range of one to five children. Nine of the mothers reported having

an alcoholic parent; among these, there were seven alcoholic fathers and two alcoholic mothers. Six had ancestors who originated from England and Ireland. Eight were Caucasian, and two were American Indian. Religious preference varied: three were Episcopalian; three were Methodist; and the rest were either Baptist, Protestant, or had no religious preference.

All of the mothers who participated had at least a high school education; six had attended college, and one had a graduate degree (this participant was also blind). Seven mothers were employed outside the home. The annual income of participants ranged from $5000 or less to over $40,000. Six had incomes below $25,000, and three had incomes of $40,000 or more. Eight families lived in an urban environment and two lived in a rural setting.

The alcoholic mothers studied had a mean age of 36 years with a range of 27 to 41 years. The average ages for initiation of drinking, onset of problem drinking, and presentation for treatment, were 17 years, 27 years, and 36 years, respectively.

Information gathered from the three treatment centers indicated similarities in interventions applied for participants while hospitalized. Seven had detoxification prior to admission to the treatment program. All subjects had participated in group, milieu, and individual therapy as well as A.A. meetings, and nine had received family therapy. At least six had alcohol education classes as well as recreational and occupational therapy. Either relaxation training, religious counseling, hot set experiences, or parent counseling were incorporated in the programs of only two participants.

Treatment center personnel reported that nine of the mothers made at least some progress on goals classified as alcohol-related, emotional, spiritual, or social while hospitalized. Only four mothers were known to be participating in an aftercare program at the time of the study. All of these women had reportedly made some progress by the treatment center personnel.

The 10 participants reported that treatment had been helpful, and of these, 8 said that treatment was very helpful. All of the mothers were members of A.A. after discharge and reported an average attendance of three A.A. meetings per week, with a range of one to eight meetings. The disease concept of alcoholism was endorsed by the 10 participants and all considered themselves alcoholic.

Instruments

Family Questionnaire

The Family Questionnaire, prepared by the researcher, was designed to obtain essential background information about mother and child. The 30 items were derived from Marlatt (1976), Tershak (1982), and Vaillant (1983), and tap areas such as marital status, age and sex of child, income, and ethnicity. (Refer to Appendix B for a copy of the questionnaire.)

The Treatment Center Report (TCR)

The TCR, prepared by the researcher, was designed primarily to verify the mother's diagnosis and treatment for alcoholism. Diagnostic criteria were employed which corresponded to the DSM-III diagnosis of Alcohol Dependence (APA, 1980). The TCR was completed by mental health

professionals at each treatment center with the mother's consent. (Refer to Appendix C for a copy of the TCR.)

The Alcohol Use Inventory (AUI)

The AUI is a self-report inventory designed for the diagnosis of alcohol-use problems. This instrument was developed and standardized by Wanberg and Horn (1983). Studies indicate that the AUI is the diagnostic test of choice for use with females because of separate norms and the identification of sex-related factors in alcoholism (Jacobson, 1980).

The Alcohol Use Deterioration scale (D1) provided a singular score for alcoholism (Wanberg & Horn, 1983; Wanberg, Horn, & Foster, 1977). The raw scale score was converted to a sten score with a range of 1 to 10, a mean of 5.5, and a standard deviation of 2.0. Each sten score also corresponds to a decile score. A high score represents alcohol-related disruption in physical, psychological, and social functioning. However, since all the scale items elicit alcohol-related problems, a moderate sten score of only three indicates a noteworthy alcohol-related condition (Horn, Wanberg, & Foster, 1984; Wanberg et al., 1977).

The AUI has strong face validity (Jacobson, 1980). Additionally, a comparison of scales D1 and D2 (an indirect indicator of alcoholism) provides an internal check for validity of responses. If the scores differ by more than three stens, the protocol is invalid (Wanberg et al., 1977).

The internal consistency reliability of scale D1 is .88, and that of D2 is .75. Thus the scales are internally consistent. Test-retest reliabilities also indicate that the measures are stable across time.

The reliability coefficients are .94 for Scale D1 and .84 for Scale D2 (Wanberg et al., 1977).

The Personality Inventory for Children (PIC)

The PIC is an objective and standardized measure of child personality (Lachar, 1984; Wirt, Lachar, Klinedinst, & Seat, 1979). The most conservative shortened version of the PIC is comprised of 420 items (out of a possible 600 items) which are answered True or False by the mother. This shortened version provides a significant reduction in informant time, with no significant decrease in the range or reliability of obtained information (Lachar, 1984).

A narrow-band adjustment scale, four broad-band factor scales, and three narrow-band validity scales were used. Raw scores were converted to t scores with a mean of 50 and a standard deviation of 10. The Adjustment scale is a narrow-band scale which serves as a screening measure to identify children who are in need of a psychological evaluation, and as a general measure of psychological adjustment (Wirt et al., 1984). The four broad-band factor scales include: Factor I: Undisciplined/Poor Self-Control; Factor II: Social Incompetence; Factor III: Internalization/Somatic Symptoms; and Factor IV: Cognitive Development. The major content dimensions of the factor scales reflect: Factor I: ineffective discipline, impulsivity, and problematic anger; Factor II: social isolation, peer rejection, and sad affect; Factor III: anxiety, poor self-concept, and somatization; and Factor IV: adaptive behavior and academic skills (Lachar, 1984; Lachar, Gdowski, & Snyder, 1984).

The PIC has an internal check for validity of responses. Three narrow-band validity scales measure parental response set and defensive-

ness. The Lie (L), Frequency (F), and Defensiveness (DEF) scale scores determine if the results are interpretable or invalid.

Lachar et al. (1984) provide substantial evidence of external validity for both broad-band factor and narrow-band scales. The authors compared the narrow-band and factor scales of 691 children with extensive behavioral ratings by parents, teachers, and clinicians. All scales, except DEF, were significantly correlated with the problem-behavior dimensions for male and female children. An investigation of the factor scales' discriminant validity showed their ability to separate six homogeneous samples including delinquent, hyperactive, cerebral dysfunctioning, somatizing, retarded, and psychotic children.

The internal consistency reliabilities for both narrow-band and broad-band scales within a clinical sample of 1226 children indicate that the scales are internally consistent. The coefficients of internal consistency ranged from .68 to .92, except for DEF (-.03). Estimates of test-retest reliability for both narrow- and broad-band scales ranged from .82 to .92, except for DEF (.70) (Lachar, 1984; Lachar et al., 1984; Wirt et al., 1984).

The Mother-Child Relationship Evaluation (MCRE)

The MCRE is an objective and standardized evaluation of a mother's attitudes toward her child. It is comprised of 48 items which are scored on a five-point scale from Strongly Agree to Strongly Disagree. The normative data for the MCRE are based on a sample of 80 middle-class mothers aged 25 to 35 years old (Roth, 1980; Straus & Brown, 1978). The MCRE was used by Krauthamer (1973) in her investigation of the alcoholic mother and child relationship.

The four attitude scales are the Acceptance, Overprotection, Overindulgence, and Rejection scales. Definitions of each scale are as follows: Acceptance refers to the mother's interest in her child's activities and development, and perception of her child as a good child; Overprotection refers to the mother's prevention of the development of independent child behavior, and an excess of parental control; Overindulgence refers to a lack of parental control reflected in oversolicitousness, and excessive gratification of the child's needs; and Rejection refers to parental neglect and abuse.

Two dimensions were derived from scale scores: (1) Acceptance-Rejection; and (2) Confusion-Dominance (Straus & Brown, 1978). On the first dimension, Acceptance is derived from the Acceptance scale, and Rejection is derived from the Overprotection, Overindulgence, and Rejection scales. The mother's attitudes can be considered either accepting or rejecting. Scale scores were also measured along a Confusion-Dominance dimension. If three or four scales are elevated above 57t (the 75th percentile), the mother's attitudes toward her child are considered confused or inconsistent. If a single scale is elevated, then the mother-child relationship is characterized by a dominant attitude.

Reliability of the scores was determined by the split-half technique using Pearson product-moment correlations. Reliability coefficients for the sample of 80 mothers were: .57 for Acceptance, .53 for Overprotection, .41 for Overindulgence, and .47 for Rejection. These coefficients may be a lower-bound estimate of reliability because they are based on half-scales of only six items. The validity of profile interpretations was based on the intercorrelations between scales. The mean coefficient of correlation was -.55 (Roth, 1980).

The Family Interaction Coding System (FICS)

The FICS is a comprehensive system for coding family behaviors and interactions in the home setting or clinic. It was developed by Patterson and his co-workers at the Oregon Social Learning Center (Patterson, 1982). (Refer to Appendix D for a copy of the Observation Rules.)

The FICS significantly differentiates families of normal children from families of children identified as antisocial, and reveals significant changes in deviant behavior after socially aggressive boys undergo treatment. The observation scores also correlate significantly with parental reports of child behavior (Ciminero, Calhoun, & Adams, 1977; Patterson, 1982).

The FICS consists of 29 individual code categories, 6 cluster categories, and 14 functional categories. Test-retest reliabilities for approximately two-thirds of the 29 individual code categories have been found to be significant at $p < .05$. The individual code categories are:

1. Approval (AP): Approval is a clear indication of positive interest or involvement. It is more reinforcing then Attend (AT). AT is a neutral or non-directive response whereas AP has reinforcing characteristics. Approval can be gestural or verbal in nature and need not be elaborate or lengthy, but should be used to indicate even the smallest positive gesture. Approval is directed at behavior, appearance, or personal characteristics of an individual. It does not include the granting of permission to carry out an activity. This is coded TA.

2. Attention (AT): This category is used when one person listens to or looks at another person. Attending behavior may either be initiated by a person or may be in response to another person's behavior. Sometimes, when listening is used as a reason for coding AT, it may be

difficult to tell if the person is, in fact, listening. In general, unless eye contact or some form of verbal recognition is offered by persons supposedly listening to another person, the behavior of the respondent would be coded NR. Some form of non-verbal recognition is necessary before a person's behavior would be coded AT. A brief glance should not be coded AT when it is an initiation.

3. Command (CM): This category is used when a direct, reasonable, and clearly stated request or command is made to another person. The verbal statement must clearly specify the behavior which is expected from the person to whom the command is directed. The code system requires that either compliance or non-compliance be coded within 12 seconds. If the command requires compliance in the future, code TA.

4. Command Negative (CN): A negative command differs from the reasonable command in the manner in which it is delivered. This kind of command must be characterized by at least one of the following: (1) immediate compliance is demanded; (2) aversive consequences are implicitly or actually threatened if compliance is not immediate; (3) sarcasm or humiliation is directed toward the receiver. Implicit use of aversive consequences is indicated by the tone of voice as well as the statement.

5. Compliance (CO): This category is used when a person does what is asked or indicates verbally or behaviorally that he will. Compliance need not follow the CM, CN, or DP immediately; other behavioral sequences can intervene. However, the indication of compliance must occur within 12 seconds of a behavior coded as CM or CN. Delay of compliance beyond 12 seconds is NC. Commands which require compliance after a period of 12 seconds would not be coded CM or CN, nor would the agreement

to comply be coded CO. Both the request and response indicating compliance would be coded TA or possibly DI. These are examples of what might be called future commands.

6. Cry (CR): This category is used whenever a person sobs or cries tears. Actual tears do not have to be present.

7. Disapproval (DI): This category is used whenever a person gives a verbal or gestural criticism of another person's behavior or characteristics. In verbal statements, it is essential that the content of the statement explicitly states criticism or disapproval of the subject's behaviors or attributes, looks, clothes, possessions, etc. DI can be coded simultaneously with CM but never with CN, as CN always implies disapproval. Code DI only when verbal disapproval (i.e., "I do not like you doing that") or gestural disapproval is implied by facial expression, vigor of the gesture, or the critical tone of voice. In addition, a DI can only be coded if either the subject or the person interacting with the subject directs the DI at the other member of the dyad. Disapproval of a third person would be coded TA.

8. Dependency (DP): Behavior is coded DP when a person is requesting assistance in doing a task that he is obviously capable of doing himself. Everyday requests should not be coded DP--for example, requests made at dinner would be coded TA unless the statement falls under the rules for coding CM. To code a behavior DP, it must meet two criteria: the person is capable of doing the act himself, and it is an imposition on the other person to fulfill the request.

9. Destructiveness (DS): This category applies to behavior in which a person destroys, damages, or attempts to damage anything other than a person; attacks on persons are coded PN. The damages need not

actually occur, but the potential for damage must exist, e.g., grabbing another's breakable materials. The value of the object is of no consideration, nor is the actual amount of damage done.

10. High Rate (HR): This code is used for any very physically active, repetitive behavior not covered by other categories that, if carried on for a sufficient period of time, would become aversive. If the behavior can be coded by other categories, i.e., YE, PN, DS, then HR is not to be used. HR may be intermittently coded with other specific deviant behaviors. The prime goal in coding HR is to represent symbolically the observed behavior as occurring excessively as measured by its frequency and/or intensity. High rate behavior is the culmination of a series of behaviors which have accelerated until they have reached an intolerable level as judged by the observer.

11. Humiliate (HU): This category is used when a person makes fun of, shames, or embarrasses another person. The tone of voice (in terms of nastiness or derisiveness), as well as the language used, is of prime importance in meeting the criteria for coding HU. Derisive or inappropriate laughter can also be humiliating. Playful verbal statements or nicknames are not humiliations. Some people call each other "stupid" more in terms of endearment than in humiliation.

12. Ignore (IG): Ignore is an intentional and deliberate non-response to an initiated behavior. There is no doubt that the subject has heard but has chosen not to respond.

13. Indulgence (IN): Behavior is coded IN when, without being asked, a person stops what he is doing in order to do some behavior for another person which that person is fully capable of doing for himself. Common kindness, i.e., pouring a cup of coffee for another while also

pouring one's own, handing a nearby dictionary to someone who has asked how to spell a word, are not to be coded IN. The helping person must stop his own ongoing chain of behavior and perform an unnecessary service for a capable person. Generally, the consequence of IN is RC. Care must be taken to distinguish this category from DP and WK.

14. Laugh (LA): Whenever a person laughs aloud pleasantly and in an agreeable manner, code LA. Simultaneous talking and laughing, code only LA.

15. Non-Compliance (NC): This code is used when a person does not do what is requested of him in response to a CM, CN, or DP within 12 seconds of the request being made. Non-compliance can be verbal or non-verbal in nature. Care must be taken to distinguish DI from NC.

16. Negativism (NE): This category is used only when a person makes a statement in which the verbal message is neutral, but which is delivered in a tone of voice that conveys an attitude of "don't bug me," or "don't bother me." Also included are defeatist, "I-give-up" statements. This code is never to be used if the verbal meaning of the statement is interpreted as disapproving (DI) or humiliating (HU).

17. Normative (NO): The normative code is used for routine behavior when no other code is applicable.

18. No Response (NR): This code is used when a behavior does not require a response, or when a behavior is directed at another person but the person to whom the behavior is directed fails to perceive the behavior.

19. Play (PL): This category is used when a person is amusing himself, either alone or with other people. Play need not be restricted to games in which clear rules are defined, i.e., monopoly, scrabble, or

card games, but is applicable to many activities such as amusing oneself alone, with a pet, or playing with toys. Play can be verbal or non-verbal.

20. Physical Negative (PN): This code is used whenever a subject physically attacks or attempts to attack another person. The attack must be of sufficient intensity to potentially inflict pain, i.e., biting, kicking, slapping, hitting, spanking, or taking an object roughly from another person. The circumstances surrounding the act need not concern the observer, only the potential of inflicting pain.

21. Physical Positive (PP): This code is used when a person caresses or communicates with touch to another person in a friendly or affectionate manner.

22. Receive (RC): This category is used when a person receives an object from another person or is touched physically by a person and is passively showing no response to the contact. If the person touched responds in some way, then the specific response should be coded rather than RC.

23. Self-Stimulation (SS): Use of this code is for a narrow class of behaviors which the individual does to or for himself and cannot be coded by any other codes.

24. Talk (TA): This code covers the exchange of conversation between family members. It is used if none of the other verbal codes are applicable. Do not use TA in cases when Talk is part of the ongoing activity required in PL or WK. Thus, in a game where one person says, "It's your turn," that is not coded TA, but simply as PL. Likewise, in a work situation when one member of a dishwashing team says, "Here are some more dishes," the proper code is WK and not TA.

25. Tease (TE): Teasing is defined as the act of annoying, pestering, mocking, or making fun of another person. Teasing behavior is directed in such a manner that the other person is likely to show displeasure and disapproval. This behavior is potentially provocative and disruptive to the other person.

26. Touch (TH): Use of this behavior code indicates non-verbal passing of objects or neutral non-verbal physical contact.

27. Whine (WH): When a person uses a slurring, nasal, or high-pitched voice, this category is used. The content of the statement can be of an approving, disapproving, or neutral quality; the main element is the voice quality.

28. Work (WK): Work is a behavior necessary to maintain the smooth functioning of a household; it is necessary for a child to perform work in order to learn behaviors that will help him to assume an adult role. A definite service performed for another is also coded as WK.

29. Yell (YE): This category is to be used whenever a person shouts, yells, or talks loudly. The sound must be intense enough that it is unpleasant or potentially aversive if carried on for a sufficient length of time (Patterson, 1982).

The individual code categories were combined to produce cluster categories. Both code and cluster categories are expressed in frequencies per minute. Cluster categories include:

1. Total Neutral Behavior for child (NEU) and mother (MNEU) comprised of CM, CR, NR, RC, and SS.

2. Total Positive Behavior for child (POS) and mother (MPOS) comprised of AP, AT, CO, IN, LA, NO, PP, PL, TA, TH, and WK.

3. Total Aversive Behavior for child (TAB) and mother (MTAB) comprised of CN, DI, DP, DS, HR, HU, IG, NE, NC, PN, TE, WH, and YE.

Additionally, 14 functional categories were derived from the cluster categories and based upon functional relationships between mother and child. The functional categories are expressed as conditional probabilities and are as follows:

1. Punishment Effectiveness (PUNEFF): conditional probability of child's negative behavior given mother's negative behavior following child's negative behavior.

2. MNUGCNU: conditional probability of mother's neutral behavior given child's neutral behavior.

3. MPOGCNU: conditional probability of mother's positive behavior given child's neutral behavior.

4. MNEGCNU: conditional probability of mother's negative behavior given child's neutral behavior.

5. MNUGCPO: conditional probability of mother's neutral behavior given child's positive behavior.

6. MPOGCPO: conditional probability of mother's positive behavior given child's positive behavior.

7. MNEGCPO: conditional probability of mother's negative behavior given child's positive behavior.

8. MNUGCNE: conditional probability of mother's neutral behavior given child's negative behavior.

9. MPOGCNE: conditional probability of mother's positive behavior given child's negative behavior.

10. MNEGCNE: conditional probability of mother's negative behavior given child's negative behavior.

11. Child Compliance (CCOMPLY): conditional probability of child's Compliance (CO) given mother's Command (CM).

12. Mother Crossover (MXOVER): conditional probability of mother's negative behavior given child's positive behavior.

13. Mother Negative Reinforcement (MNEGREIN): conditional probability of mother's positive behavior given child's negative behavior following mother's negative behavior.

14. Mother Punishing Child (MPUNISH): conditional probability of mother's negative behavior given child's negative behavior (Patterson, 1982).

For the present study, two hours of videotaped interactions were obtained per family. A professional female photographer videotaped the families. The videotapes were coded by two of the most veteran professional coders at the Oregon Social Learning Center. Training involved: memorization of the code manual; coding of simple and complex behavioral sequences, from videotapes and role play, to near-perfect accuracy; immediate feedback; and quizzes and drills (Reid, 1982). The coders were blind to the purpose of the study, and participants' identities were kept strictly confidential. A contract was agreed upon in which Oregon Social Learning Center personnel retrained coders; coded 20 hours of videotapes; performed interobserver reliabilities; and did the requested computer programming, data entry, and analysis. In exchange, the researcher paid for services rendered.

The coders employed a momentary time-sampling technique in which behaviors were coded at continuous six-second intervals or time frames. Each frame had two components: the targeted subject's antecedent behavior, and the respondent's consequent behavior. The child was targeted

as the subject and the mother was the respondent (Patterson, 1982; Patterson, Reid, & Maerov, 1978b).

There is a large body of normative data available for the FICS since it has been employed in the observation of over 500 families with normal, socially aggressive, and abused children (Patterson, 1982; Patterson et al., 1975). Normative data were used in order to compare alholic mothers and their children with clinical and nonclinical populations. Nine socially aggressive children and their mothers, and nine normal mothers and children were matched to our sample for child's age and sex, and mother's marital status. The normative data consisted of mean scores across six observation sessions. The married clinical and nonclinical mothers from the Oregon Social Learning Center's files had had their husbands present in the observations. An additional sibling was also present in approximately half of the normative sample sessions. However, only mother and targeted child behaviors and interactions were coded.

Interobserver reliability was assessed on 20% of the videotapes. The summary reliability statistic used was an occurrence proportion of agreement scale in which the number of frames of agreement was divided by the sum of the frames of agreement and disagreement (Patterson, 1982; Patterson et al., 1978b; Reid, 1982). The mean percentage of agreement was 91% with a range of 84 to 98% agreement.

The complexity of the interactions was assessed by dividing the number of different entries by the total number of entries in each of the reliability tapes. Reliability is generally lower for more complex protocols. The mean complexity was 17%, with a range of 7 to 31%. The

correlation between percentage of agreement and complexity of the protocols was -.94.

Pearson product-moment correlations were computed to assess the agreement of observers for the cluster and functional categories. The range of the correlations was .01 to 1.00. (Refer to Table E-1 for these correlations.) All correlation coefficients were above a value of .60 with five exceptions. The exceptions were as follows: NEU, r = .15; MPOGCNU, r = .58; MNEGCNE, r = -.16; MNEGREIN, r = .10; and MPUNISH, r = .01.

Procedure

Staff members at participating alcoholism treatment centers contacted prospective participants by telephone. If alcoholic mothers were interested in participating or obtaining more information, and verbal consent was given, the researcher contacted them by telephone. The researcher then read to them the Introductory Statement and Observation Rules and set up an appointment. There was only one refusal. Mental health professionals at the treatment centers completed the TCR on each participating mother.

During the first meeting in the home, mothers signed the Informed Consent Form, filled out the Family Questionnaire, and were given a copy of the Observation Rules to discuss with their children. In the meantime, the photographer set up the video camera, microphones, and equipment in a room of the participants' choice. On the first day, the photographer videotaped one hour of mother-child interaction. The researcher was not present in the house during observations.

The next day, the second hour of videotaped transaction was obtained. After this was completed, the researcher gave the child a small prize for participating. Mothers were given a packet containing the remaining test items and an addressed, stamped envelope in which to return the completed test materials. Mothers were given $50 for their participation at the completion of testing. The appropriate videotapes and final results of the study were sent to the families when they became available.

CHAPTER III

RESULTS

The results of this study will be presented in five sections. The first section addresses the diagnosis of maternal alcoholism. The second reviews the adjustment of children of alcoholic mothers. The third section examines the attitudes of alcoholic mothers toward their children. Behavioral measures of mother-child interaction are explored in the fourth section. And the last section summarizes the results with reference to the hypotheses.

Diagnosis of Alcoholism

The diagnosis of maternal alcoholism was derived from clinical status. Mental health professionals, familiar with the women from treatment, provided DSM-III (APA, 1980) diagnoses and enumerated specific diagnostic criteria from clinical record review, as reported in Treatment Center Reports (TCRs). The respondents included a Ph.D.-level psychologist, a doctoral candidate in psychology, and an A.C.S.W.-level social worker.

All of the mothers had a diagnosis of Alcohol Dependence (APA, 1980). Eight manifested continuous courses and two had episodic courses. Out of a possible six diagnostic criteria, the group averaged 5.3 criteria (SD = .67; range = 4 to 6). All sample mothers evidenced: a pattern of pathological alcohol use; impairment in social or occupational

functioning; and duration of the disorder of at least one month. All mothers exhibited either tolerance or withdrawal or both.

The Alcohol Use Inventory (AUI) was administered to mothers in order to further document alcohol-related problems (Horn et al., 1984). (Refer to Table E-2 for raw data for all major variables.) One AUI profile was found to be invalid because scales D1 and D2 differed by more than three stens. The profile was excluded from analysis. The respondent may have exaggerated her symptoms. The Alcohol Use Deterioration scale (D1) provides a univariate measure of alcoholism. A sten or decile score of three or above indicates a noteworthy alcohol-related condition. The mean score on D1 for sample mothers was 4.1 (SD = 2.14; range = 1 to 7). This confirms that sample women had significant problems associated with the use of alcohol. The average score was, however, below a sten score of seven which is highly indicative of what is clinically judged to be severe alcoholism (Wanberg et al., 1977).

Use of drugs other than alcohol was also gauged. On the AUI, the sample mean sten score on the Non-Alcohol Drug Use scale (Scale 13) was 6.33 (SD = 1.80; range = 5 to 10). In other words, approximately 65% of the respondents in the reference group (which was comprised of over 1200 inpatient alcoholics) had an equivalent score or less. This indicated an occasional use of non-alcohol drugs including marijuana, narcotics, barbiturates, and amphetamines (Horn et al., 1984). Information supplied by mental health professionals on the TCR showed further that two sample women were dually dependent upon amphetamines and alcohol.

Seven of the alcoholic mothers had additional clinical diagnoses. In addition to the two women with Amphetamine Dependence, two had Dysthymic Disorders, and one each had a Dependent Personality Disorder--

Agoraphobia with panic attacks, or Borderline traits (APA, 1980). Two mothers also had physical disorders: one was blind and another had a hearing loss.

Children's Adjustment

The adjustment of children of alcoholic mothers was determined by parental report on the Personality Inventory for Children (PIC) (Lachar, 1984; Wirt et al., 1984). Three validity scales, a narrow-band adjustment scale, and four broad-band factor scales (M = 50t; SD = 10t) were scored. Refer to Table 1 for the descriptive statistics for the PIC scales.

Inspection of Table 1 indicates that 9 out of 10 profiles were valid. One profile was omitted from analysis because of a deviant response set in the form of extreme validity scale scores. This mother may have deliberately or unintentionally exaggerated her child's symptoms. The average Lie (M = 50.80; SD = 17.60), Frequency (M = 46.80; SD = 5.25), and Defensiveness (M = 52.22; SD = 11.41) scale scores fell within the normal range. These mothers neither exaggerated nor were defensive about their children's behavior. Therefore, the results for nine profiles were accurate and interpretable.

A narrow-band general measure (Adjustment scale) as well as four broad-band factor scales (Factors I through IV) were used to measure adjustment status. The Adjustment scale served as a screening measure to identify children in need of psychological evaluation and as a general measure of psychological adjustment (Wirt et al., 1984). Table 1 reveals that the average Adjustment scale score (M = 50.22; SD = 7.60) was within the normal range. The children of alcoholic mothers were

Table 1

Descriptive Statistics for Scales of the Personality Inventory for Children (PIC)

Scale	Descriptive Statistics		
	M	*SD*	Range
Validity Scales			
Lie (L)	50.89	17.60	34-84
Frequency (F)	46.89	5.25	41-57
Defensiveness (DEF)	52.22	11.41	37-74
Adjustment Scale	50.22	7.60	42-63
Factor Scales			
Factor I	55.22	15.16	41-86
Factor II	46.56	9.33	39-63
Factor III	52.44	9.46	42-72
Factor IV	52.11	11.43	39-74

Note. These are ± scores (*M* = 50; *SD* = 10). One profile was omitted because it was invalid, *n* = 9.

not in need of psychological evaluation according to this instrument, and evidenced a normal level of general psychological adjustment.

The factor scales assess, respectively: Factor I: Undisciplined/ Poor Self-Control; Factor II: Social Incompetence; Factor III: Internalization/Somatic Symptoms; and Factor IV: Cognitive Development. Results displayed in Table 1 indicate that the average Factor I ($M = 55.22$; $SD = 15.16$), II ($M = 46.56$; $SD = 9.33$), III ($M = 52.44$; $SD = 9.46$), and IV ($M = 52.11$; $SD = 11.43$) scale scores were all within the nonclinical range. In addition to a normal level of general psychological adjustment, offspring of alcoholic mothers were normal on indices of behavioral, social, emotional, and cognitive functioning. There were no differences between sons and daughters of married or single alcoholic mothers on adjustment status as assessed by t test procedures.

Parental Attitudes

Mothers' attitudes toward their children were measured by the Mother-Child Relationship Evaluation (MCRE) (Roth, 1980). This is a standardized instrument which generates a profile of four attitudes: Acceptance, Overprotection, Overindulgence, and Rejection. Two dimensions were derived from scale scores: (1) Acceptance-Rejection, and (2) Confusion-Dominance.

The Acceptance dimension of the MCRE is derived from the Acceptance scale, and the Rejection dimension is derived from the Overprotection, Overindulgence, and Rejection scales. Results showed that alcoholic mothers were significantly more accepting ($M = 61.10$; $SD = 9.22$) of their children than rejecting ($M = 42.93$; $SD = 7.12$), $t(18) = 4.93$,

$p < .0001$. There were no differences between married and single mothers and no differences attributable to sex of child as assessed by t test procedures.

If three or four scales on the MCRE are elevated above 57t (the 75th percentile), attitudes are considered confused or inconsistent. If a single scale is elevated, then the mother-child relationship is characterized by a dominant attitude. Table 2 presents the descriptive statistics for the MCRE scales and reveals that only the Acceptance scale was elevated. Alcoholic mothers were consistently accepting of their children.

Mother-Child Interaction

Videotapes of home observations of alcoholic mothers and their children were evaluated at the Oregon Social Learning Center by professional coders using the Family Interaction Coding System (FICS). Behavior rates per minute of the 29 individual code categories, cluster categories, and conditional probabilities for 14 functional categories were obtained for both mother and child. Behaviors were assessed for stability across time. Additionally, single and married alcoholic mothers and their children as well as normal families, alcoholic families, and families with socially aggressive children were compared.

Time

Alcoholic mothers and children were videotaped at two separate points in time. Data for the normal and socially aggressive samples were collapsed across six sessions. Therefore, stability across time was assessed only for the alcoholic sample. All cluster and functional

Table 2

Descriptive Statistics for Scales of the Mother-Child Relationship Evaluation (MCRE)

Scale	Descriptive Statistics[a]		
	M	*SD*	Range
Acceptance	61.10	9.22	42-73
Overprotection	42.40	11.66	30-64
Overindulgence	41.50	8.54	30-61
Rejection	44.90	5.47	37-53

Note. These are *t* scores (*M* = 50; *SD* = 7).

[a] *N* = 10.

categories except MPUNISH remained stable across time as assessed by *t* test procedures. The conditional probability of mother's negative behavior given child's negative behavior (MPUNISH) increased from time one (M = .06; SD = .12) to time two (M = .12; SD = .14), $t(9) = -2.85$, $p < .02$. Moreover, MPUNISH for married mothers, but not single mothers, increased significantly from time one (M = .07; SD = .14) to time two (M = .18; SD = .42), $t(4) = -3.56$, $p < .03$. Given low interobserver reliability correlation for MPUNISH (r = .01), however, this category must be interpreted with caution.

Marital Status

To determine the effects of marital status on parent and child behaviors, analyses of variance and *t* test procedures for the individual code, cluster, and functional categories from the FICS were performed. Married and single mothers were not significantly different except for MNEU. (Refer to Table E-3 for the analysis of variance summary for MNEU.) These data indicate that the groups were significantly different, $F(1,8) = 5.67$, $p < .05$. Single mothers' rate per minute of total neutral behavior (M = .85; SD = .41) including Command (CM), Cry (CR), No Response (NR), Receive (RC), and Self-Stimulation (SS), was greater than that of married mothers (M = .39; SD = .14), $t(8) = 2.38$, $p < .05$. Single alcoholic mothers were more neutral than married alcoholic mothers. However, this result may have been attributable to chance. A multivariate analysis of variance was attempted but could not be performed due to too few degrees of freedom in the within cells error term.

Prosocial Behavior

In order to determine whether alcoholic families differed from normal and socially aggressive families in rates of prosical behavior, analyses of variance were performed on Children's Total Positive Behavior (POS), Mothers' Total Positive Behavior (MPOS), and their component individual code categories including: Approval (AP); Attention (AT); Compliance (CO); Indulgence (IN); Laugh (LA); Normative (NO); Physical Positive (PP); Play (PL); Talk (TA); Touch (TH); and Work (WK).

Children. There were significant main effects of group for children on: POS (F (2,26) = 4.13, $p < .05$); AP (F (2,26) = 6.03, $p < .01$); LA (F = (2,26) = 4.75, $p < .05$); and NO (F (2,26) = 9.91, $p < .01$). (Refer to Table E-4 for these analysis of variance summary tables.) There were no significant differences between groups on AT, CO, IN, PP, PL, TA, TH, and WK. (Refer to Tables E-5 and E-6 for the descriptive statistics for FICS cluster categories and individual code categories, respectively, for children by sample.) Scheffé's S tests were used to make multiple comparisons between groups. The results indicated that:

1. Children of alcoholics (M = 10.42; SD = .68) and normal children (M = 15.18; SD = 5.59) did not differ on Total Positive Behavior, but socially aggressive children (M = 16.36; SD = 6.35) had a higher POS rate than children of alcoholics, $p < .05$.

2. Children of alcoholics (M = .05; SD = .03) and normal children (M = .02; SD = .03) did not differ on AP, but children of alcoholics had higher rates of Approval than socially aggressive children (M = .01; SD = .02), $p < .05$.

3. Children of alcoholics ($M = .41$; $SD = .26$) had a higher rate per minute of LA than both normal ($M = .16$; $SD = .17$) and socially aggressive children ($M = .16$; $SD = .18$), $p < .05$.

4. Normal ($M = 2.76$; $SD = 1.06$) and socially aggressive children ($M = 2.25$; $SD = 1.27$) had higher rates of Normative behavior than offspring of alcoholics ($M = .76$; $SD = .63$), $p < .05$.

Children of alcoholic and normal mothers did not differ on most indices of prosocial behavior. However, the former laughed more than the latter and normal children had higher rates of Normative behavior. Although children of alcoholic mothers and socially aggressive children did not differ on most indices of prosocial behavior, socially aggressive children had a higher rate of Total Positive Behavior as well as Normative behavior, and children of alcoholics had higher rates of Approval and Laugh.

Mothers. The analyses of variance of mothers' prosocial behaviors show significant main effects of group for: MPOS (F (2,25) = 5.04, $p < .05$); AT (F (2,25) = 4.67, $p < .05$); NO (F (2,25) = 16.35, $p < .00001$); PL (F (2,25) = 4.10, $p < .05$); and WK (F (2,25) = 5.60, $p < .05$). (Refer to Table E-7 for these analysis of variance summary tables.) There were no significant differences between mothers on AP, CO, IN, LA, PP, TA, and TH. (Refer to Tables E-5 and E-8, respectively, for the descriptive statistics for FICS cluster categories and individual code categories for mothers by sample.)

Scheffé's multiple comparisons were performed and the results indicated that:

1. Normal mothers ($M = 10.63$; $SD = .95$) had a higher rate of Total Positive Behavior than alcoholic mothers ($M = 9.03$; $SD = .38$), $p < .05$,

but alcoholic and socially aggressive mothers (M = 10.47; SD = 1.90) did not differ on MPOS.

2. Alcoholic mothers (M = 1.46; SD = 1.22) had a higher rate of AT than normals (M = .34; SD = .27), $p < .05$, but socially aggressive (M = .69; SD = .59) and alcoholic mothers did not differ on Attention.

3. Alcoholic mothers (M = .01; SD = .02) had lower rates of Normative behavior than both normal (M = 1.80; SD = .94) and socially aggressive mothers (M = 1.99; SD = 1.15), $p < .05$.

4. Alcoholic mothers (M = 3.55; SD = 3.04) had higher rates of Play than normals (M = .78; SD = 1.10), $p < .05$, but socially aggressive (M = 1.65; SD = 1.74) and alcoholic mothers did not differ on PL.

5. Normal mothers (M = 3.58; SD = 1.58) had a higher rate of Work per minute than alcoholics (M = 1.10; SD = 1.71), $p < .05$, but there were no differences between socially aggressive (M = 1.95; SD = 1.59) and alcoholic mothers on WK.

Normal mothers had a higher rate of Total Positive Behavior, Normative, and Work; and alcoholic mothers had a higher rate of Attention and Play. On the other hand, alcoholic and socially aggressive mothers were not significantly different on most measures of prosocial behavior although the latter had a higher rate of Normative.

Children of normal and alcoholic mothers did not differ on the cluster category Total Positive Behavior and most prosocial individual code categories, with the exception of Laugh and Normative. Normal mothers had a higher overall rate of Total Positive Behavior, Work, and Normative behavior than alcoholic mothers, and alcoholic mothers were higher than normals on Attention and Play. In only two cases did alcoholic families have higher rates of prosocial behavior than socially

aggressive families: children of alcoholic mothers had higher rates of Approval and Laugh than socially aggressive children. Moreover, socially aggressive children had a higher rate of the cluster category Total Positive Behavior than children of alcoholics. However, except for Normative, the two groups of children did not differ on prosocial individual code categories. In addition, alcoholic and socially aggressive mothers had equivalent rates of Total Positive Behavior as well as most prosocial individual code categories. Socially aggressive mothers had a higher rate of Normative behavior than alcoholics.

Aversive Behavior

In order to determine whether alcoholic families differed from normal and socially aggressive families in rates of aversive behavior, analyses of variance were performed on Children's Total Aversive Behavior (TAB), Mother's Total Aversive Behavior (MTAB), and their component individual code categories including: Command Negative (CN); Disapproval (DI); Dependency (DP); Destructiveness (DS); High Rate (HR); Humiliate (HU); Ignore (IG); Negativism (NE); Non-Compliance (NC); Physical Negative (PN); Tease (TE); Whine (WH); and Yell (YE). The results indicated that there were no significant between-group effects for any of these variables. Although alcoholic families were not less aversive than socially aggressive ones, perusal of Table E-5 indicates that there were nonsignificant differences in the predicted direction for TAB and MTAB. Socially aggressive children ($\underline{M}$ = .59; $\underline{SD}$ = .58) had a higher frequency of Total Aversive Behavior than children from both normal ($\underline{M}$ = .30; $\underline{SD}$ = .21) and alcoholic groups ($\underline{M}$ = .29; $\underline{SD}$ = .34). Similarly, socially aggressive mothers ($\underline{M}$ = .21; $\underline{SD}$ = .16) had a higher rate

of general aversive behavior than both normal (M = .09; SD = 11) and alcoholic mothers (M = .12; SD = .12).

Socially aggressive families were not more aversive than alcoholic or normal families as measured by mean rates of aversive behavior. Correlational analysis indicated, however, a strong relationship between mother and child aversive behaviors in socially aggressive and normal families. The correlations between TAB and MTAB for the three groups are as follows: socially aggressive, r = .91, p < .0001; normal, r = .72, p < .02; and alcoholic, r = .47, p < .09. Socially aggressive families, and to a lesser extent normal families, had reciprocally aversive patterns of behavior, whereas alcoholic families did not.

Neutral Behavior

Analyses of variance were performed on Children's Total Neutral Behavior (NEU), Mothers' Total Neutral Behavior (MNEU), and their component individual code categories including: Command (CM); Cry (CR); No Response (NR); Receive (RC); and Self-Stimulation (SS). Groups did not differ on mother and child CR, RC, and SS. The analyses of variance for neutral behaviors which reached significance were: NEU (F (2,26) = 5.64, p < .05); Children's NR (F (2,26) = 4.02, p < .05); MNEU (F (2,25) = 9.27, p < .05); Mother's NR (F (2,25) = 18.34, p < .00001); and Mothers' CM (F (2,25) = 5.58, p < .05). (Refer to Tables E-5, E-6, E-8, and E-9 for the descriptive statistics for FICS cluster categories, individual code categories for children and mothers, respectively, by sample, and analysis of variance summary tables.) Multiple comparisons between groups reveal that:

1. Children of normal (M = .13; SD = .09) and alcoholic mothers (M = .06; SD = .08) did not differ on Total Neutral Behavior, but socially aggressive children (M = .40; SD = .39) had a higher rate of NEU than children of alcoholics, $p < .05$.

2. Children of normal (M = .05; SD = .09) and alcoholic mothers (M = .00; SD = .00) did not differ on NR, but socially aggressive children (M = .10; SD = .10) had a higher rate of No Response than children of alcoholics, $p < .05$.

3. Alcoholic mothers (M = .62; SD = .38) had a higher rate of Total Neutral Behavior than normals (M = .12; SD = .09), $p < .05$, but did not differ from socially aggressive mothers (M = .32; SD = .20).

4. Alcoholic mothers (M = .56; SD = .36) had a higher frequency of No Response than both normal (M = .01; SD = .01) and socially aggressive mothers (M = .07; SD = .05), $p < .05$.

5. Socially aggressive mothers (M = .28; SD = .19) had a higher frequency of Command than both normal (M = .12; SD = .09) and alcoholic mothers (M = .09; SD = .10), $p < .05$.

Normal and alcoholic families had equivalent rates of Children's Total Neutral Behavior, No Response, and Mothers' Command. Furthermore, socially aggressive families had the highest rates of Children's Total Neutral Behavior, No Response, and Mothers' Command, whereas alcoholic families had the highest rates of Mothers' Total Neutral Behavior and No Response. It should be noted that the interobserver reliability of NEU was very low (R = .15), indicating caution in making inferences about this category.

Reinforcement and Punishment

In order to determine whether alcoholic families differed from normal and socially aggressive families in the use of appropriate reinforcement and punishment, analyses of variance were performed on PUNEFF, MNUGCNU, MPOGCNU, MNEGCNU, MNUGCPO, MPOGCPO, MNEGCPO, MNUGCNE, MPOGCNE, MNEGCNE, CCOMPLY, MXOVER, MNEGREIN, and MPUNISH.

The analyses of functional relationships which were statistically significant by group were: MPOGCPO (F (2,26) = 49.83, $p < .001$); MNEGCPO (F (2,26) = 3.45, $p < .05$); and MPOGCNE (F (2,26) = 9.98, $p < .001$). (Refer to Table E-10 for the analysis of variance summary tables for functional relationships.) All other between-group effects were nonsignificant. (Refer to Table E-11 for the descriptive statistics for FICS functional categories by sample.) Multiple comparisons of group means indicate that:

1. Alcoholic families (M = .93; SD = .04) had a higher probability of MPOGCPO than both normal (M = .28; SD = .13) and socially aggressive families (M = .23; SD = .26), $p < .05$.

2. Normal (M = .05; SD = .06) and alcoholic families (M = .01; SD = .01) had equivalent scores on MNEGCPO, but socially aggressive families (M = .08; SD = .08) had a higher probability of MNEGCPO than alcoholic families, $p < .05$.

3. Alcoholic families (M = .71; SD = .30) had a higher probability of MPOGCNE than both normal (M = .30; SD = .36) and socially aggressive families (M = .16; SD = .18), $p < .05$.

Alcoholic mothers were most likely to inappropriately reward their children's aversive behavior (MPOGCNE), yet alcoholic mothers were also

most likely to appropriately reward their children's prosocial behavior (MPOGCPO). There were no differences between groups on the inappropriate use of rewards to strengthen mother-child aversive interactions (MNEGREIN, a category which had a low interrater reliability correlation, $\underline{r}$ = .10).

Alcoholic mothers were the least likely to inappropriately punish children's prosocial behaviors (MNEGCPO). There were no differences between groups on: the use of punishment (MNEGCNE and MPUNISH, both categories with low interrater reliability coefficients, $\underline{r}$ = -.16 and .01, respectively); the effectiveness of punishment (PUNEFF); or the appropriate nonreinforcement of aversive child behavior (MNUGCNE).

Results also reveal that mothers of normal and socially aggressive children were similar in their use of reinforcement and punishment with one exception. Both groups were less likely than alcoholic mothers to appropriately reward children's prosocial behaviors (MPOGCPO), but they were also more likely not to inappropriately reward children's aversive behaviors (MPOGCNE). All groups had equivalent probabilities of MNEGCNE, MPUNISH, PUNEFF, and MNUGCNE. In terms of MNEGCPO, however, normal mothers did not differ from others, but mothers of socially aggressive children were more likely than alcoholic mothers to inappropriately punish children's prosocial behavior.

Summary

The hypothesis that the adjustment of sons and daughters of alcoholic mothers would be within the normal range was supported. The hypothesis that alcoholic mothers would have ambivalent attitudes toward their children was not supported. Rather, alcoholic mothers had one dominant

attitude toward their children and that was acceptance. It was predicted that alcoholic and normal families would not differ in rates of prosocial behavior. This was found to be true of the offspring but not of the mothers. In addition, it was expected that alcoholic families would have higher rates of prosocial behavior than socially aggressive families but this was only partially supported. As expected, alcoholic and normal families did not differ in rates of aversive behavior. Contrary to expectations, socially aggressive families were not more aversive than normal and alcoholic families as measured by mean rates of aversive behavior. Correlational analysis indicated that socially aggressive families, and to a lesser extent normal families, had reciprocally aversive patterns of behavior whereas alcoholic families did not.

Limited support was found for the hypothesis that alcoholic mothers would inappropriately reinforce their children's behavior: alcoholic mothers were, in comparison with normal and socially aggressive mothers, most likely to inappropriately reward their children's aversive behavior, yet were also most likely to appropriately reward prosocial behavior. There was no support for the hypothesis that alcoholic mothers would use punishment inappropriately. In fact, alcoholic mothers were the least likely to punish their children's prosocial behavior.

CHAPTER IV

DISCUSSION

The purpose of this study was to provide basic descriptive information about the relationship of recovering alcoholic mothers and their children, their effectiveness as parents, the adjustment of their children, and to address some of the methodological shortcomings in the literature. This was accomplished by means of multimodal assessment including: behavioral observation and evaluation of alcoholic mothers and their children by professional coders blind to the purpose of the study; objective and standardized measurement of parental attitudes; standardized assessment of children's adjustment; and valid and reliable diagnosis of parental alcoholism.

Alcoholic mothers had consistently favorable attitudes toward their children, perceived their children as good, and were interested in their activities and development. In addition, alcoholic mothers were more likely than normal or socially aggressive mothers to use positive, and not negative, consequences for their children's behavior. Alcoholic families were less coercive than other groups. Furthermore, the average adjustment of children of alcoholic mothers was within the normal range, although there were instances of behavioral problems among offspring.

The findings of the present study suggest that recovering alcoholic mothers may be noncontingently positive or permissive as parents. Alcoholic mothers were most likely to appropriately reward and least likely

to punish their children's prosocial behavior in comparison with mothers of normal and socially aggressive children. Alcoholic mothers' skill in this area may be associated with the development of social competence in their children (Patterson, 1982). However, alcoholic mothers also used inappropriate positive consequences for their children's aversive behavior. Recovering alcoholic mothers' inept or noncontingent use of positive reinforcement coupled with positive regard for their children is indicative of a permissive parenting style. According to Baumrind (1967), the permissive parent exercises the least amount of power or control over the child and has a laissez-faire attitude. This parenting style is associated with the development of antisocial behavior in childhood and adulthood (Moore & Arthur, 1983; Patterson et al., 1975). There is the possibility that this general permissive approach was an artifact of the procedures. Mothers' reactivity to direct observation and assessment procedures may have influenced their performance. So aware of public censure, alcoholic mothers may have tried to "put their best foot forward" more so than the other observed groups. Indeed, previous research has demonstrated that positively valenced behaviors are more readily altered by reactive assessment than negatively valenced behaviors (Harris & Lahey, 1982; Kazdin, 1982).

Generalizations from this study to populations of alcoholic mothers and their children are severely limited by a number of factors. These include: the small sample size employed in the present study; the confounding of maternal alcoholism and other risk factors associated with clinical status including the association of alcoholism with other psychiatric problems--although it is also possible that sampling bias resulted in the selection of a relatively well-motivated and well-adjusted

sample (Heller et al., 1982); and the confounding of treatment effects with clinical status. Concerning the last factor, treatment outcome in alcoholic women is generally unrelated to treatment variables (Annis & Liban, 1980). Yet treatment may have had specific or nonspecific effects upon the relationship of alcoholic mothers and their children. Mental health professionals reported similarities in interventions applied for participants while hospitalized. For example, membership in A.A. may have influenced mothers' child-rearing practices; one mother remarked that the only "program" she could work was her own and not her child's; another said she had to "let go and let God" take responsibility for her children.

It is also important to consider the moment in time at which alcoholic families are assessed. More specifically, it is believed that there may be significant differences between families of actively drinking versus sober alcoholic parents in the use of appropriate consequation for children's behavior and other family management skills. The literature suggests that actively drinking alcoholic parents may be coercive, rejecting, neglectful, and inconsistent (Bauman & Dougherty, 1983; Cork, 1969; Wilson & Orford, 1978). The results of the present study, based upon a sample of mothers who were sober and in a phase of early recovery, may not necessarily be inconsistent with previous findings when drinking and/or treatment status of the parent is considered.

Only five studies sampled subjects in a manner that could shed some light on this issue. Cork (1969) used unstructured and informal interviews to assess the impact of parental alcoholism upon 115 children aged 10 to 16 years old. Most had parents who were active alcoholics and had been or were currently in treatment for alcohol-related disorders. Cork

reported a considerable amount of rejection and virtual neglect of the children by both alcoholic and nonalcoholic parents, and no improvement in parent-child relationships after alcoholics achieved sobriety. In fact, Cork perceived the 15 children with abstinent parents to be more seriously affected and the relationship with parents to be far from positive. This finding is inconsistent with the present study which found that the relationship between abstinent alcoholic mothers and their children was a positive if not permissive one. This discrepancy may be due to several factors including: methodological improvements in the present study, sex of alcoholic parent (Cork did not report sex of recovering alcoholic), phase of recovery, relationship with the nonalcoholic parent, or children's ages. Both Cork and Krauthamer (1973), for example, employed pre- and adolescent samples and found them to be poorly adjusted. This suggests that adjustment status may vary as a function of children's stage of development. It might also be noted that the parent-child relationship is but one correlate of children's adjustment (Murphy, 1970); other factors may contribute to whatever adjustment status is found (Benson, 1980).

Other studies of alcoholic mothers in treatment have also found parent-child relationships and children's adjustment to be problematic. Both the Wilson and Orford (1978) and Krauthamer (1973) studies sampled families of alcoholic parents who were then out- or inpatients and newly sober. Using unstructured interviews, Wilson and Orford found that children felt neglected and resentful, and described their parents' behavior accompanying drinking as inconsistent and unpredictable. Using standardized and objective assessment procedures, Krauthamer found inpatient alcoholic mothers to have confused attitudes toward their children; and

children to be more submissive, withdrawn, and lower on ego strength than a comparison group of families of mothers in private psychotherapy.

Few studies have examined alcoholic families in the recovery process; but with the exception of Cork's (1969) study, most indicate that recovery of a parent is accompanied by benefits for children. Moos and Billings (1982), for example, found that children of active alcoholic parents had more symptoms of emotional disturbance as measured by a problem checklist than children of recovered alcoholics who were functioning as well as normal controls. In another study, O'Gorman (as cited in Jacob et al., 1978) found that adolescent children of recovered alcoholic fathers (whose mean length of sobriety was three years) perceived more paternal affection and demands than offspring of active alcoholic fathers as measured by objective and standardized instruments. In addition, the children of unrecovered alcoholics had significantly lower self-esteem and more external locus of control than a normal comparison group.

Based on the results of this study, several aspects of the alcoholic parent and child relationship warrant further investigation. Future research might focus on the recovery process and changes over time in the relationship between members of alcoholic families; however, it is anticipated that recruitment of active alcoholic parents may pose serious logistical problems. Future studies might also employ: larger samples, control groups including parents in treatment for other psychiatric problems, and alcoholic fathers and their children.

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APPENDIX A

CONSENT FORMS

Introductory Statement

The purpose of this letter is to ask for your help in a study being conducted through Oklahoma State University. This project has been discussed with and approved by (Coordinator, Alcoholism Treatment Center).

Most of what is known about alcoholism comes from study of male alcoholics. Women alcoholics are less well-studied, and there have been few investigations of the relationship between the alcoholic mother and her child. Your participation in this study will help us to better understand parent and child relationships.

If you agree to take part in the study, you will be asked to fill out four questionnaires, and to be videotaped at home with your child. We will also need to obtain information from your treatment center concerning your diagnosis of alcoholism, treatment goals, and progress. We will not release any information to them about your participation in this project.

The questionnaires will cover areas such as: general background and family life; drinking practices; relationship between you and your child; and perceptions of your child's behavior. In addition, we will videotape you and your child together at home on two different days. We will need two hours of videotape in all. You will be asked to be with your child alone in one room, and not to watch television or make telephone calls during this taping.

This process is not stressful and children typically enjoy participating in a "special project." All together, this project will take about five hours of your time. In exchange, you will be given $50.00, and your child will be given a small prize.

The information we obtain will be kept in strict confidence. At no time will any participant's--mother's or child's--identity be revealed. Questionnaires will be identified by number only and videotapes will be erased or given to you after the study ends. Since this study is looking at alcoholic mothers and children in general and the results will be anonymous, we will not have information specifically about you and your child.

Informed Consent Form

I have read the Introductory Statement for the study of alcoholic mothers and their children. I voluntarily consent to participate with my child in this research project. I know that we may withdraw from the study at any time.

I understand that I will be asked to fill out some questionnaires about my general background, family life, drinking practices, child's behavior, and relationship with my child. I understand that we will be videotaped at home on two separate occasions. Additionally, I give permission for the researchers to obtain information about my hospitalization from the alcoholism treatment center. In exchange for my full participation, I will be given $50.00 and my child will receive a small prize.

Witness: _____

Mother's Signature: _____

Date: _____

If you would like a copy of the final results of this study, please indicate this so that this information can be sent to you after completion of the study.

__ Yes, please send me results. My address is:

_____

_____

__ No, I do not want to know the results.

APPENDIX B

FAMILY QUESTIONNAIRE

Parent No. ____

Family Questionnaire

Directions: This questionnaire is designed to gather background information about you and your child. Fill in all the answers below or check the appropriate responses. Please try to answer each question as accurately as possible. All of your answers will be privileged and confidential.

1. What is your present age? _____ years

   What is your date of birth? ___/___/___

2. Your current marital status:

   __ single
   __ married
   __ living together
   __ separated
   __ divorced
   __ widowed
   __ never married

3. What is the age and sex of the child participating in this study with you?

   Age: ___ years Date of Birth: ___/___/___

   Sex: ___ male ___ female

4. Are you the biological mother of this child?

   ___ Yes ___ No

   If No, explain: _____

5. Are you currently raising this child?

   ___ Yes ___ No

   If No, explain: _____

   If Yes, for how long have you raised this child? _____

6. What is the marital status of you and the biological father of this child? Check all that apply.

   ___ married
   ___ living together
   ___ separated
   ___ divorced
   ___ never married
   ___ you are remarried
   ___ father remarried
   ___ father deceased

7. Is/was the biological father alcoholic? ___ Yes ___ No

8. Are/were either or both of your parents alcoholic?

   ___ Yes ___ No Specify which: _____

9. How long has it been since you were discharged from inpatient alcoholism treatment?

___ months _____ Date of Discharge

10. Have you totally abstained from alcohol use since then?

___ Yes ___ No

If No, ___ light drinker
___ average drinker
___ heavy drinker

11. Ethnic background:

___ White
___ Black
___ Hispanic
___ Asian
___ American Indian
___ Other (Specify: _____)

12. What is your religion? _____

13. What country did most of your ancestors come from?

_____

14. Current employment status (check all which apply):

Are you currently:	employed full time	___ Yes	___ No
	employed part time	___ Yes	___ No
	a homemaker	___ Yes	___ No
	a student	___ Yes	___ No
	disabled	___ Yes	___ No
	unemployed	___ Yes	___ No

Major occupation or skill--whether or not you are presently employed: _____

15. Education (circle the last grade attended):

1 2 3 4 5 6 7 8 9 10 11 12

Years of college ___

16. Have you ever been addicted to drug(s) other than alcohol?

___ Yes ___ No

If Yes, what drug(s)? _____

Have you received treatment for this? ___ Yes ___ No

Are you currently addicted to other drug(s)? ___ Yes ___ No

17. Type of home is from:

___ Rural (living in a town under 15,000)
___ Urban (between 15,000 and 100,000)
___ Metropolitan (over 100,000)

18. Which of these ranges represent your total family income before taxes for 1983? (Please include your own income and that of all members of your immediate family who are living with you, and any other sources of income you may have. Include welfare payments, child support, alimony, social security, income from stocks, etc.)

___ None
___ Less than $5,000
___ $5,000-$9,999
___ $10,000-$14,000
___ $15,000-$19,000
___ $20,000-$24,999
___ $25,000-$29,999
___ $30,000-$34,999
___ $35,000-$39,999
___ $40,000 and over

19. Family situation:

How many children do you have? ____
How many adults are there in your household? ____
How many children are there in your household? ____

20. Have you ever been hospitalized because of an emotional or psychiatric problem (other than alcohol)?

___ Yes ___ No

If Yes, please specify problem: _____

21. Has the child participating in this study been diagnosed as having Fetal Alcohol Syndrome?

___ Yes ___ No

22. Has the child participating in this study ever been in counseling or therapy?

___ Yes ___ No

If Yes, please specify problem: _____

_____

23. Has this child ever abused alcohol or drugs?

___ Yes ___ No

24. Does this child attend:

___ Day Care
___ Preschool
___ Kindergarten
___ Grade School
___ Other (please specify): _____

25. Approximately how old were you when you took your first drink?

___ years old

Approximately how old were you when you first became intoxicated?

___ years old

Approximately how old were you when drinking became a problem?

___ years old

Approximately how old were you when your first sought treatment for alcohol problems?

___ years old

26. Are you an active member of A.A.?

___ Yes ___ No

If Yes, how many meetings per week do you attend? ____

27. How helpful was your inpatient treatment for alcohol problems?

___ Not all helpful ___ Helpful ___ Very helpful

28. Please number the items below in the order of your preference for eventual outcome of treatment.

1 = most preferred outcome
2 = preferred outcome
3 = non-preferred outcome
4 = least preferred outcome

___ I would like to stop drinking completely.
___ I would like to become an occasional (light) social drinker.
___ I would like to become a moderate (average) social drinker.
___ I would like to become a heavy (frequent) social drinker.

29. Some people have said that alcoholism is a disease or sickness. Others have said it is not a disease, but rather it is more like a bad habit a person has learned. Still others have said it is a learned solution to life's problems.

Do you see it more as a disease, bad habit, or solution?

___ disease ___ bad habit ___ solution to problems

30. Would you say that you are an alcoholic?

___ Yes ___ No

APPENDIX C

TREATMENT CENTER REPORT (TCR)

Treatment Center Report

Client's Name: _____

1. Did the above-named person attend and complete your inpatient program for the treatment of alcoholism?

   ___ Yes ___ No

2. What was her discharge date? _____

3. Which of the following DSM-III criteria for alcohol abuse and alcohol dependence did she meet? (Check all which apply.)

   ___ Pattern of pathological alcohol use
   ___ Impairment in social or occupational functioning due to alcohol use
   ___ Tolerance
   ___ Withdrawal
   ___ Duration of disturbance of at least one month
   ___ Episodic course
   ___ Continuous course

4. Other diagnoses? (Please list.)

   _____

   _____

   _____

5. Treatment modalities? (Check all which apply.)

   ___ group therapy
   ___ milieu therapy
   ___ family therapy
   ___ individual therapy
   ___ A.A.
   ___ recreational therapy
   ___ occupational therapy
   ___ antabuse
   ___ didactic instruction
   ___ relaxation training
   ___ aversion therapy
   ___ parent training
   ___ religious counseling
   ___ detoxification

6. What were her treatment goals? (Please specify.)

   (1) _____

   (2) _____

   (3) _____

7. How would you evaluate her progress toward these goals? (Check the ones which apply.)

   (1) ___ No progress ___ Some progress ___ Goal attained
   (2) ___ No progress ___ Some progress ___ Goal attained
   (3) ___ No progress ___ Some progress ___ Goal attained

8. Is this person participating in aftercare?

___ Yes ___ No

9. If Yes, does she have aftercare goals? (Please specify.)

(1) _____

(2) _____

(3) _____

10. How would you evaluate her progress toward these goals? (Check the ones which apply.)

(1)	___ No progress	___ Some progress	___ Goal attained
(2)	___ No progress	___ Some progress	___ Goal attained
(3)	___ No progress	___ Some progress	___ Goal attained

APPENDIX D

THE FAMILY INTERACTION CODING SYSTEM

(FICS) OBSERVATION RULES

Observation Rules for Families

1. Both mother and child must be present.
2. No other persons allowed.
3. Mother and child are limited to one room.
4. The researcher will wait only 10 minutes for mother and child to get ready.
5. Telephone: No calls out; briefly answer incoming calls.
6. No television or radio.
7. No talking to the researcher during videotaping.
8. No drinking of alcohol prior to or during observations.

APPENDIX E

TABLES

Table E-1

Interobserver Reliability Correlations for the Cluster and Functional Categories from the Family Interaction Coding System (FICS)

Categories	Correlation Coefficients[a]
1. TAB	0.99**
2. POS	0.89*
3. NEU	0.15
4. MTAB	0.99**
5. MPOS	0.99**
6. MNEU	0.99**
7. PUNEFF	1.00*
8. MNUGCNU	
9. MPOGCNU	0.58
10. MNEGCNU	1.00**
11. MNUGCPO	0.99**
12. MPOGCPO	0.99**
13. MNEGCPO	0.98**
14. MNUGCNE	
15. MPOGCNE	0.60
16. MNEGCNE	-0.16
17. CCOMPLY	0.99**
18. MXOVER	0.99**
19. MNEGREIN	0.10
20. MPUNISH	0.01

Note. Explanations of abbreviations are given in Chapter II.

[a]Data for two categories were not computed.

*$p < .05$.

**$p < .01$.

Table E-2

Raw Data by Mother-Child Dyad for Major Variables

Dyad	Mother's Age	Marital Status	Child's Age	Child's Sex	AUI			PIC								MCRE			
					D1	D2	#13	L	F	DEF	ADJ	I	II	III	IV	A	OP	OI	R
1	35	S	9	F	1	1	5	89	42	49	43	41	40	42	43	42	64	61	53
2	38	S	10	F	4	5	7	53	50	56	61	46	63	57	74	50	37	37	47
3	40	S	6	F	4	2	5	68	42	49	49	43	40	42	40	63	53	37	40
4	41	M	9	M	7	6	5	41	45	43	42	55	39	54	39	70	35	30	43
5	27	S	4	M	7	9	10	38	57	44	63	86	56	48	55	58	58	47	40
6	36	M	4	F	6	3	8	34	45	75	49	69	40	57	65	61	42	47	52
7	36	S	7	M	2	5	5	34	50	56	54	46	56	46	49	66	34	37	45
8	41	M	10	M	3	4	5	30	114	31	98	96	95	108	92[b]	65	32	37	37
9	34	M	9	M	4	6	7	42	50	37	45	65	42	72	54	73	30	40	50
10	39	M	10	M	5	9	7[a]	64	40	63	46	46	42	53	51	63	40	42	42

Table E-2 (Continued)

Dyad	TAB	POS	NEU	MTAB	MPOS	MNEU	PUNEFF	MNUGCNU	MPOGCNU	MNEGCNU
1	0.13	10.18	0.00	0.02	8.36	1.37	0.00	0.00	0.00	0.00
2	0.08	10.39	0.07	0.04	9.41	0.32	0.00	0.00	1.00	0.00
3	0.37	10.44	0.09	0.07	8.59	1.12	0.00	0.00	0.90	0.10
4	0.28	10.60	0.02	0.33	9.09	0.31	0.20	0.00	1.00	0.00
5	0.45	11.36	0.19	0.33	8.68	0.76	0.13	0.05	0.69	0.27
6	0.17	10.71	0.21	0.11	9.10	0.59	0.00	0.50	0.44	0.06
7	0.07	10.01	0.04	0.06	9.06	0.67	0.00	0.50	0.00	0.00
8	1.18	8.95	0.02	0.19	9.11	0.49	0.25	0.00	0.00	0.50
9	0.13	11.29	0.01	0.08	9.40	0.28	0.00	0.00	0.00	0.00
10	0.00	10.31	0.00	0.00	9.50	0.36	0.00	0.00	0.00	0.00

Table E-2 (Continued)

Dyad	MNUGCPO	MPOGCPO	MNEGPO	MNUGCNE	MPOGCNE	MNEGCNE	CCOMPLY	MXOVER	MNEGREIN	MPUNISH
1	0.14	0.86	0.00	0.27	0.48	0.00	0.10	0.00	0.00	0.00
2	0.03	0.96	0.00	0.07	0.94	0.00	0.33	0.00	0.00	0.00
3	0.12	0.87	0.00	0.09	0.90	0.00	0.87	0.00	0.50	0.02
4	0.03	0.94	0.03	0.04	0.59	0.35	0.75	0.03	0.74	0.36
5	0.08	0.90	0.02	0.06	0.80	0.14	0.70	0.03	0.88	0.27
6	0.06	0.93	0.01	0.00	0.96	0.01	0.97	0.01	0.50	0.09
7	0.07	0.93	0.01	0.00	0.67	0.00	0.75	0.01	0.00	0.00
8	0.05	0.94	0.01	0.01	0.95	0.05	0.25	0.01	0.75	0.19
9	0.03	0.96	0.01	0.00	0.84	0.00	0.33	0.01	0.50	0.10
10	0.03	0.97	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Note. Explanations of abbreviations are given in Chapter II. Variables TAB to MNEU are expressed in frequencies per minute and variables PUNEFF to MPUNISH are expressed as conditional probabilities. Scores are collapsed across time.

[a]AUI scores for this subject were invalid.

[b]PIC scores for this subject were invalid.

TABLE E-3

Analysis of Variance Summary Table of the Effects of Marital Status on Mothers' Neutral Behavior (MNEU) from the Family Interaction Coding System (FICS)

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio
Between Groups	0.525	1	0.525	5.67*
Within Groups	0.741	8	0.093	
Total	1.266	9		

*$p < .05$.

Table E-4

Analysis of Variance Summary Table of the Effects of Group Membership on Children's Prosocial Behaviors from the Family Interaction Coding System (FICS)

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio
	Total Positive Behavior (POS)			
Between Groups	195.765	2	97.882	4.13*
Within Groups	616.785	26	23.723	
Total	812.550	28		
	Approval (AP)			
Between Groups	0.008	2	0.004	6.03**
Within Groups	0.017	26	0.006	
Total	0.025	28		
	Laugh (LA)			
Between Groups	0.425	2	0.212	4.75*
Within Groups	1.163	26	0.045	
Total	1.588	28		
	Normative (NO)			
Between Groups	20.765	2	10.383	9.91**
Within Groups	27.254	26	1.048	
Total	48.019	28		

*$p < .05$.

**$p < .01$.

Table E-5

Descriptive Statistics for the Cluster Categories from the Family Interaction Coding System (FICS) by Sample

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
TAB			
M	0.29	0.30	0.59
SD	0.34	0.21	0.58
POS			
M	10.42	15.18	16.36
SD	0.68	5.59	6.35
NEU			
M	0.06	0.13	0.40
SD	0.08	0.09	0.39
MTAB			
M	0.12	0.09	0.21
SD	0.12	0.11	0.16
MPOS			
M	9.03	10.63	10.47
SD	0.38	0.95	1.90
MNEU			
M	0.62	0.12	0.32
SD	0.38	0.09	0.20

Note. Explanations of abbreviations are given in Chapter II. These These variables are expressed in frequencies per minute.

[a] $n = 10$.

[b] $n = 9$.

[c] $n = 9$.

Table E-6

Descriptive Statistics for Children's Individual Code Categories from the Family Interaction Coding System (FICS) by Sample

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
Approval (AP)			
M	0.05	0.02	0.01
SD	0.03	0.03	0.02
Attention (AT)			
M	0.58	0.46	0.55
SD	0.62	0.66	0.30
Command (CM)			
M	0.03	0.04	0.04
SD	0.04	0.05	0.05
Command Negative (CN)			
M	0.00	0.00	0.01
SD	0.00	0.00	0.01
Compliance (CO)			
M	0.07	0.13	0.13
SD	0.08	0.09	0.10
Cry (CR)			
M	0.00	0.01	0.00
SD	0.00	0.02	0.01
Disapproval (DI)			
M	0.09	0.04	0.11
SD	0.12	0.04	0.15
Dependency (DP)			
M	0.01	0.01	0.00
SD	0.01	0.03	0.01
Destructiveness (DS)			
M	0.01	0.02	0.03
SD	0.02	0.06	0.05

Table E-6 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
High Rate (HR)			
M	0.00	0.00	0.00
SD	0.01	0.00	0.00
Humiliate (HU)			
M	0.03	0.00	0.00
SD	0.08	0.00	0.01
Ignore (IG)			
M	0.02	0.01	0.00
SD	0.03	0.01	0.01
Indulgence (IN)			
M	0.00	0.00	0.00
SD	0.00	0.00	0.00
Laugh (LA)			
M	0.41	0.16	0.16
SD	0.26	0.17	0.18
Non-compliance (NC)			
M	0.02	0.03	0.07
SD	0.03	0.04	0.09
Negativism (NE)			
M	0.01	0.01	0.02
SD	0.01	0.02	0.03
Normative (NO)			
M	0.76	2.76	2.25
SD	0.63	1.06	1.27
No Response (NR)			
M	0.00	0.05	0.10
SD	0.00	0.09	0.10
Play (PL)			
M	4.29	3.03	3.22
SD	2.92	1.71	2.42

Table E-6 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
Physical Negative (PN)			
M	0.01	0.02	0.01
SD	0.02	0.03	0.02
Physical Positive (PP)			
M	0.08	0.02	0.02
SD	0.13	0.03	0.04
Receive (RC)			
M	0.02	0.01	0.01
SD	0.03	0.01	0.03
Self-stimulation (SS)			
M	0.01	0.00	0.12
SD	0.02	0.00	0.36
Talk (TA)			
M	2.99	2.21	2.53
SD	1.74	1.02	1.63
Tease (TE)			
M	0.03	0.02	0.05
SD	0.05	0.03	0.07
Touch (TH)			
M	0.02	0.01	0.01
SD	0.03	0.01	0.03
Whine (WH)			
M	0.05	0.06	0.05
SD	0.05	0.12	0.10
Work (WK)			
M	1.17	1.25	0.77
SD	1.88	0.95	1.05

Table E-6 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
Yell (YE)			
M	0.02	0.01	0.04
SD	0.05	0.03	0.08

Note. Scores are expressed in frequencies per minute.

[a] *n* = 10.

[b] *n* = 9.

[c] *n* = 9.

Table E-7

Analysis of Variance Summary Table of the Effects of Group Membership on Mothers' Prosocial Behaviors from the Family Interaction Coding System (FICS)

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio
Mothers' Total Positive Behavior (MPOS)				
Between Groups	15.025	2	7.512	5.04*
Within Groups	37.258	25	1.490	
Total	52.283	27		
Attention (AT)				
Between Groups	6.237	2	3.119	4.67*
Within Groups	16.693	25	0.668	
Total	22.930	27		
Normative (NO)				
Between Groups	23.074	2	11.537	16.35**
Within Groups	17.640	25	0.706	
Total	40.714	27		
Play (PL)				
Between Groups	38.390	2	19.195	4.10*
Within Groups	117.045	25	4.681	
Total	115.435	27		
Work (WK)				
Between Groups	29.801	2	14.901	5.60*
Within Groups	66.521	25	2.661	
Total	96.322	27		

*$p < .05$.

**$p < .00001$.

Table E-8

Descriptive Statistics for Mothers' Individual Code Categories from the Family Interaction Coding System (FICS) by Sample

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
Approval (AP)			
M	0.12	0.07	0.09
SD	0.12	0.11	0.09
Attention (AT)			
M	1.46	0.34	0.69
SD	1.22	0.27	0.59
Command (CM)			
M	0.09	0.12	0.28
SD	0.10	0.09	0.19
Command Negative (CN)			
M	0.00	0.00	0.02
SD	0.00	0.00	0.06
Compliance (CO)			
M	0.03	0.02	0.02
SD	0.04	0.02	0.02
Cry (CR)			
M	0.00	0.00	0.00
SD	0.00	0.00	0.00
Disapproval (DI)			
M	0.09	0.06	0.18
SD	0.10	0.06	0.14
Dependency (DP)			
M	0.00	0.00	0.00
SD	0.00	0.00	0.00
Destructiveness (DS)			
M	0.00	0.00	0.00
SD	0.00	0.00	0.00

Table E-8 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
High Rate (HR)			
M	0.00	0.00	0.00
SD	0.00	0.00	0.00
Humiliate (HU)			
M	0.00	0.00	0.01
SD	0.01	0.00	0.03
Ignore (IG)			
M	0.01	0.00	0.01
SD	0.02	0.01	0.03
Indulgence (IN)			
M	0.01	0.00	0.00
SD	0.02	0.00	0.01
Laugh (LA)			
M	0.42	0.25	0.16
SD	0.33	0.33	0.20
Non-compliance (NC)			
M	0.01	0.01	0.01
SD	0.02	0.02	0.01
Negativism (NE)			
M	0.00	0.00	0.00
SD	0.01	0.01	0.00
Normative (NO)			
M	0.01	1.80	1.99
SD	0.02	0.94	1.15
No Response (NR)			
M	0.56	0.01	0.07
SD	0.36	0.01	0.05
Play (PL)			
M	3.55	0.78	1.65
SD	3.04	1.10	1.74

Table E-8 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
Physical Negative (PN)			
M	0.00	0.00	0.01
SD	0.00	0.01	0.01
Physical Positive (PP)			
M	0.22	0.08	0.02
SD	0.34	0.15	0.03
Receive (RC)			
M	0.02	0.00	0.01
SD	0.03	0.01	0.01
Self-stimulation (SS)			
M	0.00	0.00	0.06
SD	0.00	0.00	0.02
Talk (TA)			
M	2.97	3.61	3.26
SD	1.77	1.39	1.84
Tease (TE)			
M	0.01	0.02	0.00
SD	0.02	0.03	0.01
Touch (TH)			
M	0.02	0.01	0.00
SD	0.03	0.01	0.01
Whine (WH)			
M	0.00	0.00	0.01
SD	0.00	0.00	0.01
Work (WK)			
M	1.10	3.58	1.95
SD	1.71	1.58	1.59

Table E-8 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
Yell (YE)			
M	0.00	0.00	0.01
SD	0.00	0.00	0.02

Note. Scores are expressed in frequencies per minute.

[a] n = 10.

[b] n = 9.

[c] n = 9.

Table E-9

Analysis of Variance Summary Table of the Effects of Group Membership on Mothers' and Children's Neutral Behaviors from the Family Interaction Coding System (FICS)

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio
	Mothers' Total Neutral Behavior (MNEU)			
Between Groups	1.218	2	0.609	9.27*
Within Groups	1.644	25	0.066	
Total	2.862	27		
	Mothers' Command (CM)			
Between Groups	0.200	2	0.100	5.58*
Within Groups	0.447	25	0.018	
Total	0.647	27		
	Mothers' No Response (NR)			
Between Groups	1.726	2	0.863	18.34**
Within Groups	1.176	25	0.047	
Total	2.902	27		
	Children's Total Neutral Behavior (NEU)			
Between Groups	0.641	2	0.321	5.64*
Within Groups	1.477	26	0.057	
Total	2.118	28		
	Children's No Response (NR)			
Between Groups	0.045	2	0.023	4.02*
Within Groups	0.146	26	0.006	
Total	0.191	28		

*$p < .05$.

**$p < .00001$.

Table E-10

Analysis of Variance Summary Table of the Effects of Group Membership on Functional Categories from the Family Interaction Coding System (FICS)

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio
		MPOGCPO		
Between Groups	2.981	2	1.491	49.83**
Within Groups	0.778	26	0.030	
Total	3.759	28		
		MNEGCPO		
Between Groups	0.024	2	0.012	3.45*
Within Groups	0.090	26	0.004	
Total	0.114	28		
		MPOGCNE		
Between Groups	1.633	2	0.816	9.98**
Within Groups	2.127	26	0.082	
Total	3.760	28		

Note. Explanations of abbreviations are given in Chapter II.

*$p < .05$.

**$p < .001$.

Table E-11

Descriptive Statistics for the Functional Categories from the Family Interaction Coding System (FICS) by Sample

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
PUNEFF			
M	0.06	0.17	0.18
SD	0.10	0.33	0.30
MNUGCNU			
M	0.11	0.00	0.02
SD	0.21	0.00	0.05
MPOGCNU			
M	0.40	0.13	0.12
SD	0.46	0.29	0.18
MNEGCNU			
M	0.09	0.11	0.15
SD	0.17	0.13	0.25
MNUGCPO			
M	0.06	0.11	0.01
SD	0.04	0.21	0.01
MPOGCPO			
M	0.93	0.28	0.23
SD	0.04	0.13	0.26
MNEGCPO			
M	0.01	0.05	0.08
SD	0.01	0.06	0.08
MNUGCNE			
M	0.05	0.10	0.05
SD	0.08	0.18	0.06
MPOGCNE			
M	0.71	0.30	0.16
SD	0.30	0.36	0.18

Table E-11 (Continued)

Categories	Samples		
	Alcoholic[a]	Normal[b]	Socially Aggressive[c]
MNEGCNE			
M	0.06	0.17	0.09
SD	0.11	0.32	0.10
CCOMPLY			
M	0.61	0.74	0.52
SD	0.32	0.31	0.40
MXOVER			
M	0.01	0.02	0.02
SD	0.01	0.02	0.03
MNEGREIN			
M	0.39	0.14	0.33
SD	0.35	0.27	0.38
MPUNISH			
M	0.09	0.10	0.23
SD	0.13	0.18	0.23

Note. Explanations of abbreviations are given in Chapter II. These variables are expressed as conditional probabilities.

[a] $n = 10$.

[b] $n = 9$.

[c] $n = 9$.

VITA

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