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ABSTRACT

The stated objectives of this document are: to increase awareness of and clarify the risks facing children of substance abusers (COSAs) through a review of recent empirical research literature; and to examine the prevention and intervention issues involved in providing services to these youth in the schools. The literature review deals mainly with children of alcoholics because of the longer history and greater prevalence of alcoholism in this country and the relative lack of research on children of other drug abusers. The similarities and differences between children affected by parents who use different drugs are clarified as much as possible, particularly as much less is known about the effects of their illicit drug use. The focus is specifically on adolescents. Terminology issues centering on COSAs, Children of Alcoholics (COAs), and Children of Other Drug Abusers (CODAs) are discussed. Specific topics discussed include: (1) prevalence; (2) characteristics and problems of COAs and CODAs; and (3) prevention and intervention, including identification and assessment, labeling, program goals and techniques, parental involvement, and program evaluations. Twenty-seven abstracts of research studies involving COSAs are included. An extensive list of references is included, as well as a selected list of some of the main sources on services for children of substance abusers. (ABL)

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YOUNG CHILDREN OF SUBSTANCE ABUSERS

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204

Far West Laboratory for Educational Research and Development
730 Harrison Street
San Francisco, California 94107-1242

The Southwest Regional Educational Laboratory
4665 Lampson Avenue
Los Alamitos, California 90720

Prevention Research Update

Gregory A. Austin, Editor
Southwest Regional Laboratory

Western Center for Drug-Free Schools and Communities

Judith A. Johnson, Director

Northwest Regional Educational Laboratory
101 SW Main Street, Suite 500
Portland, OR 97204
(503) 275-9500

Field Office
1164 Bishop Street, Suite 1409
Honolulu, Hawaii 96813
(808) 532-1904

Far West Laboratory for Educational Research and Development
730 Harrison Street
San Francisco, CA 94107
(415) 565-3000

Southwest Regional Laboratory
4665 Lampson Avenue
Los Alamitos, CA 90720
(213) 598-7661

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YOUNG CHILDREN OF SUBSTANCE ABUSERS

Gregory Austin, Ph.D.
Michael Prendergast, Ph.D.
Western Center for Drug-Free Schools and Communities
Southwest Regional Laboratory

Prevention Research Update is a quarterly current awareness service, prepared by the Western Center for Drug-Free Schools and Communities, which summarizes recent research on adolescent drug abuse and its prevention. Each issue abstracts and reviews the prevention implications of new research dealing with a major topic of concern in the field, placing the new information in the context of past findings. The goal is to help bridge the communications gap between the researcher, the practitioner, and the general population, by disseminating research findings in an accessible manner and providing an introductory review of their significance. Abstracts are arranged alphabetically by first author's last name. Preceding the abstracts is an overview discussion in which references to abstracted studies are identified by an asterisk (*). References to all documents cited are located following the abstracts. Copies of the Updates are available from all the Western Center sites, listed on the last page of this issue.

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OVERVIEW

INTRODUCTION

One of the most discussed special populations at risk of alcohol and other drug (AOD) abuse and related problems is children of substance abusers (COSAs); that is, people who are raised by parents addicted to or heavy abusers of alcohol and other drugs. This population has long been characterized as at exceptionally high risk of becoming AOD abusers themselves as well as of developing a wide range of social, behavioral, and emotional problems stemming from the dysfunctional family life that results from parental AOD abuse. Much of this discussion has focused around adult children of alcoholics (COAs). In this *Update* we focus on the current state of knowledge about school-age children of both alcoholics and other drug abusers.[1]

Concerns over the effects of parental AOD abuse on children run throughout history. In the West, these concerns have focused on alcohol, the drug of choice. In particular, the spread of gin consumption among poor women in 18th-century London sparked widespread concern (Austin et al. 1985). Temperance tracts beginning in the 1830s described the many negative effects of male drunkenness on families, emphasizing that it led to subsequent alcohol problems in children and even hereditary degeneration, as well as to numerous economic and social hardships and other detrimental impacts on family life. The child as victim was an especially strong theme within the Woman's Christian Temperance Union.

Such concerns subsided in the aftermath of Prohibition, when alcoholism was primarily viewed as an individual problem of a small segment of the population. Indeed, the primary image of the alcoholic was that of a single, homeless male--the skid-row drunkard--cut off from all ties to the family. Margaret Cork's 1969 book, *The Forgotten Child*, heralded a new awareness that the most common environmental setting in which to find an alcoholic is "a structurally intact, and by and large completely functioning, family" (Steinglass 1987:21). The problems faced by the children of alcoholics (COAs) were discussed in terms of a neglected, hidden tragedy involving numerous unseen casualties. In 1974, the National Council on Alcoholism created a Department of Prevention and Education, which decided to focus on COAs as the population most at risk of becoming alcoholics themselves, and in the same year the National Institute on Alcohol Abuse and Alcoholism contracted for a study on the needs and resources for COAs (O'Gorman 1982:37-38).

As in the 19th-century temperance tracts, concerns were not limited to the risk COAs faced of becoming alcoholics themselves. By the late 1970s, clinicians began describing clients who did not have alcoholism problems themselves but who came from alcoholic families and seemed to be manifesting a particular set of other adverse characteristics (e.g., low self-esteem, inability to achieve intimacy). Alcoholism came to be recognized as a "family disease" on the premise "that the sharing of the dysfunctional behavior of the alcoholic by the other family members through the adoption of individual dysfunctional behaviors is like sharing the disease of alcoholism" (NIAAA 1985:4).

Responding to, and in many ways fueling, these changing perceptions, a vigorous grassroots movement with evangelical overtones emerged encompassing clinicians and counselors, 12-step programs, national organizations, and popular media (Williams 1990:210-211; Seilhamer and Jacob 1990:168). This movement has sought to address the concerns of COAs and improve public understanding of their problems. Formal advocacy organizations have been created (notably the Children of Alcoholics Foundation, founded in 1982, and the National Association for Children of Alcoholics, founded in 1983), and a cottage industry has evolved for the counseling and treatment of COAs.

Furthermore, as a result of the normalization of illicit drug use over the same period, awareness of the problems of children whose

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[1]We are grateful for the comments and criticism of this review provided by Margret Dugan, of the National Association for Children of Alcoholics; Michael Fitzgerald, drug education consultant in the Nevada Department of Education; Jeannette Johnson of the University of Baltimore, Maryland; and Richard Yoast, of the Wisconsin Clearinghouse. In addition, we would like to acknowledge the assistance provided by Ann Bickel, Karen Fieland, and Melinda Jones of the Western Regional Center for Drug-Free Schools and Communities.

parents are dependent on other drugs has also grown. The rise of cocaine and crack addiction among women has produced a sense of urgency over the need to develop programs to deal with a new generation of youth adversely affected by maternal drug use during pregnancy.

Despite these efforts, considerable uncertainty surrounds the scope and nature of the problem as well as the most effective means to deal with it. The public remains only vaguely aware of the risks faced by COSAs. This *Update* aims, first, to increase awareness of, and clarify, the risks facing COSAs through a review of recent empirical research literature and, second, to examine the prevention and intervention issues involved in providing services to these youth in the schools.[2] This review deals mainly with children of alcoholics because of the longer history and greater prevalence of alcoholism in this country and the relative lack of research on children of other drug abusers. At the same time, we have sought to clarify as much as possible the similarities and differences between children affected by parents who use different drugs, particularly as much less is known about the affects of their illicit drug use. Whereas much of the literature deals with adult COAs or the population as a whole, we are specifically concerned with adolescents.

The focus is also on research rather than on the large and growing body of clinically based COA literature directed at practitioners and the general public. The concepts and techniques of this literature are essential to anyone providing help to COSAs. Attention should especially be directed to the early books on children of alcoholics that have influenced all subsequent writers (e.g., Black 1981; Wegscheider 1981; Ackerman 1983; Woititz 1983). But there are numerous practitioner handbooks and self-help guides, whereas findings from the research literature are less familiar. We are concerned, however, with the connection between research and practice; specifically, the extent to which research supports the characteristics of COSAs as described in the clinical literature.

It will be shown that youthful COSAs are a population at high risk of substance abuse and other problems and that prevention and intervention efforts in both schools and communities need to be expanded to address their needs. However, many of the assumptions and assertions made in the clinical and popular literature about the scope and nature of this problem, much of it based on observations of adult patients, is not supported by existing research dealing with youth. Although much of the popular and clinical literature describes COSAs, and particularly COAs, as a population almost universally at risk of a clearly defined syndrome, the research suggests considerable variability.

Before proceeding to the review of the research itself, two general issues need to be discussed: the confusion surrounding terminology and the limitations of the research.

Terminology Issues

The substance abuse field is plagued by many definitional problems, and this is particularly the case in regard to COAs (children of alcoholics) and COSAs (children of substance abusers). There is a pronounced lack of clarity in the use of these term that needs to be addressed. Although COSA is the most commonly used term to refer to the "illicit drug" equivalent of COA, conceptually the terms are not equivalent since an alcoholic is not the same as a substance abuser, who may or may not be drug dependent. Furthermore, "substance abuse" is a generic term that refers to alcohol as well as other drugs.

A more appropriate equivalent to COA would be "children of drug addicts" or "children of drug dependent parents." There are several problems with the use of the latter terms, however. The defining characteristic of a COA or a COSA is not always parental dependency. In common usage, COA and COSA do not just refer to children of parents who are clinically defined as alcoholics or addicts. In fact, many of the estimates of the prevalence of COAs are based on respondent *perceptions* that alcohol use was a problem within a family. For example, to identify COAs DiCicco, Davis, and Orenstein (1984) argue that drinking behavior that results in a child wishing that his or her parent would drink less should be considered "alcoholic,"

[2]Although the literature on this subject spans the period from the 1960s to the present, the discussion emphasizes studies that have appeared since 1985. For reviews of the earlier literature, see el-Guebaly and Offord 1977, 1979; Giglio and Kaufman 1990; Jacob, Favorini, et al. 1978; Watters and Theimer 1978; West and Prinz 1987; Woititz 1978; Woodside 1983, 1988, 1988a).

even though this might not conform to a strict clinical definition of alcoholism.

In addition, the concerns about these children are not simply rooted in their risk of alcoholism or addiction per se, but more broadly on the adverse effects that the child experiences as a result of the parent's excessive AOD abuse and on the accompanying chaotic and stressful family life. From the perspective of school prevention and intervention efforts, whether a parent meets the clinical criteria of alcoholism or addiction may be less important than that the child exhibits problems related to parental alcohol abuse, or feels troubled by it, to the extent that his or her development is impaired. In this context, it is important to remember that any parental AOD use does not in iteself warrant classification of a child as a COSA.

Thus, for purposes of this *Update*, COA should be understood to mean "children of alcoholics and alcohol abusers," although specific studies of this population are confined to clinically diagnosed alcoholics. Similarly, COSA is used to refer to any child who experiences a dysfunctional family and personal life as the result of parental *abuse* of any licit or illicit drug. The acronym CODA is used to refer specifically to "children of *other* drug abusers."

Distinguishing between children of substance abusers, alcohol abusers, and other drug abusers is conceptually important. On the one hand, there are many similarities in the experiences and problems faced by all children of substance abusers, as well as in the prevention and intervention strategies recommended for them. Furthermore, with the spread of multiple drug use, the number of COSAs is increasing. Alcoholics are often abusers of other substances, although alcohol is probably the drug that is most visible in the family. On the other hand, children of parents who are predominantly other drug abusers face problems stemming from the illegality of their parents' drug use that are not faced by children of alcoholics. Because of these differences, as well as the lop-sided nature of the literature, we will discuss children of alcoholics and children of other drug abusers separately.

Methodology Issues

Assessing the scope and nature of the COSA population is made difficult by several limitations in the research itself, although more recent studies have managed to use designs and analyses that avoid many of them. These methodological problems will be discussed further in the text as relevant, but they include the following:[3]

- Use of unrepresentative samples. Most research has been conducted on children whose parents are in treatment and who are therefore likely to be from families that are more dysfunctional than those in which the parents are not in treatment, thereby rendering the results unrepresentative of the general population of COSAs. Also, many adolescent samples are unrepresentative of the general youth population (e.g., delinquents) or combine children of different developmental stages.
- Study samples that are confined to sons and fathers or to parents and children. Relatively little research is available on mothers or daughters.
- Failure to control for confounding variables, such as psychiatric diagnoses in parents other than alcoholism (e.g., antisocial personality disorder, schizophrenia) and drinking or drug use by the mother during pregnancy. Thus, problems among children attributed to parental alcoholism may actually be rooted in other parental disorders.
- Failure to control for substance use variables (e.g., duration of use, severity of dependence) and for demographic and family variables.
- Interviewing or other data collection that is not blind to the status of the subjects.
- Use of correlational rather than longitudinal designs, making it difficult to determine causal or developmental factors.
- Inconsistent or imprecise definitions and measures of alcoholism, drug dependence, and other variables.
- Failure to consider the clinical significance of differences found between groups in research studies, so that the practical implications of the research are unexplored.
- Reliance on a single source or instrument, raising questions about the validity of the assessment or diagnosis.

[3]This summary of the limits of COSA research was drawn from Drake and Vaillant 1988; el-Guebaly and Offord 1977, 1979; Jacob 1987; Jacob and Leonard 1986; Kumpfer and DeMarsh 1986; Roosa, Sandler, et al. 1988; Tarter, Jacob, and Bremer 1989; and West and Prinz 1987.

- Use of control groups that are not comparable to the treatment group.

These limitations make it difficult to generalize the results of a particular study to the entire population of COSAs, to infer causal pathways between parental AOD abuse and problems in offspring, or to determine whether problems observed among COSAs are unique to them or whether they are typical of children from families that are generally dysfunctional (Burk and Sher 1988:287; see especially West and Prinz 1987 for recommended methodological improvements in COA research). As future research addresses these methodological limitations, the validity and generalizability of our knowledge of children of substance abusers will improve. In the meantime, these limitations need to be kept in mind while reading this review.

PREVALENCE

In terms of numbers of people affected, we know much more about children from alcoholic homes than from homes in which other drugs are abused. The exact number of either population is uncertain, however, in large part because of the methodological difficulties in identifying this population, including the tendency of children from alcoholic or drug-dependent families to deny their status and lack of clarity and consistency in how the population is defined.

Alcohol

Estimates of the number of COAs vary greatly, and figures are often cited without providing any evidence as to their source. For example, on the high end, Allen (1983:165) simply states as fact that COAs comprise approximately 25% of the school population. The generally accepted estimate of the number of COAs in the United States is 12.5% of the general population (28.6 million) and 10% of the under 18 population (6.6 million) (Russell, Henderson, and Blume 1985:1-2). This estimate was derived by the Children of Alcoholics Foundation in the early 1980s on the basis of data from the 1979 National Drinking Practices Survey (Clark and Midanik 1982), in which 15% of men and 6% of women were classified as problem drinkers on the basis of loss-of-control and alcohol-dependency scores. Strictly speaking, therefore, the 28-million figure refers to children of problem drinkers rather than to children of alcoholics. Also, the figure may be an underestimate because the 1979 survey did not include people who were in the military or in institutions or who were homeless (Woodside 1988:643; Kumpfer and DeMarsh 1986:50).

Only a few surveys have attempted to determine more precisely the number of COAs in the youth population, and these have tended to be based on small samples. Some have reported rates close to the 10% estimate given above. In a survey of 18-year-olds from Kauai, Werner (1986*) was able to identify 7% of them as children from alcoholic families. A survey of 1,300 adolescents (ages 12-21) in New Jersey found that 10.6% had at least one alcoholic parent and 9% had a grandparent who was alcoholic (Pandina and Johnson 1989*).

Other studies, using more liberal criteria, have found higher prevalence rates. Researchers at Arizona State University asked a sample of high school students to complete the Children of Alcoholics Screening Test (CAST); 18% of the students met the COA criterion. Since the CAST measures concern about parental drinking, not whether the parent meets clinical criteria for alcoholism, the students are more properly labelled "self-identified children of alcoholics," which may account for the high percentage (Roosa, Sandler, et al. 1988*). Similarly, in Lillis' (1987) survey in New York, 17% of respondents stated that one or both parents were alcoholic.

An even higher estimate of from 27% to 30% was found by the CASPAR Alcohol Education program in Somerville, Massachusetts (DiCicco, Davis, and Orenstein 1984:5). These estimates were based on the number of students in junior and senior high schools who responded "yes" when asked, "Have you ever wished that either one or both of your parents would drink less?" The authors argue that drinking behavior that results in a child wishing that his or her parent would drink less should be considered "alcoholic." However, a such perceptions are also influenced by what youths are taught in school. The high percentage may also be related to the high rate of alcoholism in Somerville (its cirrhosis mortality rate is 65% above the national average).

In the absence of more reliable data, the figure of 10% for preadolescents and adolescents proposed by Russell, Henderson, and

Blume (1985) is a reasonable, although possibly conservative, estimate of the number of school-age youth whose parents are alcoholics or alcohol abusers. However, other studies using more liberal criteria suggest that as many as 1 in 5 youth may be experiencing difficulties because of, or have concerns about, their parents' drinking that may warrant attention from schools.

Other Drugs

Even less is known about the number of children with parents who are dependent on, or heavy abusers of, other drugs. Estimates comparable to those for children of alcoholics are even more difficult to make. As more and more people use both alcohol and other drugs, it becomes increasingly difficult to distinguish families on the basis of the type of drug they use. Furthermore, even more so than in the case of alcohol, determining the prevalence of CODAs is plagued by definitional problems. There is little doubt, however, that the normalization of drug use that occurred in the 1970s and early 1980s, especially the rise of cocaine use, has greatly expanded the dimensions of the problem.

Rough estimates of the size of the population can be derived from the number of people in drug treatment, especially women who are of childbearing age. According to Weinstein and West (1986), the largest growing population of substance abusers is women of reproductive age. In 1978, about 20% of drug treatment slots funded by NIDA were for women, whereas by 1984 the percentage had increased to 30% (Kumpfer 1987:3). In a summary of earlier studies, Beschner and Thompson (1981) reported that 67% to 73% of women entering drug treatment had children, although not all had their children living with them prior to treatment (cited in Deren 1986:77).

Since about 1985, increased attention has been focused on the growing problem of infants who are exposed perinatally to drugs, particularly cocaine or crack. In Los Angeles, regional centers that perform developmental evaluations of children have reported that 10-15 new referrals per month are of children with a history of fetal drug exposure to PCP, heroin, and/or cocaine. In the mid-1980s, the New York City Department of Health reported that about 1,000 children were born to addicted women annually, which was acknowledged to be an underestimate. In a nationwide survey of 36 hospitals in 1988, the National Association for Perinatal Addiction Research and Education (NAPARE) found that 11% of newborns had traces of illicit drugs in their bodies. This study is the basis for the frequently cited estimate that 375,000 babies exposed to illicit drugs are born each year. Of these, 200,000 are believed to have been exposed to cocaine, reflecting the fact that cocaine has become the most prevalent illicit drug used by pregnant women (Van Dyke and Fox 1990:160; Viadero 1989; Deren 1986a:20). Some researchers, however, believe that the estimate of 200,000 cocaine babies is too high; Besharov (1989) places the figure between 30,000 and 50,000. Rates also vary greatly between hospitals. Some hospitals with active drug screening and maternal interview programs have reported rates as high as 25% (Barry, White, and Yoast, forthcoming). These figures, however, say little about the influence of fathers or other adult males in the family who may be drug abusers.

Recently, the Institute on Medicine (1990:76-80) attempted to estimate the number of Americans who are in need of treatment for the use of drugs other than alcohol, using data from NIDA's 1988 National Household Drug Survey. The report concluded that 4.6 million Americans over the age of 12 were clearly or probably in need of treatment, or roughly 2.3% of the total US population age 12 and over. What percentage of these have children is, however, uncertain, but it is likely that the figure (2.3%) is an upper limit of the proportion of the population who are children of drug-dependent parents.

Conclusion

Taken together, the Russell and IOM estimates would indicate a total dependent COSA population (youth and adult) of about 14.8%, consisting of 12.5% COAs and 2.3% CODAs. This is considerably less than the statement that often appears in the literature that 20% of children (or one in five children in a classroom) live in chemically dependent families (e.g., Woll 1990). Furthermore, there is undoubtedly considerable overlap between COA and CODA families, suggesting that the total COSA population is probably less than the combined COA and CODA figure given above. Nevertheless, depending on the definition used, many more youth may be affected by

parental substance use to the extent of being placed at higher risk of developing AOD and other problems. The real challenge to the future is not so much in developing more accurate estimates of the prevalence of the population, which by any count is substantial, but in being able to identify more effectively the risks faced by individuals from substance-abusing families and developing programs that address those risks.

CHARACTERISTICS AND PROBLEMS

The research literature on the characteristics and problems of COAs and CODAs can be divided into four general areas: (1) the risk of developing alcoholism or other drug abuse; (2) health effects, including somatic problems and fetal effects; (3) the characteristics of COSAs families and the ways children try to cope with living in such a family; and (4) psychosocial and psychiatric disturbances, including emotional disorders, behavioral problems, academic difficulties, and cognitive deficits. There is some overlap in these categories, but they serve as a convenient way to organize the research findings.

Children of Alcoholics and Alcohol Abusers

For many decades, alcoholism was regarded as a disease of the individual; few therapists or researchers were concerned with the impact of alcohol on the family. More recently, however, it has come to be recognized that alcohol abuse in one or both parents affects all members of a family in a variety of ways, although the specific manner in which it does so is complex and far from being fully understood.

The emphasis of most of the COA clinical literature has been on victimization. The bulk of it (e.g., Black 1981; Wegscheider 1981; Woititz 1983) emphasizes that COAs differ from other children in terms of risk of AOD abuse and negative psychosocial and physical functioning, and that for many their parent's drinking is the central influence on their psychological development (Deutsch 1982). For example, Robinson (1990:68) writes: "All children experience fear, anger, confusion, embarrassment, guilt, and shame, but COAs experience these emotions in greater depth and intensity and with greater frequency. Their feelings, personalities, and behaviors are molded more by the fact of alcoholism than by any other force. Parental drinking becomes the major driving force in their young lives, and everything revolves around it."

Indeed, there is a tendency to assume that exposure to parental alcoholism by itself results in child pathology, that alcoholism is universally stressful for families, and that all COAs are impaired in some respect and in need of intervention regardless of whether they are symptomatic or not (Williams 1990). Some writers assert that adult COAs exhibit a cohesive and distinctive clinical pattern and that any appearance of competence is illusory (Balis 1986). Coping skills that nonsymptomatic children of alcoholics exhibit are even considered to lead to dysfunction in adulthood (Black 1979).

A related assumption is the concept of codependency, "the view that the dynamics of alcoholism, if not the actual alcoholic behavior, are inevitably shared by all members of the family and that the same principles of recovery apply to family members as apply to the alcoholic" (Blane 1988). Some practitioners argue that codependency should be a diagnostic syndrome in and of itself (e.g., Cermak 1986).

The research does support clinical findings that COAs are at high risk of developing AOD abuse and other problems. But it also shows that there is marked variation within the COA population and that COAs are not at equal risk of developing significant problems.

Risk of AOD Use and Abuse

COAs, especially males, are at higher risk for becoming alcoholics and alcohol abusers than is the general population. Most clients in treatment for alcoholism or drug dependence have had alcoholic parents or relatives. Twin and adoption studies have shown that sons of alcoholic fathers are four times more likely than sons of nonalcoholic fathers to become alcoholics, with the risk being 9-10 times higher of developing alcoholism in early adulthood (Goodwin, Schulsinger, et al. 1973). For daughters of alcoholic mothers, the risk is three times higher (Bohman, Sigvardsson, and Cloninger 1981), and if they do not become alcoholic themselves, they are likely to marry alcoholic men (Nici 1979). Sons of alcoholics are at least twice as likely to become alcoholics

as are daughters of alcoholics; alcoholic mothers are more likely to have alcoholic sons or daughters than are alcoholic fathers (Kumpfer and DeMarsh 1986:57-58).

Whether this risk from parental alcoholism is primarily caused by genetic or by environmental factors has been much debated. The large body of literature on the genetic aspects of alcoholism cannot be summarized here in detail.[4] It is evident that genetic factors do place COAs at higher risk. At least one form of alcoholism--characterized by early onset, severe symptomatology, the need for extensive and early treatment, and almost always confined to males, often with antisocial personalities--has a substantial genetic basis. But genetics is far from adequate to explain why some COAs become alcoholic and some do not. At best, it explains a portion of the variations in severe types. The extent to which alcoholism in offspring is influenced not by genetics but by exposure to alcohol *in utero* has yet to be determined. It is also evident that environmental factors, particularly the many dysfunctional aspects of some COA families, have a significant effect as well (Cadoret 1990; Searles 1990; Barnes 1990). These factors will be discussed in more detail below.

Researchers have also studied the effect of having alcoholic parents on adolescent children's patterns of alcohol and other drug use, but with mixed results. Pandina and Johnson (1989*) conducted a prospective longitudinal study of a large community-based sample (n=1,380), in which they compared drinking and drug use by adolescents and young adults from four different types of families: (1) alcoholic parent; (2) mother and/or the father consumed alcohol at high quantity or frequency (this group could have included undiagnosed alcoholics); (3) high stress levels but not alcoholism or heavy drinking; and (3) no-risk, "normal" parents. Contrary to expectations, none of the groups differed on several of the main study variables: levels of use for alcohol, marijuana, or other drugs; age of first intoxication; or use of alcohol or other drugs as a means of coping with problems. Although children from alcoholic families were more likely than children in the no-risk group to report negative consequences from alcohol and other drug use, the three risk groups (alcoholic, heavy drinking, and stress) showed few differences in negative consequences. Among the oldest subjects (age 21), COAs and children of heavy drinkers did report significantly more episodes of drunkenness than did the other two groups.

Overall, the results of this study indicate that adolescent children of alcoholics are largely indistinguishable from children of nonalcoholics on a variety of indicators of drinking and drug behavior (see also Pandina and Johnson 1990*). A similar result was found in a study of Swedish male adolescents with alcoholic fathers; the COAs in this study did not differ significantly from non-COAs in drinking patterns or drinking history (Knop, Teasdale, et al. 1985).

Although these two studies suggest that not all adolescent COAs are at high risk of developing AOD problems, the subjects in both studies had yet to enter the period of highest risk for heavy drinking and serious alcohol problems, that is, the late twenties and early thirties. Furthermore, other studies have found differences in AOD use between COAs and non-COAs. In a study comparing college males having both first- and second-degree relatives who were alcohol-dependent with students having only first degree affected relatives and students having no affected relatives, McCaul, Turkkan, et al. (1990) found that the subjects with first- and second-degree alcoholic relatives had higher rates of alcohol and other drug use, began using alcohol and marijuana at an younger age, and had more AOD problems. Johnson, Leonard, and Jacob (1986) also reported that children of alcoholics were at risk for both alcohol and drug abuse.

Unfortunately, little is known about the relationship of adolescent and adult use among COAs, although in the general population adolescent abuse has not proved predictive of adult abuse (see Donovan, Jessor, and Jessor 1983; Temple and Fillmore 1986, cited in Williams 1990). This points to the need to undertake more longitudinal studies that follow COAs from adolescence through young adulthood.

In summary, contrary to the impression often given in the COA literature, "as many COAs *don't* become alcoholics as those who do" (Blane 1988:796). Far more research is

[4]For reviews of the role of genetics in the etiology of alcoholism, see Goodwin 1985; Lester 1989; Murray, Clifford, and Gurling 1983; Peele 1986; Searles 1990, 1990a; Secretary of Health and Human Services 1990; Windle and Searles 1990; and Zucker and Lisansky Gomberg 1986.

needed to determine the reasons for these variations. The likelihood of COAs becoming involved in alcohol or other drug abuse and the degree of severity of the problem are mediated by a variety of factors that increase or decrease the risk of AOD use. Whereas there is a genetic component in the risk for some forms of alcoholism, many components of a family's psychosocial environment seem to increase or decrease the likelihood for intergenerational transmission of AOD dependency. The following are among a variety of factors identified as increasing the risk that children of alcoholics will become AOD dependent themselves:[5]

- Age of the child when parental substance abuse begins;
- Degree of involvement in substance abuse of the primary caretaker;
- Nonfulfillment of parental responsibilities;
- Severity of emotional, physical, educational, and spiritual neglect or abuse;
- Temperament of the child and role the child assumes in the family;
- Social isolation of the child and family;
- Degree of family stress due to inconsistency in rules, rituals, discipline, etc.;
- Degree of family conflict and lack of cooperative, supportive behavior;
- Degree of open modeling by parents or siblings of drug or alcohol abuse;
- Presence of both alcoholism or substance abuse and severe psychopathology in the parents.

For example, risk of alcoholism appears to be increased when parental alcoholism compounds other mental health problems and when both parents are alcoholics. Merikangas, Weissman, et al. (1985*) found that offspring of depressed parents with secondary alcoholism were three times more likely to be alcoholics than were offspring of parents with depression alone. Offspring had a twofold greater risk when both parents were alcoholics.

[5] This list is taken from Jacob and Leonard 1986; Kumpfer and DeMarsh 1986; and Lawson, Peterson, and Lawson 1983.

Health Problems

Parental alcoholism can have a variety of health effects on their children. A number of studies conducted in the 1960s and 1970s found that children of alcoholics had a higher incidence of somatic problems than did control children: headache, abdominal pain, palpitations, tiredness, general debility, vomiting (in infancy), asthma, and hypersensitivity to noise, light, and temperature (Nylander 1960; Schneiderman 1975; Fine, Yudin, et al. 1976). Only limited confirmation of these findings have been found in the more recent literature, however.

For example, a small study by Biek (1981) found that among adolescents seen at a clinic (mainly female), COAs had nearly twice as many somatic complaints as did adolescents who indicated no history of parental alcoholism (9.3 vs. 4.9). A study based on two million health insurance subscribers in Pennsylvania found that COAs (through age 19) spent more days in the hospital than did others (an average of 7.6 days per year vs. 5.9), although the specific reasons for admission were not stated (cited in Woodside 1988:644). By contrast, two studies (Moos and Billings 1982; Rimmer 1982) found no significant differences in health problems between children with and without alcoholic parents.

An additional risk for this population is child abuse; it has been estimated that between 20% and 70% of child abuse and neglect cases involve alcoholism, although many of the studies on which these estimates are based suffer from poor research designs or other limitations (Deren 1986:89; Famularo, Stone, et al. 1986; West and Prinz 1987:212-213). Presumably, a significant number of cases of child abuse also involve parental drug abuse or addiction.

Fetal alcohol syndrome

Of all the potential adverse health effects that COAs can experience, the most devastating and thoroughly studied are those that result from maternal abuse during pregnancy (prenatal or perinatal use). Although the adverse effects of fetal and neonatal alcohol exposure have been known for centuries (Warner and Rosett 1975), the "fetal alcohol syndrome" (FAS) was first clinically recognized in the United States as a dis-

tinct set of birth defects in 1973 (Jones and Smith 1973; Clarren and Smith 1978). The syndrome has four main characteristics: central nervous system dysfunction, abnormal facial features, behavioral deficits, and growth deficiency. A large body of literature has documented the effects of alcohol on prenatal and postnatal development and has explored the mechanisms that underlay these effects. Research on animals and humans has firmly established that alcohol crosses the placenta and can affect the development of the embryo, resulting in both morphological and behavioral deficits in the infant, with the severity of impairment varying with the level of drinking during pregnancy. FAS is the leading cause of preventable mental retardation in the Western world (Abel and Sokol 1986).

The incidence of FAS in the general population has been estimated to be 1.9 cases per 1,000 live births; among heavy drinking women, the incidence may reach as high as 20 cases per 1,000 live births (Abel 1982; Secretary of Health and Human Services 1990:139-140). As children with fetal alcohol syndrome mature, they typically exhibit developmental delays, hyperactivity, varying degrees of mental retardation, and lower IQ scores. In one sample of 20 children with FAS, the average IQ score was 65, with the range from 15 to 105. The degree of IQ impairment varied with the severity of the FAS diagnosis (Streissguth 1986:217, 220).

A major longitudinal study of children with FAS has been conducted at the University of Washington in Seattle since the mid-1970s. Two recent reports from this study have examined the long-term effects of perinatal alcohol exposure on behavior, development, and learning among children of pre-school and elementary-school age. Streissguth, Barr, et al. (1989*) examined the relationship between maternal alcohol use during pregnancy and child IQ as measured at four years of age. Analysis of data from 421 mother/child dyads indicated that consumption of an average of three drinks per day during pregnancy was significantly associated with an average decrement of nearly five IQ points, even after adjustment for a variety of potentially confounding variables (e.g., education, race, smoking, medicinal drug use, child's sex and birth order, and postnatal care). This decrement resulting from perinatal alcohol exposure translates into a tripling of the risk of subnormal intelligence (IQ < 85) for a child with an "average background." (The authors caution that three drinks a day should not be regarded as a "safe" drinking level since other outcome measures more sensitive than IQ have shown significant effects at lower levels of consumption.)

Streissguth, Barr, et al. (1986) evaluated the same group of children at age seven, examining the effects of perinatal alcohol exposure on attention, as measured by a computer-generated vigilance task. After adjusting for potential confounding variables, it was found that perinatal alcohol exposure was significantly related to decrements in attention and reaction time. Error scores on the vigilance task were also significantly related to examiner ratings of endurance, persistence, organization, distractibility, and impulsivity. The lowered attention and distractibility scores and the slower reactions times observed under laboratory conditions are likely to translate into poor performance in the classroom. More research is needed to determine how these attentional deficits specifically affect classroom learning and whether they persist into adolescence.

Supporting this evidence of learning impairment is a follow-up study of FAS children in Germany who were assessed at about age 4 and again at age 8 (Spohr and Steinhausen 1987; Steinhausen, Gobel, and Nestler 1984). The investigators found that while the children showed some improvement in several behaviors, other problems that were evident at age 4 showed no improvement four years later, particularly cognitive deficiencies. A large proportion of the children in the study required special education.

Although the link between maternal alcoholism and fetal effects is clear, research also indicates that the severity of the problems depends on other variables, such as the adequacy of prenatal care and the socioeconomic background of the mother (Bingol, Schuster, et al. 1987).

The Alcoholic Family

Beyond the risk of adolescent alcohol abuse itself, the COA literature emphasizes that parental alcoholism creates, or is associated with, a wide variety of unhealthy and stressful situations and behaviors in the family. A detailed discussion of these related family problems is beyond the scope of this *Update*. Suffice it to say that families of alcoholic parents (alcoholic families) have been found to

exhibit a variety of problems that interfere with healthy social, emotional, and professional functioning. As summarized by Kumpfer and DeMarsh (1986:69-75), these problems include:

- High levels of stress;
- Inadequate family resources (whether of time, finances, or emotional support);
- Poor life skills and family management techniques;
- Lack of family stability (frequent moves, separation, divorce, prison, death);
- Few family rituals;
- Social isolation;
- Decreased family cohesion;
- Emotional neglect of children;
- Less time spent with children;
- Family conflict;
- Low emphasis on prosocial values, on authority and tradition, on academic achievement, and on religious, social, and cultural involvement;
- External locus-of-control orientation; and
- High, unrealistic expectations for their children.

Woititz (1983) has listed the following as the most common problems of adult COAs: guessing at what constitutes normal behavior; difficulty completing projects; lying when telling the truth would be just as easy; harsh self-judgments; taking oneself too seriously; difficulty having fun; difficulty establishing intimate relationships; constant need for approval and affirmation; being excessively responsible or excessively irresponsible; excessive loyalty; need for control; difficulty expressing feelings; distrust of others; and taking care of other people while ignoring one's own needs and desires.

Family roles

A central concept in the COA literature is that of family roles within the alcoholic family. In the 1970s, therapists who worked with children of alcoholics, drawing on the family systems theory of Virginia Satir (1972), identified distinct but often overlapping role behaviors that family members adopt in order to cope with the unpredictability, stresses, and inconsistency of the alcoholic family. The roles enable family members to survive by providing "a rigid set of defenses and compulsive behavior patterns" that protect against the excessive stress caused by the alcoholic's drinking (Rhodes and Blackham 1987*:146). These roles help the child to survive and function in the dysfunctional family situation. They mask the pain, anger, confusion, and isolation that the child is experiencing. Nevertheless, it is argued that, while these roles are functional in childhood, they have a negative impact upon children's academic behavior and emotional and social adjustment. Furthermore, these roles tend to become rigid and increasingly dysfunctional as they continue to operate into adulthood, adversely affecting adult relationships and performance and making it difficult for adult children of alcoholics to lead happy, satisfying, and fulfilling lives.

The most widely used role typologies are those developed by Sharon Wegscheider (1981) and Claudia Black (1981). Wegscheider's roles are the Family Hero, the Mascot, the Scapegoat, and the Lost Child. Black uses different terms for similar behaviors: the Responsible Child, the Adjuster, the Placater, and the Acting Out Child. According to role theory, children of alcoholics may adopt more than one of these roles, but one tends to predominate.

For example, clinical literature (Black 1981; Woititz 1983) describes the "responsible child" and the "family pet" as characterized by maturity, achievement, or even super-achievement. While this appears to be adaptive behavior and the child appears normal, clinicians argue that it is actually a way for both the COA and the other family members to escape from the reality of parental alcoholism and that it covers up symptoms of psychopathology. Regarded in this way, what is normally viewed as admirable behavior and healthy becomes a sign of personal pain and denial (Burk and Sher 1990:162).

The notion of roles was developed on the basis of clinical observation and experience, and they have been widely disseminated through lay literature and COAs programs. But little research has been conducted to confirm their validity and reliability. Three studies have been identified that do address these issues, and all three found only limited support for COA roles as they are currently defined.

Manning, Balson, and Xenakis (1986*) assessed children of alcoholics to determine whether they were more likely to exhibit Type A personality than were controls. Type A personality is defined by the authors as "a relatively chronic struggle to achieve a series of

poorly defined goals in the shortest period of time possible and is marked by competitive achievement, striving, time urgency, impatience, aggression, and hostility" (p. 184). These traits appear to be an attempt to assert control over uncontrollable events, which would describe the situation of children of alcoholics, particularly those who adopt the "Family Hero" role.

In separate ratings by nonalcoholic mothers and alcoholic fathers of two measures of Type A personality (competitiveness and impatience-aggression), in only one case was there a significant difference between COAs and controls (mother's rating of impatience-aggression). A third study that assessed Type A personality as rated by COAs themselves (in grades 4-12) found no significant differences with the control group. Also, first-born COAs were no more likely to exhibit Type A behavior than were other COAs. This is contrary to the common observation in the clinically based COA literature that the oldest child is normally the "Family Hero" and would thus be more likely to exhibit Type A personality characteristics (Deutsch 1982; Wegscheider 1981). Still, as the authors point out, the results of their study are "good news" for children of alcoholics, particularly the eldest in the family. "Even holding aside the implications for coronary-artery disease in adulthood, the quality of life of type A individuals is lower than for others not marked by their hurtful traits of impatience, hostility, and aggression" (p. 189).

Williams and Robbins (1987) also failed to find strong support for the four roles described by Wegscheider and Black. Responses by adult COAs (college students) on the Interpersonal Adjective Scale-Revised fell into four clusters, but these clusters could not be matched with the postulated roles in alcoholic families. According to the authors, "All four clusters appear to be Placater profiles, or some combination of Placater-Hero-Mascot profiles. Furthermore, clusters for non-ACOA data do not appear to differ to any great degree from ACOA clusters, with a virtual one-to-one correspondence of clusters. In addition, ACOAs were not found to differ significantly from non-ACOAs in self-reported demographic, psychological, and adjustment variables." The authors note various weaknesses of their study and emphasize the problems involved in conducting research in this field, but their results do suggest caution in using the concept of roles to identify or work with COAs.

Finally, Rhodes and Blackham (1987*) compared adolescents from alcoholic and nonalcoholic families as to whether they perceived themselves as exhibiting the behaviors or attitudes indicative of Black's four roles (responsible child, placater, adjuster, and acting-out child). COAs scored significantly higher than controls only on the acting-out role; their mean scores on the placater and adjuster roles were higher, but only approached significance; and their mean score on the responsible child role was virtually identical to that of the control group. While females scored higher than males on the placater role, this is more likely explained by gender socialization practices than by family alcoholism. Also, the four roles were not consistently associated with birth order. Similarly, Manning, Balson, and Xenakis (1986*) reported that Type A behavior among COAs could not be differentiated on the basis of birth order.

In considering the results of these studies, it should be pointed out that children in alcoholic families, according to the clinical view of roles, do not always follow the same role, but often switch from one to another in different situations. Thus, these studies may not have adequately captured this dynamic aspect of family roles. Also, even though the COA roles may lack strong empirical validation, they nonetheless may have an important heuristic value in providing prevention and treatment services to this population. In any case, the concept of roles in alcoholic families clearly is in need of further study and refinement before more credence can be placed on it. It is an investigation that would profit from collaborative studies conducted jointly by clinicians and researchers.

Psychosocial and Psychiatric Problems

On the whole, as West and Prinz (1987:214) concluded in a comprehensive literature review, research supports "the contention that [parental] alcoholism is associated with heightened incidence of child symptomatology." However, again, there is considerable variation in vulnerability.

Aronson, Kyllerman, et al. (1985) found that Swedish children of alcoholic mothers scored significantly lower than controls on a variety of developmental, perceptual, and behavioral measures. This was one of the first studies to document perceptual difficulties among children of alcoholic mothers. Study

group children raised in foster homes did not differ from those raised with their biological parents, suggesting that the observed deficits were caused prenatally.

Bennett, Wolin, and Reiss (1988*) confirmed findings reported in earlier studies that children from alcoholic families have significantly lower emotional and cognitive functioning than do children from nonalcoholic families. Specifically, COAs scored significantly less well on measures of IQ, reading, arithmetic, self-concept, behavior problems, emotional disorders, psychosomatic symptoms, learning problems, and impulsivity-hyperactivity.

Jacob and Leonard (1986*) found that sons of alcoholic fathers were rated by their parents as more poorly adjusted on measures of social competence, behavior problems, and learning disabilities than were sons of depressed fathers or of nonalcoholic fathers. For daughters, those with depressed fathers had greater deficits than did those with alcoholic fathers. The observed differences, however, were seldom large, and the mean scores were in the normal range. With the exception of a small minority of children, the problems exhibited by the children of alcoholics and the children of depressed fathers in this study were neither severe nor pervasive. In other words, most of the children, whether their fathers were alcoholic, depressed, or neither, would not be considered clinically impaired. The factor that distinguished COAs with severe impairment was not familial alcoholism itself, but a combination of having a father with frequent alcohol problems and severe psychopathology and having a (nonalcoholic) mother with severe psychopathology.

Psychological and emotional problems

Research studies have found that COAs are more likely than non-COAs to exhibit various emotional and behavioral problems. These include social aggression, fighting, temper tantrums, truancy, impulsivity, disobedience, lying, and delinquency. COAs often have a diagnosis of conduct disorder (Russell, Henderson, and Blume 1985; Robinson 1989:77-79).

Earls, Reich, et al. (1988*) studied the incidence of psychological and behavior dysfunction in three groups of children: those of alcoholic parents, those of antisocial parents, and those of parents who were neither alcoholic nor antisocial. The specific childhood disorders examined were attention deficit disorder with hyperactivity, oppositional disorder, conduct disorder, depression, and anxiety. A significantly greater number of mean symptoms and mean diagnoses were found in children from alcoholic and antisocial families than in children from control families. The highest number of symptoms and diagnoses was found in children from families in which both parents were alcoholic. For instance, attention deficit disorder was found in 12% of the children with neither parent alcoholic, in 21% of the children with one parent alcoholic, and in 50% of the children with both parents alcoholic. Overall, children of parents who were both alcoholic and antisocial were two-to-three times more likely to exhibit at least one of the childhood disorders than were children of parents with neither disorder.

Other studies have confirmed impaired psychological functioning in COAs. Rolf, Johnson, et al. (1988*) reported that COAs had more problems with depressive affect than did children from nonalcoholic families. DiCicco, Davis, and Orenstein (1984) examined disturbances in the self-image of students in grades 7 to 10 who were identified as being from alcoholic and nonalcoholic families. COA students had a more external locus of control and lower scores on three of the five subscales of the Coopersmith Self-Esteem Inventory (self, family, school).

Merikangas, Weissman, et al. (1985*) found that offspring of depressed parents with secondary alcoholism were not only at greater risk of alcoholism but five times more likely to have a diagnosis of antisocial personality-conduct disorder. There was a three-fold greater risk of this disorder when both parents were alcoholics than when only one was.

Moos and Billings (1982) investigated the emotional functioning of children from families of relapsed alcoholics, children from families of alcoholic parents in recovery, and children from families with no alcohol problems. Children of relapsed alcoholics reported higher levels of depression and anxiety than did children from nonalcoholic families, but no significant differences were found between children of parents in recovery and those of nonalcoholic parents. The results of this study indicate that the emotional stress experienced by COAs decreases when parents stop drinking.

Academic performance

Recent studies of academic performance among COAs have produced conflicting results. Marcus (1986*) reported that children of alcoholic mothers (mainly white and middle class) performed significantly more poorly on measures of academic achievement than did children of nonalcoholic mothers. Tarter, Hegedus, et al. (1984) reported similar results for sons of alcoholic fathers. Ervin, Little, et al. (1984) compared intellectual development and academic achievement in 50 children of alcoholic fathers and 50 children of nonalcoholic fathers, all of whose mothers were nonalcoholics. The IQ and academic achievement scores of the children of alcoholic fathers were significantly lower than those of the children of nonalcoholic fathers, even when a variety of confounding variables were taken into account. Bennett, Wolin, and Reiss (1988*) found that children from alcoholic families scored significantly less well than children from comparison families on measures of IQ, reading, and arithmetic. Results from a longitudinal study of children on the island of Kauai indicated that children whose alcoholic mothers drank during pregnancy were particularly likely to exhibit lower academic performance (Werner 1986*). Knop, Teasdale, et al. (1985) reported that sons of alcoholic fathers were more likely than sons of controls to have attended more schools, to have repeated a grade, and to have been referred to a school psychologist (reasons not specified).

These conclusions would seem to contradict the observation in the clinical literature that COAs tend to be superachieving students. On the other hand, in several studies COAs did perform in the normal to high range (e.g., Ervin, Little, et al. 1984; Bennett, Wolin, and Reiss 1988*). Moreover, Johnson and Rolf (1988*) found that middle-class, nondelinquent children of alcoholics did not differ significantly on IQ or academic achievement from children of nonalcoholics. The two groups did differ, however, in perceptions by the children and their mothers of the child's IQ and academic achievement; both mothers and children perceived the child's competence as being lower than the actual academic achievement of the child. Presumably, this perception would affect the child's motivation, self-esteem. and future performance in school. Johnson and Rolf suggest that previous studies reporting differences in academic performance between COAs and non-COAs may have been measuring the effects of socioeconomic status or sampling heterogeneity rather than the effects of family alcoholism.

While further research will be needed to resolve this discrepancy, for the present the weight of evidence indicates that parental alcoholism may result in at least moderate deficits in academic performance. The reasons for this are unclear.

Cognitive abilities

Low school performance may be related to a variety of factors, such as lower cognitive ability, lack of parental encouragement and support, difficulty in doing home work at home, attention difficulties, or other factors related to living in an alcoholic family (or to several of these in some combination). The factor that has been most thoroughly investigated is cognitive ability.

Hegedus, Alterman, and Tarter (1984*) attempted to disentangle the effects of several of the factors in a study of academic achievement among delinquents with and without alcoholic fathers. As was found in previous studies, the academic achievement of the sons of alcoholics was significantly lower than that of the sons of nonalcoholics, even though both groups were equivalent in intellectual ability. When academic achievement scores were correlated with measures of family disruption, psychopathology, adolescent deviancy, and neuropsychological capacity, it was found that underachievement in sons of alcoholics was most strongly related to neuropsychological capacity. Since none of the sons of alcoholics in this study had a history of alcoholism, the authors concluded that certain cognitive impairments may precede rather than follow the onset of alcoholic drinking.

Tarter, Jacob, and Bremer (1989*) reported that sons of alcoholic fathers, when compared with sons of fathers who were depressed and sons of fathers who were neither depressed nor alcoholic, exhibited impairments in planning ability, psychomotor efficiency, and inhibitory control. These impairments were not severe, however, nor was a generalized cognitive deficit in sons of alcoholics confirmed.

In a reanalysis of the results from this sample, Tarter, Jacob, and Bremer (1989a*) found that sons of fathers with early onset al-

coholism (before age 24) had significantly lower scores on verbal IQ and attention/memory processes than did sons of nonalcoholic fathers. Unlike previous studies, however, the findings did not confirm impairments in sons of alcoholics on spatial, abstracting, and praxic abilities. According to the authors, the sons of alcoholic fathers in this study probably exhibited relatively mild cognitive impairment because the fathers had been recruited from the community rather than from clinical populations and because none of the fathers had a diagnosis of antisocial personality disorder, which, when combined with alcoholism, appears to result in more severe impairment in offspring.

Gabrielli and Mednick (1983) administered the Wechsler Intelligence Scale for Children to Danish children age 11 to 13 in order to determine the effects of parental alcoholism on intellectual ability. A group of children of hospitalized alcoholic fathers (high risk) was compared with a group of children whose parents had been identified as having a problem controlling alcohol consumption (moderate risk) and with a group of children whose parents were neither alcoholics nor problem drinkers (low risk). The high risk and moderate risk groups scored lower on all of the subscales, significantly so on the scales measuring verbal IQ. Removing children of schizophrenic parents from the analysis did not affect the results.

Begleiter and his colleagues (1984) have documented differences in brain waves between boys of alcoholic fathers and boys of nonalcoholic fathers. As the boys in the study responded to a computer-generated visual task, their brain waves were recorded. The researchers were particularly interested in event-related potentials, which are recordings of electrical responses to the brain's processing of information. The so-called P3 brain wave examined in this study has been associated with memory functions. It had previously been observed that adult alcoholics showed P3 deficits. The P3 component in sons of alcoholics was significantly lower than that in control subjects. According to the authors, "the significantly reduced P3 amplitude in high-risk boys suggests a reduced capacity to assess the significance or allocate the necessary neural resources for encoding a specific event. [T]his specific neurophysiological deficit in HR [high risk] subjects suggests that sons of alcoholics may manifest deficits in memory." A subsequent study by Begleiter, Porjesz, et al. (1987) found a similar P3 deficit in response to an auditory stimulus among boys with alcoholic fathers. The finding that the P3 deficit occurs in boys at risk for alcoholism who have not used alcohol suggests that the deficit precedes alcohol abuse and may be genetically determined. Continued research in this field is needed, particularly since more recent studies have failed to find a P3 deficit in boys with a family history of alcohol on a visual stimulus task (e.g., Polich, Haier, et al. 1988).

Resiliency Factors

It is evident that many COAs do avoid destructive patterns of alcohol use and manage to lead lives relatively free of *severe* personal or social problems, contrary to the impression in much of the clinical and popular literature. As Woodside (1988:787) has observed, "Historically, most studies of children explore immediate short-term negative effects of parental alcoholism and overlook coping patterns and mechanisms which may explain why some remain relatively unaffected." In developing effective prevention and intervention programs for this population, it is just as important to understand the sources of resilience in COAs as it is to know the problems they face. Only limited attention, however, has been given to positive adjustment by COAs and to moderating variables that enable "invulnerable" children to cope with the effects of family dysfunction. (Research on protective factors among children of drug abusers has not been identified, but it is likely that many of the findings from studies of COAs would also apply to them.)

According to Ackerman (1983:53), about 10% of COAs are "invulnerables" who successfully survive their alcoholic family and grow up into healthy, well-adjusted adults. More recent research indicates that the figure may be even higher (Drake and Vaillant 1988*; Werner 1986*), although the figure will vary depending on how adjustment and alcoholism are defined and at what point in the life span they are assessed.

In a 33-year-long study, Drake and Vaillant (1988*) found that while COAs had more problems in adolescence than did children from nonalcoholic families, by their mid-40s over half (58%) of them had not received a diagnosis of either alcoholism or alcohol abuse. In a second longitudinal study, Werner (1986*)

found that even though children of alcoholics were more likely than children of nonalcoholics to exhibit serious learning and behavior problems by age 18, the majority of COAs (59%) were doing well in school, at work, and in their social life, and had positive, realistic expectations and goals for the future.

In large part, these resilient COAs have gone unrecognized because most COA literature is based on clinical samples of help-seeking patients. Barnard and Spoentgen (1986) concluded from a study of college students that some COAs were more resilient than others and that the more impaired ones were the treatment seekers (Williams 1990). Similar conclusions have been reached by Jacob, Ritchey et al. (1981) and Steinglass, Bennett et al. (1987). Similarly, Blane (1988:797) warns that there has been relatively little consistent and systematic research on medical, psychological, or social pathology in general population samples of COAs to assess rates of dysfunction.

The two longitudinal studies cited above examined protective factors that enabled some children of alcoholics to avoid both alcoholism and serious psychological or social problems. Drake and Vaillant (1988*) concluded that healthy adult development of COAs is related to several factors: (1) managing to leave the alcoholic environment, (2) leaving the nonalcoholic parent (usually the mother), (3) developing competency at appropriate tasks, (4) experiencing and internalizing healthy relationships, and (5) developing mature defense mechanisms. In particular, their finding that poor adolescent adjustment of COAs was most strongly related to having a poor relationship with one's mother emphasizes the importance of the nonalcoholic parent in buffering the child from the effects of parental alcoholism.

Werner's (1986*) study of children in Hawaii from birth to age 18 supports the view that the effects of alcoholism in the family are moderated by factors other than drinking itself and that these factors contribute to psychosocial adjustment. In particular, Werner identified several characteristics of the family environment and the child's behavior that differentiated COAs who are resilient from those who develop problems:

- Much attention from the primary caretaker during infancy;
- No prolonged separation from the caretaker;
- No additional births into the family during the first two years of life;
- The absence of parental conflict during the first two years of life;
- A temperament that elicited positive attention from the primary caretakers;
- At least average intelligence and adequate communication skills;
- Achievement orientation;
- A responsible, caring attitude;
- A positive self-concept;
- A more internal locus of control; and
- Belief in self-help.

Additional protective factors have also been identified. Keane (1983) reported that among COAs of mixed socioeconomic status, those who had more positive perceptions of their family were able to make a more successful adjustment to parental alcoholism than were other COAs (cited in Woodside 1988a:788). Other researchers have cited the importance of good coping skills in helping to attenuate the negative effects of parental alcoholism (Rutter 1979), particularly if the coping strategies are problem-based (directed at changing the situation) rather than emotion-based (directed at reducing emotional distress) (Clair and Genest 1987*). Chassin, Mann, and Sher (1988) found that COAs who scored high in self-awareness, self-reflection, and introspection had low levels of alcohol use and alcohol-related problems.

Another resiliency factor may be the child's age when parental alcoholism began. It has been suggested that the later in the child's life that the parent(s) begins to drink abusively, the greater is the likelihood that the child will have developed a sense of trust and autonomy to better handle the stresses and problems of living in an alcoholic household (Ackerman 1983:69). Peitler (1980) found that the younger the age at the time of a father's development of alcoholism, the greater was the impairment in three areas of functioning: self-worth, withdrawal tendencies, and antisocial tendencies.

In a study examining the home environments of children of alcoholics, Reich, Earls, and Powell (1988*) found that the incidence of psychiatric disorders was lower among those COAs whose family life was characterized by a low level of parent-child conflict, a high level of parent-child interaction, and infrequent exposure to parental drinking.

The research of Bennett and her colleagues indicates that COAs are less likely to become alcoholics themselves if the family is able to maintain rituals such as holidays or regular mealtimes and to keep these times relatively stress free, and if the parents are able to consistently make plans and follow though on them (Bennett, Wolin, and Reiss 1988*; Wolin, Bennett, et al. 1980). According to Bennett, "families which have a serious problem in their midst--such as parental alcoholism--and which still impose control over those parts of family life that are central to the family's identity--rituals, relationships, and roles--communicate important messages to their children regarding the possibility to take control of present and future life events. It is possible that in the processing of learning how to be deliberate as a family, children learn that they can successfully meet difficult challenges in life" (Bennett, Wolin, and Reiss 1988*:828).

Viewed in another way, parental alcoholism is a form of stress that affects all members in the family. But stress itself does not produce pathology directly since the effects of stress are shaped, by or filtered through, a variety of moderating variables, such as family environment, social supports, and coping behaviors. These moderating variables either ameliorate or potentiate the effects of stress associated with parental alcoholism. Given a favorable constellation of these variables, the child can learn to handle the problems and stresses of living in an alcoholic family and can grow up with relatively few severe adjustment problems (Clair and Genest 1987*). Future research in this area should focus on attempting to determine which children of alcoholics develop severe problems and which do not, and why at-risk children develop different problems. This knowledge can then be used to develop more effective prevention and intervention programs for children of substance abusers.

Conclusion

The research reviewed here clearly supports the view that children who grow up in families in which one or both parents are alcoholic face a greater risk of developing alcoholism themselves and of exhibiting other problems in physical, emotional, cognitive, and social functioning. However, there is considerable variability in risk or differences in vulnerability. Being a COA does not necessarily lead to alcoholism or to psychosocial dysfunction (Leonard 1990:273). If exposure to parental alcoholism by itself resulted in pathology in the children, then all COAs would exhibit greater disorder, pathology, and maladjustment than the research indicates is in fact the case.[6]

Emphasizing the variability among COA backgrounds, Steinglass (1987) draws a distinction between "families with alcoholism," which are not particularly affected by drinking, and "alcoholic families," which are organized around the central theme of drinking and are vulnerable to its disruption, showing greater psychiatric symptomatology, rigidity, highly patterned behavior, and susceptibility to intergenerational transmission of alcoholism. The focus on the dramatic problems of the latter, he argues, has led to a misleading picture of the impact of alcohol on the family, which is often not that of a sharp pain but of a dull ache that saps the family's energy and resources over time. The best approach, he argues, is one that acknowledges that families with alcoholic members make up highly complex behavioral systems that vary markedly and that do not fit into simplistic formulas or uniform conceptual frameworks.

It is further doubtful that conduct problems, emotional distress, cognitive deficits, and other problems found among COAs are due to parental alcoholism alone. Marital conflict, depression in parents, family disruption, and similar factors may also contribute to these difficulties. The dysfunctional characteristics of alcoholic families are also found in families with other problems as well. One of the major weaknesses in much of the research on COAs has been the failure to control for other problems.

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[6] Jacob and Leonard (1986:378) observe: "...clinical reports have consistently suggested that most children of alcoholics are seriously impaired, although the empirical literature addressing this issue has been much more equivocal. Unfortunately, it is very difficult to compare and reconcile cross-study differences within this literature since most of these reports have not employed the same measures or have not used equally reliable and valid measures. In addition, most studies have simply reported differences between group means and have not considered the clinical significance of the findings any further. There is a clear need to consider this issue more carefully, since it has tremendous implications for prevention and intervention programs."

There may be several complex factors independent of one's COA status that could result in severe psychopathology (Windle and Searles 1990. There is a need to differentiate the impact of psychopathology and other problems that may accompany alcoholism from the more specific impact of alcoholism itself. A related problem is whether COAs are at greater risk of behavioral problems (other than alcoholism) than are youth from families that are nonalcoholic but still dysfunctional (Blane 1988). The extent to which COAs exhibit a syndrome distinct from that of youth from other dysfunctional families needs to be clarified (see Riddell 1988 for one of the few efforts to study differences between multiproblem families and alcoholic families).

These qualifications do not detract from the heightened risks that COAs do face. The importance of alcohol abuse in the family is suggested by the fact that many problem behaviors in alcoholic families and in affected children end or are greatly reduced when alcoholism stops (Kumpfer 1987:3).

Children of Other Drug Abusers

Much less research has been conducted on the characteristics and problems of children of abusers of drugs other than alcohol. In fact, many statements regarding CODAs are drawn from the COA literature. At this time, little can be said definitively about the similarities and differences between these them.

Kumpfer (1987) suggests that there is considerable overlap between the two groups in terms of the risk for AOD abuse and for other problems associated with having substance abusing parents, but almost all her data concerns alcohol. At the same time, as Johnson (1990) observes, children of other drug abusers differ from children of alcoholics in several ways. First, because of the inherent risks of illegal activity, CODAs are exposed to aspects of life that COAs are not, including even greater secrecy and stigma, fear of legal reprisal, drug paraphernalia. Second, wnereas there are several public advocacy groups for COAs, there are none for CODAs. Third, CODAs must contend with the AIDS epidemic, especially if the parents are intravenous drug users. They may be exposed to parental illness and death and increased risk of AIDS themselves if they begin intravenous use themselves, especially since adolescents are less likely to take steps to reduce the risk of HIV transmission. Fourth, in many cases they come from more disadvantaged or deviant home environments, often accompanied by loss of parents due to incarceration.

Though information on CODAs is limited in scope, recent studies have examined characteristics of the drug-abusing family, the influence of parental drug use on the drug use of children, and the problems faced by children exposed to drugs perinatally.

The Drug-Abusing Family

Kumpfer and DeMarsh (1986) compared 60 drug-dependent families and their children with 60 control families on a variety of psychosocial, family, and child behavior variables. The early childhood environment of children from drug-dependent families was significantly more dysfunctional than that of controls. The dependent families had higher levels of stress, parental depression, and family conflict; fewer friends; and less involvement in recreational, social, religious, and cultural activities. Generally, substance-abusing families exhibited strain and social isolation, partly because of the need to maintain protective boundaries and partly because of community rejection; thus, they received less help and support from others, which further increased strain on family functioning and resources. The study also found that substance-abusing parents spent half as much time with their children as nonabusing parents. They were also significantly less likely to spend time with their children in family activities.

The children in the substance-abusing families had fewer overt family rules to follow, were more disobedient at home, had fewer opportunities to interact with other children, had fewer friends to whom they could tell secrets, were less likely to bring their friends home, were more likely to believe that they lacked the ability to make friends, lacked age-appropriate social skills and behaviors, and tended to be avoided by their peers. They also attended school less and were more often late to school; they received limited help with homework from their parents.

This profile differs little from that of the classic COA family. But in describing their sample, Kumpfer and DeMarsh did not specify whether their drug-dependent families included alcoholics. If they did, this might account for much of the similarity of the profiles.

The stress, inconsistency, unpredictability, and abuse seen in alcoholic families is likely to be present in substance-abusing families. It is, therefore, likely that the children of parents who abuse illicit drugs face similar challenges and adopt similar coping strategies and roles as do children of alcoholic parents, although no research has been found to confirm this. Clearly, much more research is needed on the similarity in experiences and risks faced by children of alcoholics and children of other drug abusers. More attention also needs to be directed toward the extent and influence of combined alcohol and other drug abuse and whether children face different risks depending on the drug of choice of their parents.

Some researchers doubt that mothers who are heavily addicted to heroin, amphetamines, or cocaine can even adequately raise their children (Densen-Gerber 1981; Eriksson, Billing, et al. 1985; Larsson 1980; Howard, Beckwith, et al. 1989; Burns and Burns 1989). Among heroin addicts, Densen-Gerber (1981:773) cites the inability of heroin addicts to alter their lifestyles to accommodate a new child, to act in the best interests of their children, or to meet their child's needs at the expense of their own. It has been observed that the lifestyles of substance-abusing mothers generally include chaos, inconsistency, and possibly violence (Howard, Bechwith, et al. 1989; Regan, Ehrlich, et al. 1987; Lief 1985; Larsson 1980).

One picture of the drug-abusing parent that emerges from the research is that of a woman addicted to heroin or, more recently, cocaine, who is living in a highly stressful situation characterized by poverty, limited education, and underemployment, if not unemployment. She likely grew up in a family that was abusive, neglectful, and unable to meet her developmental needs. Her child is likely to be premature or neurologically impaired from prenatal drug exposure and to require increased attention. Without effective intervention, these conditions intensify parental dysfunction and the child's developmental problems (Barry, White, and Yoast, forthcoming).

This portrait, however, is biased by the characteristics of the subjects studied. Most of the subjects have been poor and Black or Hispanic. The observed effects may be less due to addiction than to the other life problems they face. This limitation is especially important to keep in mind given the relative lack of research on more educated, professional women who are addicted to cocaine and other drugs (Barry, White, and Yoast, forthcoming). We know very little about the characteristics of families, especially middle-class families, in which heavy marijuana use occurs, or dependency on such psychotherapeutics as tranquilizers, which is common among women.

Risk of AOD Use

Clinicians and researchers have increasingly come to recognize the importance of the family environment, particularly the substance abuse of parents, in "the genesis, maintenance, and alleviation of drug abuse" among children and adolescents (DeMarsh and Kumpfer 1986:117). A number of studies conducted during the 1970s found that actual or perceived drug use by the parent or other significant adult is positively correlated with adolescent drug use, although this research tended to focus on parental use rather than abuse (Kumpfer and DeMarsh 1986). Fawzy, Coombs, and Gerber (1983) reported that 78% of a sample of adolescents whose parents admitted to marijuana or hashish use also used some type of drug.

In a recent study, Gfroerer (1987*) examined drug use by teenagers and drug use by older family members living in the same household, using data drawn from NIDA's National Survey on Drug Abuse. He confirmed earlier results indicating that teenagers were more likely to use drugs--and particularly marijuana--if the father, mother, or older sibling also used drugs. The results also indicated that even low levels of use by parents can influence drug experimentation by teenagers.

Clinicians have also reported high rates of parental chemical dependency in the background of adolescent and adult clients seen at substance abuse treatment programs (Huba, Wingard, and Bentler 1980; Jessor and Jessor 1977; Kandel, Kessler and Margulies 1978; for reviews of this literature, see Gfroerer 1987*; Halebsky 1987; and Kumpfer and DeMarsh 1986). The cause of the correlation between parental and offspring use, especially the role of genetics, is unclear because many of the studies did not control for environmental variables or for related diagnoses in the parents such as antisocial personality (for recent studies on genetic and environmental influences on substance abuse, see Cadoret, Troughton, et al. 1986; McClearn 1983; Meller, Rinehart, et al. 1988). Separating environmental and genetic effects is also difficult because children

may have been affected *in utero* by maternal use of heroin or cocaine during pregnancy.

In a study examining the possibility of specific family transmission of substance abuse, Meller and colleagues (1988) found evidence of familial transmission specific to drug abuse and not alcoholism. Drug treatment patients (age not specified) with a DSM-III diagnosis of drug (nonalcohol) abuse had a significantly increased likelihood of having parents or siblings who abused drugs only or both drugs and alcohol. Furthermore, the strongest association was between drug abuse by the subject and drug abuse by his or her parent. In speculating on the possible causes for the family transmission of drug abuse, the authors note: "It seems quite possible that environmental variables influence an individual's initial decision to experiment with substances of abuse and also influence the choice of substance. Once the individual has begun to abuse a given substance, his or her ability to tolerate that substance without developing physical dependence or other forms of physical and social impairment may be strongly influenced by his or her genetic makeup" (p. 1038). The results of this study suggest a genetically transmitted biochemical vulnerability of abuse to drugs other than alcohol, which is independent of a vulnerability to alcohol dependence. In this study, however, the number of drug abusers was small (27) compared with the number of polydrug abusers (177) and the number of alcoholics (97).

Contrary to these findings, Klinge and Piggott (1986) found no relationship between the drug use of a sample of adolescent psychiatric inpatients and that of their parents.

In summarizing earlier studies of drug-addicted mothers, Bauman and Dougherty (1983) noted a cycle of addiction, repeating from one generation to the next. Several explanations have been advanced to explain the transmission of addiction, including hypotheses that parents pass their addictive behavior down to their children, that drug-addicted mothers are deficient in parenting skills, and that fetally drug-exposed children are developmentally slow and have physiological, cognitive, and psychological difficulties that place them at risk for later AOD abuse. Confirmation of these hypotheses are largely lacking, however, and much remains to be known about the long-term effects of the mother's drug addiction on her child's risk of drug abuse. Similarly, we know little about the effects on the child of the father's drug use.

Psychosocial Problems

Johnson, Boney, and Brown (1991*) compared 35 children of substance abusers and 37 children of non-substance abusers on measures of depression, state and trait anxiety, and three standardized measures of academic ability reading, spelling, and arithmetic). Children of substance abusers scored significantly lower on depression, trait anxiety, and arithmetic. This suggests potential risks for psychological difficulties, especially affective and academic problems.

Health Problems

Research on the consequence on a child's health of parental drug abuse has been largely limited to fetal and neonatal effects. So far, a clinically defined "fetal drug syndrome," similar to the fetal alcohol syndrome, has not been recognized, and it is unlikely that such a syndrome will be identified since so many different types of drugs are involved and since the high prevalence of polydrug use makes it difficult to isolate the effects of a single drug. Research has confirmed, however, that drugs taken by the mother cross the placenta and that the fetus is repeatedly exposed to the drug as it is eliminated from the body and then reabsorbed from the amniotic fluid. A growing body of research indicates that perinatal exposure to abused drugs can result in developmental disabilities, impaired neurological development, and cognitive and learning deficits, similar to those found in fetal-alcohol children (e.g., Sowder and Burt 1980; Hans, Marcus, et al. 1984). Studies have also found that the somatic, developmental, and attentional problems observed in drug-exposed infants continue into early childhood (Deren 1986:85).

Estimates of the number of drug-exposed babies--the most commonly cited being 370,000 born each year--have lead to sensationalistic predictions, such as one newspaper's headline "crack kids [are] about to plague schools" (*San Francisco Chronicle*, April 24, 1989). It should be noted, however, that far more newborns have been exposed to alcohol and tobacco than to illicit drugs and that exposure does not necessarily mean impairment (as is also true for alcohol). Furthermore, a particular problem or deficit is not necessarily di-

rectly associated with perinatal drug exposure since the health of the infant can be affected by a variety of other factors. For instance, women who are heavy drug users seldom receive adequate prenatal care, either because they cannot afford it or because they fear legal repercussions for their drug use (Van Dyke and Fox 1990:161-162). These points are made not to minimize the seriousness of problem of perinatal drug exposure, but to discourage the stereotyping and extreme responses that too often occur in public policy discussions of drug abuse.

Studies conducted in the 1970s of drug-addicted (mainly heroin) mothers and their children presented inconsistent results: some showed deficiencies in the child's cognition, development, and interpersonal relationships; others showed a more or less normal course of development (Bauman and Levine 1986:850).

The largest of these early studies (Sowder and Burt 1980) sought to determine whether children of heroin addicts were at greater risk than other children for health, learning, behavior, emotional, or adjustment problems. The subjects (ages 3-17) consisted of children of drug treatment clients (n=365) in five cities and a comparison group of children (n=369) with non-drug abusing parents living in the same neighborhoods as the treatment clients. In regard to learning and school adjustment problems, the children of drug abusers were significantly more likely than the comparison children to have poor IQ and perceptual-motor performance, more classroom behavior problems, greater need for tutoring, more school failure, more missed days of school, and more likely to have parents contacted because of the child's misbehavior. Children of drug abusers were also more likely to have used mental health services. Differences in delinquent behavior and health problems were not significant, or the numbers were too small for analysis.

Bauman and Dougherty (1983) confirmed these findings in a study that eliminated methodological weaknesses in earlier studies. Preschool children of women who were in a methadone maintenance program scored significantly lower than preschool children of nonaddicted mothers in motor development, general development, expressive language, and intelligence (though average scores for both groups were in the normal range). The children of methadone mothers also exhibited more aversive behaviors and fewer prosocial behaviors than did children of nonaddicted mothers. The lowered IQ scores of the children of methadone mothers may have been due to their shorter attention spans or to lower task perseverance rather to lower intellectual capacity. A replication of this study by Bauman and Levine (1986*), using a larger sample, found that children of methadone mothers were more likely to have developmental delays, lower IQ scores, and lower heights and weights.

Recently, the media has focused considerable attention on babies exposed to crack during pregnancy. As toddlers, these children have difficulty relating to the world, are easily distracted, have poor attachment to care givers, exhibit less goal-directed behavior, and lag behind in performing age-appropriate tasks. While less systematic research has been devoted to preschool children, clinical observations indicate that they exhibit temper tantrums, poor impulse control, problems in regulating behavior, learning problems, attention deficit disorder, and language-development problems (Dixon 1990; Howard, Beckwith, et al. 1989; Kronstadt 1989:5-6; Weston, Ivins, et al. 1989).

It needs to be remembered, however, that the environment in which these children grow up, which is usually characterized by poverty, an unstable home life, poor nutrition, and community violence, also adversely affects their development. Indeed, it becomes difficult to determine how much of their behavior is due to cocaine exposure and how much to the many other risk factors that they experience both before and after birth. According to Judith Howard, a clinical professor of pediatrics at UCLA who works with children exposed to drugs prenatally, "What the school systems are going to have to deal with are children coming from very chaotic and violent homes, because wherever there are drugs there is violence. [The children] are going to be even less organized and show even more developmental delays" (quoted in Viadero 1989:11).

At a recent conference on "Babies and Cocaine: New Challenges for Educators" (LRP Publications 1990), the speakers outlined the dimensions of the problem and described the effects of perinatal drug exposure on the development of children. But they also emphasized that many, if not most, cocaine-exposed infants develop normally and that there is great variability in the medical and behavioral effects exhibited by these children. Furthermore, with adequate postnatal care, particularly in the first weeks of life, infants exposed to cocaine can

overcome many of their early problems and show significant recovery. Unfortunately, most of these infants and toddlers will not receive adequate care and will reach school age with a variety of problems that schools are not yet equipped to handle.

Children exposed to drugs prenatally are also at particularly high risk for AOD abuse. First, it is likely that they will continue to live in an environment pervaded by drug use and by the social deprivation that encourages use. Second, and more immediately, unless the child is placed in foster care, he or she is likely to grow up in a family in which the parents and other older adults and siblings use alcohol and other drugs, providing a model for drug-using behavior. Third, these children will probably have difficulty throughout their school years and will be at high risk for school failure and dropping out, both of which increase the chance of becoming involved in drug activities.

Conclusion

The relative lack of research on children of other drug abusers and addicts makes it difficult to draw any firm conclusions. Although they would appear to have many of the same risks as COAs, they also face substantially different, and arguably even greater, problems associated with the violent, deviant, and socioeconomically depressed environments in which they often grow up. Whether distinctions can be drawn between children with alcoholic parents and children with drug dependent parents is unclear, as is whether the same protective factors exist. In particular, far more research is needed on families other than poor, ethnic minorities and on the effects of illicit drugs other than heroin and cocaine.

PREVENTION AND INTERVENTION

Although not all COSAs are equally at risk for AOD abuse and other problems, they are nevertheless a population that should be given high priority in our prevention and intervention efforts. The problems they face will not be overcome until we break the intergenerational cycle that perpetuates them and this will require concerted efforts both to treat existing AOD abusers and to prevent abuse from developing among their offspring. It is also evident that these efforts must transcend the issue of AOD abuse and address the problems of the dysfunctional family that both result from and feed this behavior.

As concerns over the potential risks faced by COSAs have increased, so have the number of prevention and intervention programs designed to serve them. Knowledge of effective programs and strategies has grown appreciably over the past decade. Several articles and books addressed to school counselors and teachers provide practical advice on helping children of alcoholics.[7] In 1986, the Children of Alcoholics Foundation compiled the first directory of programs designed specifically to serve COAs. The directory only included 235 programs in 34 states, three-fourths of which had been in operation for three years or less. Most programs tended to be small, with about half serving 50 or fewer COAs each year (Children of Alcoholics Foundation 1986; Woodside 1988a:790). Appendix A includes a selected list of organizations, programs, and curricula that deal with children of alcoholics.

The US Office of Substance Abuse Prevention, in conjunction with national COA advocacy organizations, is now launching a national awareness campaign. But equally important are efforts to expand school-based services to address directly the needs of COSAs. Because of the large amount of time that children spend in school, the school is probably the most promising setting for identifying children of substance abusers and for providing them support, education, and counseling. Furthermore, since these children are at high risk of emotional, behavioral, and relationship problems that interfere with success in school and in the world at large, one can argue that addressing their needs is essential to the school's pedagogical mission. Considerable uncertainty exists, however, over what specifically schools can and should do to prevent these problems from developing or to intervene once they are apparent. In the remainder of this section, we will discuss some of these issues involved in service delivery and provide some guidelines for establishing effective programs.

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[7]See Ackerman 1983; Brooke 1988; Campbell 1988; Deutsch 1982; Edwards and Zander 1985; Fisher 1989; Manning and Manning 1984; National Association of Children of Alcoholics 1989; Priest 1985; Robinson 1989; Tharinger and Koranek 1988; Waite and Ludwig 1985.

COSA programs are still in their infancy, however, and there are large gaps in our knowledge about what issues need to be addressed and which approaches are most effective. Empirical studies on prevention and treatment for COSAs are almost nonexistent, and the research that has been conducted provides little guidance for program development. Furthermore, most programs are limited to COAs. Indeed, as mentioned above, one of the problems faced by CODAs compared with COAs is the lack of support groups and programs.

The relative lack of programs for COSAs and the small number students who participate in them has been attributed to a variety of obstacles (Tharinger and Koranek 1988:180-182):

- Public denial of the alcoholism and the needs of COAs;
- Ignorance and misinformation about alcoholism and its effects on children;
- Ambivalence and confusion over who should provide help;
- A tendency to overlook the needs of children who appear not to require help;
- A variety of fears, including fear of calling attention to a problem, of doing more harm than good, and of intruding into family affairs;
- Parental resistance to intervention; and
- The denial, fear, distrust, and shame of the COAs themselves.

In this section, we discuss some of the main topics that need to be addressed in planning, developing, and implementing prevention and intervention programs for COSAs, including identification and assessment, labeling, program goals and techniques, student assistant programs (SAPs), programs for drug-exposed children, parent involvement, and program evaluations.

Identification and Assessment

The first stage in the process of providing effective services to this population is developing reliable identification and assessment techniques. It has been estimated that 95% of the school-aged children of alcoholics are never identified (Robinson 1989:83-84, 102). Identification of COSAs in schools can be a difficult task. There is denial by parents of AOD problems and reluctance of children to talk with outsiders about their parent's use because people still tend to view chemical dependency in negative or moralistic terms (Woodside 1988:646). Most children of alcoholics remain hidden; many cause no trouble, are superachieving students, or do not otherwise draw attention to themselves. Others may exhibit serious problems, but the underlying cause of the problems may not be recognized.

If schools are to help COSAs cope with their situation, avoid becoming substance abusers themselves, and develop a healthy psychosocial adjustment, COSAs must be identified early using valid assessment instruments and provided with referral and intervention services that are appropriate to their needs. Several screening instruments have been developed to help school counselors and psychologists identify children of alcoholics:

- The Children of Alcoholics Screening Test (CAST)--the most reliable and most widely used instrument (Jones 1982; Dinning and Berk 1989);
- The Children of Alcoholics Life-Events Schedule (Roosa, Sandler, et al. 1988);
- The Biek screening interview (Biek 1981); and
- The CAF (children from alcoholic families) item on the questionnaire completed by participants in the CASPAR Alcohol Education Program: "Have you wished that either one or both of your parents would drink less?" (DiCicco, Davis, and Orenstein 1984).

Since these instruments must be read, however, they are not appropriate for very young children. Instruments to identify children of drug users have not been found, although they could probably be adapted from COA instruments.

Clinicians have also identified a number of indicators or signs that the teacher or school counselor can watch for which suggest that a particular child may come from an alcoholic family (Ackerman 1983; Campbell 1988; Deutsch 1982; Woititz 1983). These include:

- Inconsistencies in the child's appearance and academic performance;
- Chronic morning lateness;
- Frequent requests to see the school nurse about stomach aches;
- Difficulty in concentrating;

- Expressions of anxiety about going home or having parents come to school;
- Social isolation; and
- Withdrawal or misbehavior during alcohol-education programs.

Caution should be used in assessing youth on these criteria. No one of these behaviors should be taken as conclusive. However, as the number of these characteristics increase, the greater is the possibility of COA or CODA status.

Once a child from an substance-abusing family has been identified as being in need of intervention, the school may need to get the parents' consent for the child to participate in whatever program is available. Psychologists and counselors must be aware of state laws regarding treatment of children and the requirements of parental consent; they must also develop ways to effectively work with parents who may be reluctant to give consent (Tharinger and Koranek 1988:182).

Labeling

An issue that needs to be considered in identifying and providing services to COSAs is the possible negative effects of labeling. Although the Children of Alcoholics movement has enabled many people to identify likely causes for their distress and to take action to improve their functioning, some researchers caution that potential harm can result from labeling students COSAs, especially since not all COSAs are equally at risk. Even if school programs are not specifically designated as being for COSAs, students or teachers may nonetheless learn the criteria used to select children for a group or program and react negatively to the children who attend (Kumpfer and DeMarsh 1986:79).

Because of this, Burk and Sher (1988*) are especially critical of the view found in much of the COA self-help and treatment community that all COAs will become dysfunctional and therefore that all COAs require therapeutic intervention. They note: "Although prevention and treatment efforts for COAs are laudable, service providers have failed to address the possibility of such harmful effects arising from being identified as a COA and from being included in psychotherapy, especially if there is no evidence of current dysfunction" (p. 286). The focus should be on the actual behavior of the individual rather than on the expected behavior of a group.

In an attempt to assess the possible dangers of labeling, Burk and Sher (1990*) examined how high school students and mental health professionals perceived children who were identified as children of alcoholics. On an instrument with 11 pairs of bipolar adjectives (e.g., sad/happy, weak/strong, inactive/active), high school students rated COAs significantly different overall compared with typical teenagers and with mentally ill teenagers. Typical teenagers received the most positive ratings, mentally ill teenagers the most negative. When nonsignificant differences occurred for specific adjective pairs, COAs were grouped more often with mentally ill teenagers as being "deviant." The mental health professionals in the study viewed a videotape of a clinical interview with an adolescent who was described as being either from an alcoholic family or from a nonalcoholic family. They tended to rate the adolescent labeled as a COA to be psychologically unhealthy solely on the basis of family background. The adolescent from the alcoholic family was perceived as more likely to develop psychopathology, less likely to remain psychologically healthy, and less likely to develop and maintain intimate relationships with family or with others.

The consequences of labeling is also evident in the history of the CASPAR Alcohol Education Program. While CASPAR was successful in attracting students to the general population (BASIC) group, participation in the children of alcoholic families (CAF) group was limited, and most of those who attended had participated in the elementary school component of the program or in the BASIC group. It appears that in the CASPAR program the negative attitudes toward alcoholism and the stigma associated with familial alcoholism discouraged COAs from making their situation known, preferring instead to participate in the integrated group (DiCicco, Davis, et al. 1984a).

Johnson, Boney, and Brown (1991*) recommend avoiding labeling by providing services to families of treatment clients. But this would only reach a small proportion of the adolescents at risk that can be reached through schools.

Despite the potential problems of labeling, it needs to be emphasized that the desire to avoid these problems should not become an excuse to do nothing. For many people, the

label "child of an alcoholic" or "child of a drug addict" is beneficial because it helps them to understand their experiences and feelings and encourages them to participate in self-help groups. The degree to which labeling is a problem depends on the climate of the school. In schools that promote help seeking and where a variety of support programs exist, the likelihood of stigmatization is reduced. As more and more student support groups become part of the normal school environment, the potential harms of labeling cited by various researchers will become less of a problem. In the meantime, programs for COSAs need to be developed in such a way as to minimize the stigmatizing effects of labeling by peers, teachers, and counselors (Blume 1985:7-8; Kaufman 1988:177-178).

Goals, Strategies, and Techniques

In order to develop effective programs for COSAs, it is important to establish clear goals as to what constitutes prevention and treatment in regard to COSAs, in large part because the risks they face are so varied. As Williams (1990:187-188) asks, "Are we treating COAs for their exposure to parental alcoholism, preventing their development of future alcoholism, or accomplishing some combination of both?" Based on the evidence reviewed, the focus clearly must be on both. The two major objectives must be to deter the development of (1) AOD and other self-destructive behaviors, and (2) risk factors associated with the subsequent development of AOD problems or other dysfunctional patterns of behavior (Williams 1990:191). Indeed, in order to serve the needs of at-risk COSAs, it may be necessary to broaden both our conception of prevention and our understanding of the function of the school in promoting the healthy development of the child.

Once clear goals are established, schools can set up programs that attempt to meet the needs of COSAs in three settings: the regular classroom, school AOD prevention programs, or special COSA programs. Ideally, all three would be combined into a coordinated, systematic program that addresses the problems from a variety of perspectives and with varying levels of intensity, such as Student Assistance Programs.

Regular Classroom Techniques

Ackerman (1983) and Campbell (1988) have summarized a number of techniques commonly found in the COA literature that teachers can use to create a classroom climate that is safe and supportive to children of alcoholics. Such techniques would also appear to apply to CODAs. They include:

- Establish routines that lend structure and stability to the school day;
- Empower the child with a sense of being in control of at least some of his or her waking hours;
- Help the child see learning as a safe journey;
- Allow time for the child to do homework during the school day;
- Arrange for some "controlled socializing" in which the child can work with other children in pairs or small nonthreatening groups;
- Help the child relax and just be a kid; and
- Support the school alcohol education programs.

Generic AOD Education Programs

Generic primary prevention programs targeted at all youth in a school provide a more focused setting for addressing COSAs issues. They educate all COSAs, both identified and unidentified, thus avoiding problems associated with stigmatization and harmful labeling, and they provide an opportunity to children in need of further education and intervention. Many COSAs can also benefit from the esteem-enhancing, coping, decision-making, and life skills being taught in the new generation of comprehensive programs. Since many COAs do not develop alcoholism and exhibit few symptoms of problems, primary prevention programs may be adequate to meet their low-risk needs (Williams 1990:192). At the same time, such programs educate caregivers and others in the problems faced by COAs.

COSA Programs

Although AOD education programs can play an important role in identifying COSAs and promoting an understanding among both students and teachers of the AOD-related problems they face, their effect on the functioning of COSAs is largely unknown.

Furthermore, it is doubtful that, given the multiple risks that many COSAs face, they are sufficient for all. Thus, a more focused strategy is to establish programs specifically for COSAs, although to avoid problems of labeling, as discussed below, such programs are usually called "concerned persons support groups," "affected others groups," or a similar term that does not specify COSA status.

Various writers have identified at least four components that programs for COSAs should have: (1) education about AOD use and its effects; (2) identification and expression of feelings; (3) development of healthy self-esteem and social interactions; and (4) development of healthy problem-solving and coping skills (Bingham and Bargar 1985; Williams 1990; Gover 1990). Because of the variability of individual cases, prevention programs for COSAs should be flexible and tailored to the needs of children with specific problems. Also important is providing the nurturing, care-giving attention that is often lacking at home. It would appear that many of the negative characteristics of the at-risk child stem from this deficiency, whereas the existence of such attention from an adult characterizes the resilient COSA. A caretaking teacher or other adult can help COSAs understand their position in the world and empower them to develop healthy attitudes and behaviors.

Most existing programs do provide various forms of social support, training in stress management and other social skills, and education about alcoholism (Emshoff and Orenstein 1990). Examples of several programs will suggest the types of objectives and activities provides. The CASPAR program discussed below includes lessons and activities designed to convey certain basic messages that are generally viewed as necessary for children of alcoholics to understand and cope with their situation (Davis, Johnston, et al. 1985):

- You are not alone.
- Your parents' drinking is not your fault.
- Alcoholism is a disease.
- Alcoholics can and do recover.
- You are a person of worth who needs and deserves help for yourself.

Deutsch (1984) outlines a "small, closed, time-limited, structured" support group for adolescents that features two adult leaders, male and female, and peer counselors. The objectives of the program, among others, include the acquisition of constructive coping skills and increased self-esteem. Naiditch (1984) describes a support group for children from alcoholic families, consisting of a structured, eight-week program that includes activities such games, discussions, art, and poetry designed to help children "find satisfying alternatives to coping with stress." The program has been used in many elementary schools and has been adapted for use in other institutions such as mental health centers and youth service boards. Black (1981) developed special play therapy techniques for young COAs that make use of drawings, puppets, dolls, and other projective activities to help children express their feelings about living in an alcoholic family.

In establishing COSA programs, three other issues that have been identified as warranting attention are the characteristics of adult facilitators, the need for age-appropriate curriculum, and counseling techniques (Gover 1990; Miller 1983):

Adult facilitators. Those who work with COSA groups should have four main skills: (a) the ability to listen, paraphrase, clarify, and reflect; (b) the ability to relate to children as human beings: (c) the ability to share information on a level appropriate to the students in the group; and (d) the ability to create an atmosphere of trust, openness, consistency, and dependability. A team of two adult leaders helps prevent burnout, allows for feedback, and provides a model of healthy adult relationships.

Age-appropriate curriculum. The information and activities in the groups should take into account both the grade-level of the students and the concerns of each age group.

Counseling. Group counseling is preferable to individual counseling, since it offers children a setting for overcoming the isolation that they often feel and an opportunity to interact with peers who have the same problem.

Student Assistance Programs

In establishing a comprehensive COSA program, a school student assistance program (SAP) can play a vital role. SAPs can take many forms, but all are ideally based on a team or individual with wide-ranging expertise in identifying and intervening with a variety of personal problems that interfere wi'h he learning or social development of students. With the backing of appropriate policies and procedures, SAPs provide an "umbrella" structure

under which school and community service providers and resources are coordinated to identify students with problems and to provide suitable help to them and their families. Depending upon the needs identified, typical interventions include curricular and classroom management modifications; peer or adult mentoring; placement in an appropriate support group; one-to-one counseling; academic, psychological, or substance abuse assessment; formal intervention and referral to treatment; and counseling referrals.

Many SAP referrals will include students who are from alcoholic or drug-abusing families, enabling the SAP staff to play an important role in identifying COSAs. Morehouse (1979) especially advocates the use of SAPs for students displaying problems or adjustment difficulties. Those identified as COSAs could then be referred to groups specifically addressing the issues and consequences of familial AOD abuse. Thus, SAP directors must be well acquainted with issues relating to COSAs.

SAPs can serve an additional function for COSAs. If the family is not involved in the intervention process at all, parents may resent the changes in the child's behavior, may complain to the school about interference in family matters, and may attempt to restore the family to its prior condition. SAP groups may thus provide the support needed by COSAs to help them cope with these pressures.

Programs for Drug-Exposed Children

In addition to the programs designed for the current generation of student COSAs, the increasing numbers of babies prenatally exposed to drugs pose new and difficult challenges to schools and other service agencies. As noted earlier, a large increase in the number of drug-exposed infants has occurred since about 1985, and many of these children are now entering preschool and kindergarten.

Much more needs to be learned about the problems and needs of these children, but, according to Cohen (1990) and Martin (1990), two lawyers who specialize in disability and special education issues, many drug-exposed children have developmental delays in cognitive, physical, language, or social skills that would qualify them for intervention and special education services under the Education of the Handicapped Act and under Section 504 of the Rehabilitation Act. If the estimates of the number of children exposed to cocaine and other drugs are at all accurate, the demands on the schools to provide intervention and special educations services will be great.

Programs for these children are beginning to be developed, but only a handful are currently in operation. Probably the most well known of these is the Prenatally Exposed to Drugs (PED) Program established by the Los Angeles Unified School District in 1987 at the Salvin Special Education Center. The program was designed as a pilot program for drug-exposed children ages 3-6 who did not otherwise qualify for special education programs. As of fall 1989, 23 students were enrolled in three classrooms at two schools. The program consists of part-time support from a physician, a psychiatric social worker, and a psychologist, and each classroom has three adults, of whom one or more is a teacher. All staff also make home visits and keep in close touch with family members. In addition to teaching, the staff provides technical assistance to other schools. Although evaluation results for the program are not yet available, the staff has reported improvements in many areas of development (Viadero 1989:11).

Although children in the PED program receive intensive services in a highly supportive environment, the administrators of the program believe that once drug-exposed children enter elementary school, they should be included within mainstream classrooms. It is unclear, however, how these children will fare in regular classrooms, where teachers seldom have either the time or the resources to provide them with the attention and help they need. Many of them will still need to receive special services, either inside or outside the classroom. The successful integration of drug-exposed children within the classroom may depend heavily on the degree to which teachers are willing to give up part of their traditional role as provider of information and assume more of the role of the case manager.

Parental Involvement

A final issue regarding services for children of substance abusers is that of parental involvement. It has been argued that school-based programs or activities for children of substance abusers should have as their purpose to provide help, assistance, and support to students, not to change the student's home environment or treat the substance abusing parent

(Ackerman 1983). Attempts at parental intervention or treatment are beyond the capability or authority of the schools. Furthermore, help for children of substance abusers is not dependent upon their parent's entering treatment or being in recovery. Even if the parent does not enter treatment, the COSA--with the help of school counselors, student assistance programs, or other support groups--can learn to cope with the conflicts and fears of the dysfunctional family environment.

At the same time, no other institution is as equipped as the schools to link families with services. Given the important role of the family environment in mediating vulnerability to AOD abuse and other problems, it would appear to be critical to develop family-based prevention and intervention efforts in schools and communities. Bowen (1974:117) emphasizes that alcoholism is a dysfunction that causes imbalance in the family system and that "when it is possible to modify the family relationship system, the alcoholic dysfunction is alleviated, even though the dysfunctional one may not have been part of the therapy." This rationale is often used for intervening with COAs even when the parents are not in treatment. (Williams 1990:200).

Many prevention specialists are coming to believe that parent education and training is a necessary component of any comprehensive prevention plan. Generally, in addition to knowledge about drug abuse itself, parent groups provide instruction and training in child development, family dynamics, communication skills, and effective parenting skills such as attending, reinforcement, positive discipline, and family-bonding activities. Homework assignments are given to enable participants to practice their skills at home (Phillips 1989).[8]

One noteworthy program is the parenting component of Kumpfer and DeMarsh's Strengthening Families Program, which is specifically designed to be used as a prevention strategy for children of substance abusers other than alcohol. This is also one of few studies assessing the effectiveness of a parenting program. The component (called the Family Skills Training Program) targets three areas of risk: family function, children's behavioral problems, and children's expressiveness. Preliminary evaluation results indicated significant improvement between pretest and posttest in all three areas of functioning. Both parents and children reported significant declines in intentions to use tobacco and alcohol, but not other drugs. Regardless of the parents' level of drug-involvement, the results indicated that they can be coached and assisted in developing more effective parenting styles and improving the home environment. Children reported that their parents were happier, they liked school better, and they were more involved in outside activities. This program has been applied only in a treatment setting. How it would function in a school or community setting needs further examination (DeMarsh and Kumpfer 1986:133, 136; Williams 1990:205).

Although some researchers believe that addicts are unable to be adequate parents, other researchers have concluded that parenting classes and other types of interventions can help them parent more effectively (Lief 1985; Fiks, Johnson, and Rosen 1985; Griffeth 1989). Lief (1985:89) observes: "Our experience has indicated that the stereotyped image of the inadequate addict parent is not necessarily the true picture. In parenting classes, they prove themselves capable of learning about developmental issues and of responding to the needs of the growing infant. Many develop sensitivity to the physical, social, and emotional needs in their children and make concerted efforts to adapt their own lifestyles to meet these needs."

While substance abusing parents are clearly in need of parental education, getting them to participate is notoriously difficult. Schools and communities face a major challenge in attempting to reach out to the entire family. Addict families are considered among the most difficult to get involved in therapy and treatment, and program attrition rates are high, often as high as 40%-50%. One solution to the problems schools encounter in engaging parents in the intervention process would be to include parent programs as part of substance abuse treatment. This would seem to be especially fertile ground for the development of school-community cooperative efforts (DeMarsh and Kumpfer 1986:143-144, who provide several ideas to ameliorate this problem; see also Bry 1983; Stanton and Todd 1981).

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[8]Several reviews of family-oriented strategies are available: DeMarsh and Kumpfer 1985; Glynn, Lukefeld, and Ludford 1983; Rose, Battjes, and Leukefeld 1984; and Sowder, Dickey et al. 1980.

In summary, parent training programs have only recently been used in the AOD field, and the effectiveness of specific family treatment approaches with the general population, much less with COSAs, has not been systematically researched (DeMarsh and Kumpfer 1986:133; Williams 1990:200). Most of the information we do have on family programs has been derived from groups of highly functional and motivated parents, primarily Caucasian. We face a major gap in our knowledge about programs for minority parents. Finally, apart from the Kumpfer-DeMarsh program, we know little about parent programs for CODAs.

Program Evaluations

Published evaluations of only two school-based prevention programs for children of substance abusers have been found and they focus on alcohol only: the CASPAR Alcohol Education Program in Somerville, Massachusetts (Davis, Johnston, et al. 1985), and the Stress Management and Alcohol Awareness Program (SMAAP) in Arizona (Roosa, Gensheimer, et al. 1989). Both of these are briefly described below.

CASPAR

The Alcohol Education Program was developed by the Cambridge and Somerville Program for Alcoholism Rehabilitation (CASPAR) in the mid-1970s. The curriculum, "Decisions about Drinking," was subsequently purchased by many schools and agencies throughout the country and became the first alcohol education program included as an exemplary program by the National Diffusion Network. One component of the CASPAR program consists of two groups for junior and senior high school students held after school: a BASIC group that is open to anyone, and a group designed for children from alcoholic families (CAF). Groups specifically for children of alcoholics are expected to be better able to directly and intensively address their problems. They are provided lessons and activities designed to promote understanding and coping with their situation. As described by the program staff, in the CAF group, "the norms of secrecy are breached; children can compare experiences and recognize that their parent's drinking is not their fault; and they can see that other CAF children are valuable people, whether or not their parents stop drinking" (Deutsch 1982; DiCicco, Biron, et al. 1984:160-161; DiCicco, Davis, et al. 1984:22).

The effectiveness of the CASPAR program was evaluated using a questionnaire administered at the first and last group meeting assessing changes in knowledge about alcohol, but without a control group. By the end of the program, participants had a greater awareness of facts about alcohol and had changed their perceptions of alcoholism in the expected direction. Anecdotal improvements and benefits were also reported (Davis, Johnston, et al. 1985; DiCicco, Biron, et al. 1984).

SMAAP

Researchers at Arizona State University have developed an intervention program for COAs in upper elementary school called the Stress Management and Alcohol Awareness Program (SMAAP) (Roosa, Gensheimer, et al. 1989*). The purpose of SMAAP is to teach children of alcoholics how to reduce the stress they experience in particular situations and how to enhance their self-esteem. In eight sessions, the program addresses five skill areas believed to be relevant to at-risk children in upper elementary grades: alcohol knowledge, self-esteem, emotion-focused coping, problem solving, and social support seeking.

The voluntary support groups of SMAAP succeeded in attracting a small number of students who were at risk for alcoholism because of their parents' alcoholism, although the groups failed to attract many other students who might have benefited from them. Nonetheless, voluntary programs, in which students chose to attend out of their own self-perceived need, do have the advantage of avoiding the ethical and practical problems involved in referring all students at risk for alcoholism to treatment (Roosa, Sandler, et al. 1988*).

A pilot test of SMAAP found that the participants showed increased use of positive coping strategies (social support seeking, problem solving, and emotion-focused coping) and trends toward decreased depression and more favorable teacher ratings of classroom behaviors, particularly moodiness. The results indicated that the SMAAP curriculum has the potential to be an effective prevention program for children who express concern about their parent's drinking. A large-scale evaluation of

SMAAP is currently being conducted (Roosa, Gensheimer, et al. 1989*).

Conclusion

Taken as a whole, this discussion leads to the conclusion that to adequately address the needs of at-risk COSAs requires a major commitment from schools and communities to expand school-based AOD prevention beyond the focus on drug use per se and to broaden the responsibility of education beyond the teaching of academics to include the promotion of the healthy development of the whole child. To do so requires developing a comprehensive, integrated system encompassing the regular classroom, AOD prevention programs, student assistance programs, and COSA programs--all aimed at identifying COSAs that are most at risk and providing them with multiple services that address each child's needs. Given the fundamental role of the dysfunctional family environment as a risk factor, efforts at parent involvement and education are also essential. It is apparent, however that there are limits to the ability of the school to involve the parents or to affect the family environment. This can be addressed in part by working with the community to establish treatment-based parent education programs. But protective factors research suggests that we also need to begin to conceptualize the school as an alternative family environment that provides the nurturing care that is often lacking in alcoholic or drug-abusing homes. This will require a commitment that transcends special programs to the regular classroom itself, and as such must begin at the level of teacher training at institutes of higher education and school district inservice programs.

A comprehensive, system-wide approach to COSAs such as outlined here is inherently labor intensive and expensive. It may be more cost effective, however, to focus prevention and intervention efforts on COSAs than to concentrate all prevention efforts in generic programs that are directed at many youth who do not need them (Miller 1983). Moreover, judged against the social costs of substance abuse and other problems among COSAs, the costs of prevention programs are small. Some indication of the social cost of growing up in a family where alcohol or other drugs are abused is seen in the fact that most clients in substance abuse treatment centers are themselves children of substance abusers. In 1984, 65% of the $1.02 billion spent on chemical dependency treatment in the United States went to the treatment of COSAs (Kumpfer and DeMarsh 1986:50, 61).

At the same time, one is struck by the similarity between many of the recommendations for dealing with COSAs and those for dealing with other problem children. This is not surprising, in that alcoholic and other dysfunctional families share similar problems. Indeed, given that not all COSAs are equally at risk of becoming substance abusers themselves, the question must be raised whether their problems are substantially different from those of children from other dysfunctional families and to what extent they warrant separate attention (Gordis 1990). Programs developed for COSAs may just as well serve the needs of children from families that are dysfunctional from factors other than AOD abuse, thereby making school-based health-promotion programs more cost effective. The expansion of student assistance programs signals a move in this direction. Assessments of SAPs are essential to provide guidelines for future program development.

ISSUES IN RESEARCH AND PRACTICE

An implicit theme that has run through this discussion is the tension that exists between research and practice. The rapid expansion in programs and activities for COSAs over the past decade or so has taken place with only limited guidance from empirical and theoretical research. Much of the knowledge base of prevention and intervention activities for COSAs rests on clinical observation and experience that has little confirmation in research findings. To help correct this problem, the Children of Alcoholics Foundation held two conferences in the mid-1980s that brought researchers and practitioners together to develop a research agenda (Blume 1985; Children of Alcoholics Foundation 1985; Russell, Henderson, and Blume 1985). In addition, the president of the foundation, Migs Woodside, has attempted to bring a stronger research focus to the field (Woodside 1983, 1988, 1988a). Despite these efforts, the gap between research and practice still largely exists (Blane 1988).

The clinical/practitioner literature on COSAs (mainly dealing with children of alco-

holics) consists of information derived from observations by therapists and clinicians on the characteristics of children of alcoholics, the dynamics of families (rules, roles, and interactions) in which one or both parents are alcoholic, and the process of recovery. This clinical information appears in books and articles directed at practitioners and the general public and is concerned with helping children of alcoholics better understand and cope with the problems of living in a substance-abusing family, either on their own or by participating in self-help or 12-Step groups, such as Alateen or Adult Children of Alcoholics.

Woodside (1988a:789) has summarized the limitations of clinically based knowledge: "Clearly, case narrative can be important in providing descriptions of children of alcoholics and the dynamics at work in the family. It can also yield a broad-brush portrayal of this population. However, as yet there have been few formal, scientific investigations to validate clinical observations. . . . Obviously, much more study is needed and in the interim, caution is warranted." As noted above, when researchers have empirically examined one of the central concepts of the movement--that of the four COA roles--the results have provided at best marginal support. Also, without research on the effectiveness of prevention and intervention programs, there is no assurance that existing programs are, in fact, meeting the needs of COSAs or that resources are being wisely used.

At the same time, much of the empirical research fails to address directly the needs of clinicians and practitioners. The empirical literature consists of research-based studies of samples of children of substance abusers, usually compared with a control group, that attempts to determine the specific biological, psychological, emotional, social, or cognitive risks associated with living in an AOD-impaired family. This literature is generally inaccessible to most people; the studies appear in academic journals and books. More to the point, they are often narrowly focused and highly technical, and the implications of their findings for prevention, intervention, and treatment are seldom obvious or direct. Research papers seldom cite the clinical literature, except to note its weak empirical confirmation.

According to Blane (1988), despite a growing number of research studies on children of alcoholics, research has been largely isolated from the clinical observations and conceptual models associated with the COA movement. Researchers have tended instead to focus on biological and genetic factors. Also, even though a research study may find a statistically significant difference between a sample of children of alcoholics and a control sample on a particular behavior, the difference may not be of practical clinical significance; that is, even though COAs may score, on average, significantly lower than non-COAs, their scores still fall in the normal range.

As one clinician wrote regarding the relevance of research to her work, "I think that there is also a feeling among those who see themselves as working in the trenches that research really does not reflect what clinicians experience as the real world. Because of the lack of collaboration and lack of communication (and I also suspect at some level possibly because of lack of mutual respect), researchers often tend to be seen by clinical people as remote and interested in talking only to one another and interested only in esoterica" (Dwinell 1986:287). People who work with children in distress on a daily basis do not have the luxury of waiting for definitive findings from academic researchers, who are continually calling for more study (Woodside 1988a:790).

A certain degree of tension between research and practice is probably inevitable, given the different interests, problems, methods, and outlooks of those who study people and those who help them. Nevertheless, closer collaboration between the two groups would seem both necessary and possible. Studies of risk factors among children of substance abusers have compared COSAs with controls, but little work has been done to determine to what extent the incidence of these behaviors vary among COSAs, particularly in terms of the concept of roles used in clinical work. For instance, it might be predicted that the "scapegoat" in the family would be more likely than other children to exhibit behavior and school problems. Similar hypotheses could be developed and tested for the other roles in order to validate and refine what has become a widely used concept among practitioners. Even more useful would be for researchers and practitioners to collaborate in evaluating existing prevention and intervention programs for COSAs in order to determine those that are most effective, for which children, and for which desired outcomes.

CONCLUSIONS

Parental alcoholism and other drug abuse places children at risk for substance abuse problems as adolescents or adults and for developing school problems, psychopathology, and impaired social and emotional functioning, although research findings suggest that the degree of impairment is not as great as that reported in the clinical literature. The available evidence clearly indicates that substance abuse is a multi-generational problem, although the causal links in terms of genetic or environmental influences have yet to be clearly delineated. Furthermore, because of limitations in the research, it is not yet clear whether the problems identified in children of substance abusers result specifically from parental alcohol or drug dependence, or whether these problems are common to dysfunctional families generally (Gordis 1990).

At the same time, not all children of substance abusers become substance abusers themselves, nor do they all develop severe problems of adjustment. A sizable number are "invulnerable" to the negative influences and stresses of the alcoholic or substance abusing family. While most research focuses on the risks and problems faced by COSAs, some researchers are beginning to examine the protective factors that promote positive adjustment and resiliency in these children. As these protective factors are identified, they can be incorporated into school-based or family-based programs, which may help break the cycle of one generation passing on its substance abuse problems down to the next.

Schools have begun to address the problems of children of substance abusers, particularly those with learning disabilities associated with fetal drug exposure. But in the years ahead, services to deal with the growing number of children exposed to alcohol or drugs (often both) during pregnancy and during their formative years will need to be expanded. The schools will be faced with an increasing number of children who have problems with attention, memory, emotional control, social relationships, and, for older children, alcohol and other drug use.

Much remains to be done to help children of substance abusers, including more broadly based clinical observation, controlled research studies with representatives samples, more accurate and sensitive assessments of children, and more effective prevention and intervention programs. Work in the field of COSAs is complex, encompassing several different disciplines, difficult questions of methodology, divergent interests between practitioners and researchers, and a variety of competing conceptual models. Significant progress in the field, both toward establishing the dimensions of the problems and toward developing better prevention strategies, would benefit from greater cooperation between researchers and practitioners. In the meantime, those who work with children of substance abusers in schools, whether as teachers, counselors, psychologists, or substance abuse specialists, must do so with imperfect knowledge and tools and with creativity, compassion, sensitivity, and hope.

ARONSON, M.; KYLLERMAN, M.; SABEL, K.G.; SANDIN, B.; AND OLEGARD, R. 1985. Children of alcoholic mothers: Developmental, perceptual, and behavioural characteristics as compared to matched controls. ***Acta Paediatrica Scandinavica*** **74:27-35. 23 refs.**

The present study focused on the developmental levels and profiles, the perception, the emotional stability, and other psychological features in children of alcoholic mothers, with and without fetal alcohol syndrome (FAS) characteristics. From a group of 103 Swedish children born live of 30 alcoholic women, 23 of the youngest children were selected to participate in the study. The consumption of alcohol of the mothers during each pregnancy was unknown. The children took a series of psychological examinations in their home, including the Griffiths Mental Development Scales, the Wechsler Intelligence Scale for Children, and Fostig's Development Test of Visual Perception.

Findings. The results of the development and intelligence tests indicated that the study group had significantly lower results that the controls. The largest differences were found in the sub-scales "hearing and speech," "eye-hand coordination," and "practical reasoning." In terms of perception, the study group encountered special difficulties in the areas of "figure-ground" and "spatial relations." Differences between the study and control groups were also found in the human figure drawings. Study group children had a greater prevalence of perceptual difficulties. Hyperactivity, distractibility, and short attention span were observed in 13 members of the study group but in none of the controls. In the group with FAS traits, IQ was significantly lower than in the group without such signs.

BAUMAN, PAMELA S., AND LEVINE, S.A. 1986. The development of children of drug addicts. ***International Journal of the Addictions*** **21(8):849-863. 22 refs.**

The effects of maternal drug addiction on child behaviors has received little study. It is possible that drug addiction results in deficient parenting, which in turn may lead to developmental lags, psychological impairments, and cognitive deficits in children. The present study sought to correct the methodological weaknesses of previous investigations by examining a relatively large sample with adequate controls.

The experimental group consisted of 70 methadone-maintained (MM) mothers and their 70 children between ages 3 and 6; a control group included the same number of nonaddicted (NDA) mothers and their children. While the control mothers were not physically dependent on drugs, the selection criteria did allow for low levels of nondysfunctional drug use. The NDA mothers were matched with the MM mothers on ethnicity or race, socioeconomic status, and participation by a male in the child's upbringing.

Data were collected from mothers on personality, intelligence, and parenting attitudes and behavior, and from children on behavior, intelligence, and development level. Assessment included observation of mother-child interaction in the laboratory and in the mother's home.

Findings. The MM mothers performed less well adaptively on measures of intelligence, personality, and parenting behavior. In addition, MM mothers were more likely than NDA mothers to express authoritarian childrearing attitudes.

Significant differences between the children of the two groups of mothers were also found. Measures of intelligence and socially adaptive behavior were lower for children of MM mothers than for children of NDA mothers. Children of MM mothers who experienced withdrawal from drugs as neonates were compared with those children of MM mothers who did not experience withdrawal. The comparison revealed that withdrawal children has significantly lower general developmental scores and a strong tendency for lower IQ scores and height and weight.

Conclusions. The results of this study indicate that MM mothers are impulsive, immature, irresponsible, and unempathetic. These traits tended to be found in the children of MM mothers. The authoritarian parenting style of MM mothers may also contribute to impairments and developmental problems in their children. The lower IQ scores of the children of MM mothers may be related to the mother's lower average IQ and to her aversive behavior patterns. Children of drug-addicted mothers exhibit cognitive and behavior patterns that are similar to that of their mothers, which may

place them at high risk of becoming drug abusers themselves. To the extent that treatment programs can teach drug-addicted effective parenting skills, it may be possible to break the intergenerational cycle of addiction. Further research, using a longitudinal design, is needed to test this hypothesis.

BENNETT, LINDA; WOLIN, STEVEN J.; AND REISS, DAVID. 1988. Cognitive, behavioral, and emotional problems among school-aged children of alcoholic parents. *American Journal of Psychiatry* 145(2):185-190. 38 refs.

Research conducted since the mid-1970s indicates that children of alcoholic parents exhibit more cognitive, behavioral, and emotional problems than children of nonalcoholic parents, with the most pronounced differences having been found in the cognitive domain. This study attempted to correct methodological weaknesses in previous research on children of alcoholics by (1) including a group of comparison families, (2) using a wide range of assessment instruments, (3) evaluating all biological children in each family, and (4) controlling for the potential lack of independence of findings from children in the same family and from families within the same sample.

The sample consisted of 37 families with at least one alcoholic parent and 45 families with no alcoholic parent. All the biological children between ages 6 and 18 were tested. A total of 144 children participated in the study: 64 in the alcoholic-family group (mean age 12.08 years) and 80 in the comparison group (mean age 11.43 years). In all but eight of the alcoholic families, only the father was the alcoholic or problem drinker. In seven families, both parents were alcoholic, and in one family, only the mother was alcoholic.

Interviews with parents collected data on alcohol use history, family alcohol history, and current drinking practices. A school psychologist who was unaware of the alcohol status of the parents administered the following instruments to the children: (1) WISC-R or WAIS-R, (2) the Peabody Individual Achievement Test, (3) the Piers Harris Children's Self-Concept Scale, and (4) the Herjanic Diagnostic Interview for Children and Adolescents. Parents also assessed each of their children using Achenbach's Child Behavior Checklist and the Conners Parent Rating Scale.

Findings. Children from alcoholic families scored significantly less well than children from comparison families on measures of IQ, reading, arithmetic, self-concept, behavior problems, emotional disorders, psychosomatic symptoms, learning problems, and impulsivity-hyperactivity. Factor analysis found significant differences between the two groups in emotional functioning and in cognitive abilities and performance; marginally significant differences were found for behavior problems. Despite the differences, all of the scores for both groups of children were in the normal range.

Conclusions. The findings confirmed results found in earlier studies that growing up in a family with an alcoholic parent leads to lowered emotional and cognitive functioning. The reason for this may be attributed to the difficulty alcoholic families have in establishing a well-planned and stable life with meaningful family rituals. Such a family environment places children at greater risk for a variety of problems; self-esteem appears to be most affected.

BURK, JEFFREY P., AND SHER, KENNETH J. 1990. Labeling the child of an alcoholic: Negative stereotyping by mental health professionals and peers. *Journal of Studies on Alcohol* 51(2):156-163. 26 refs.

Children of alcoholics (COAs) have received increasing attention recently as a group that is at high risk for becoming alcoholics and for developing a variety of emotional, educational, and social problems. While many people have urged the necessity of establishing prevention services for all COAs, there is evidence that many COAs show no signs of psychopathology and do not later become alcoholics. Furthermore, identifying and labeling children and young people as COAs may result in negative stereotypes and other negative outcomes. The current investigation sought to determine the effects of labeling children of alcoholics as perceived by peers and by mental health professionals. Two studies were conducted.

Study 1. In the first study 570 high school students at two schools in a midwestern city provided demographic information about themselves and then indicated the degree to which 11 pairs of bipolar adjectives (e.g., sad/happy, weak/strong, inactive/active) described seven different roles: themselves, teenagers (male and female) with an alcoholic parent), teenagers (male and female) who were

mentally ill, and typical teenagers (male and female) at their high schools.

Findings. The students rated COAs significantly different overall compared with typical teenagers and mentally ill teenagers; they fell between the other two groups, with typical teenagers receiving the most positive ratings. When nonsignificant differences occurred for specific adjective pairs, COAs were grouped more often with mentally ill teenagers as being "deviant."

Study 2. To determine the views of those who work most closely with COAs, 80 mental health professionals and paraprofessionals in two cities, either in groups or individually, watched a videotape of a clinical interview with an adolescent who was described as having either a positive or a negative family history of alcoholism and as being either a class leader or a problem teenager. After watching the videotape, the subjects completed questionnaires that collected demographic information and elicited responses describing the adolescent in the videotape on three scales: Current Level of Dysfunction Scale, Future Functioning Scale, and Acceptance/Rejection of the Child Scale.

Findings. COAs were seen as significantly less psychologically healthy and more pathological than the controls. They were also perceived as more likely to develop psychopathology, less likely to remain psychologically healthy, and less likely to develop and maintain intimate relationships with their family or with others. Significant effects or interactions for the Acceptance/Rejection of the Child Scale were not found. In short, mental health professionals considered COAs (whether the class leader or the problem teenager) to be psychologically unhealthy solely on the basis of limited information on family background. Specifically, compared with non-COAs, COAs were viewed as (1) cut off from sources of support, (2) unhappy with the quality of their lives, (3) pessimistic about their future, (4) functioning as a low psychological level, (5) likely to be abusing alcohol or other drugs, (6) having numerous school problems, and (7) being unpopular with their peers. The future for COAs was equally negative, although the mental professionals generally believed that COAs could become "normal" after receiving psychotherapy.

Conclusions. Although the appearance of the children of alcoholics movement has enabled many people to identify a cause for their distress and to take action, there is potential harm in labeling persons COAs, particularly those who exhibit healthy and adaptive behaviors. COAs may experience peer rejection, which may result in depression, lowered self-esteem, and possibly seeking acceptance with deviant peers. The result is a self-fulfilling prophecy. Mental health professions, assuming that COAs are deviant, may subject them to unnecessary treatment. While labeling can be beneficial, it can also have negative consequences, which mental health professionals should be aware of in making decisions about psychological interventions with children whose parents are alcoholics. The focus should be on actual behavior in need of attention rather than expected behavior.

CLAIR, DAVID, AND GENEST, M. 1987. Variables associated with the adjustment of offspring of alcoholic fathers. *Journal of Studies on Alcohol* 48(4):345-355. 47 refs.

Variables were examined that may account for the fact that some children of alcoholics appear relatively invulnerable to the stressors and ill effects of having an alcoholic parent, whereas others are dysfunctional. Potential moderating variables were examined for their roles in buffering the stress of parental alcoholism. The study hypothesized that family environment, social support, and coping behaviors would have additive roles in accounting for the variability in subjects' reactions to the stresses of parental alcoholism. Coping was of particular interest in this study because it can be considered a moderator over which the individual has some control.

The sample consisted of 30 offspring of alcoholic fathers and nonalcoholic mother and 40 offspring of nonalcoholic parents aged 18-23. Subjects were asked to report retrospectively on their family environments, social supports, and coping behaviors used in response to specific problems situations when they were between the ages of 13 and 18 years of age. Women were overrepresented in this study.

Respondents were asked to complete the following instruments: The Family Environment Scale (FES) that assessed relationship dimensions, personal growth dimensions, and system maintenance dimensions; the Dimensions of Social Support Scale (DSSS) that assessed the informational and emotional support received by subjects; the Ways of Coping checklist that assessed coping strategies used to deal with problems resulting from parental

alcoholism; the Depression-Proneness Rating Scale (DPRS) that assessed proneness to moderated depressive episodes, rather than current depression of clinical severity; and the Tennessee Self-Concept Scale (TSCS) that assessed positive and negative self-perceptions.

Findings. Children of alcoholics had lower scores than the comparison group on the FES sub-scales of cohesion and intellect-cultural orientation and higher scores on the conflict sub-scale. Offspring of alcoholics did not, however, score lower on the sub-scales measuring expressiveness and recreational-operation.

Data from the DSSS indicated that both the offspring and the comparison group scores were similar on the emotional support scale, but offspring reported less information support than the comparison group.

From the Ways of Coping checklist, the offspring group indicated a greater tendency to appraise problem situations in their families as unchangeable or as requiring acceptance. Offspring also had a higher mean endorsement rate on the emotion-focused coping category (directed at reducing emotional distress) than on the problem-focused coping category (directed at changing the situation) Comparison subjects, on the other hand, did not differ on the two categories. Children of alcoholics also endorsed all the avoidance-escape strategies with the exception of medication more frequently than did the comparison subjects. Offspring of alcoholics had higher scores on depression-proneness, but did not differ from the comparison subjects in terms of their scores on social self-esteem, general maladjustment, and total self-esteem.

Multiple regression analysis found that approximately 50% of the variance in depression-proneness and 40% of the variance in self-esteem could be accounted for by a combination of family environment, social support, and coping variables. This suggests the need for a multivariate approach to understanding the functioning of COAs.

Conclusions. Children of alcoholics reported considerably more disruption in their family environments than did the comparison subjects. Alcoholic families were seen as less cohesive, less organized, less orientated toward intellectual or cultural pursuits, and more conflict-ridden. Offspring of alcoholics tended to use more emotion-focused than problem-focused coping in response to their problems. While the risks of maladjustment were higher for those raised in alcoholic families, there was a range of adjustment within these offspring. Cohesiveness, expressiveness, and encouragement of the child's independence were associated with positive adjustment. In addition, support, both emotional and informational, was found to be related to adjustment within alcoholic families.

DRAKE, ROBERT E., AND VAILLANT, GEORGE E. 1988. Predicting alcoholism and personality disorder in a 33-year longitudinal study of children of alcoholics. *British Journal of Addiction* 83:799-807. 38 refs.

This study examined five questions related to the effect of COA status on adolescent adjustment and on adult alcoholism and personality disorder: (1) What adjustment problems do nondelinquent adolescent COAs exhibit compared with their peers? (2) In what ways are these adjustment problems related to family disruptions? (3) What are the influences of COA status on adult alcoholism and personality disorder? (4) What factors in adolescence predict adult alcoholism (DSM-III criteria) among COAs? (5) What factors in adolescence predict adult personality disorder (DSM-III criteria) among COAs?

The subjects consisted of 174 males with biological fathers identified as alcohol abusers. They were selected from a sample of nondelinquent men who had participated since about age 14 in a 33-year longitudinal study of alcoholism. Subjects without alcoholic fathers served as controls (n=282). Variables tested as predictors in adolescence of adult alcoholism and personality disorder were familial use of and attitudes toward alcohol, adolescent environment (e.g., socioeconomic status, relationship with mother, relationship with father, parental separation, parental death), and adolescent adjustment (e.g., hyperactivity, IQ, emotional problems, physical health, feelings of inadequacy, and school behavior problems).

Findings. In adolescence, the COA subjects were significantly different from their peers on a variety of characteristics. The COAs were more likely to have alcoholic relatives (in addition to father), to come from a non-Mediterranean background, to have poor relationships with their father and mother, to have disruptions in their lives, to have emotional problems, to have poor competence in age-appropriate skills, and to have school

problems (although they did not demonstrate poor results on intelligence tests or hyperactivity). Measures of poor adolescent adjustment of COAs was most strongly and consistently correlated with having a poor relationship with one's mother.

As adults, the primary negative consequences of COA status was alcoholism, not personality disorder. COAs were more than twice as likely as the controls to receive a diagnosis of alcohol dependence (28% vs. 12%). Over half (58%) of the COAs had not received a diagnosis of alcoholism and another 14% had received a diagnosis of alcohol abuse; comparable figures for controls were 73% and 16%, respectively.

COAs who became alcoholics as adults were more likely than those with no alcoholism to have many alcoholic relatives, to have a non-Mediterranean background, to have a low socioeconomic status, and to have frequent school problems.

Adult COAs were only slightly more likely than controls to have received a diagnosis of personality disorder (25% vs. 23%). Twelve (36%) of the COAs with personality disorder were also alcoholics. Significant predictors of adult personality disorder among nonalcoholic COAs were environmental weakness, poor relationship with mother, low IQ, and feelings of inadequacy.

Conclusions. The finding that poor adolescent adjustment of COAs was most strongly related with having a poor relationship with one's mother suggests the importance of the nonalcoholic parent in protecting (or not protecting) the child from parental alcoholism. This point is reinforced by the finding that the adolescent variables that predicted adult alcoholism did not overlap with those variables that predicted adult personality disorder, except for having a poor relationship with one's mother.

Although COAs were more likely than controls to become alcoholics as adults, their alcoholism was not related to their adjustment problems in adolescence. There was little continuity between poor adolescent adjustment and alcoholism or personality disorder as adults. Even though COAs had more than their share of problems in adolescence, by midlife most had not developed either alcoholism or personality disorder. Healthy adult development appears to be related to several factors: (1) managing to leave the alcoholic environment, (2) leaving the nonalcoholic parent (usually the mother), (3) developing competency at appropriate tasks, (4) experiencing and internalizing healthy relationships, and (5) developing mature defense mechanisms.

EARLS, FELTON; REICH, WENDY; JUNG, KENNETH G.; AND CLONINGER, C. ROBERT. 1988. Psychopathology in children of alcoholic and antisocial parents. *Alcoholism: Clinical and Experimental Research* 12(4):481-487. 32 refs.

Frequency and types of psychopathology were investigated in children of parents with alcoholism and children of parents with antisocial personality disorder. The study sample was drawn from three groups: hospitalized alcoholics, convicted felons, and hospitalized medical controls. The final sample consisted of 69 families and 93 children (age 6-17). Data were collected from structured diagnostic and psychosocial interviews with one of the parents (usually the mother) and with each child in the family in the 6-17 age range; assessment of children also included measures of self-concept, temperament, verbal IQ, and academic achievement.

Two sets of analysis were carried out: frequency of disorder between children with either one or two alcoholic parents (but neither with antisocial personality disorder) and children in nonalcoholic families; and frequency of disorder between children of antisocial parents, children of alcoholic parents, and children of parents with neither diagnosis. Childhood disorders examined were attention deficit disorder with hyperactivity (ADDH), oppositional disorder (OPD), conduct disorder, depression, and anxiety.

Findings. Analysis of general indices of psychopathology indicated that a significantly greater number of mean symptoms and mean diagnoses in children from alcohol families and from antisocial families compared with children from control families. The highest number of symptoms and diagnoses was found in children from families in which both parents were alcoholic and in children from antisocial families (many of which were also alcoholic).

For children from alcoholic homes, the frequency of specific behavioral disorders increased with the number of alcoholic parents. For instance, attention deficit disorder was found in 12% of children with neither parent alcoholic, 21% in children with one parent alcoholic, and 50% of children with both parents

alcoholic. Differences in emotional disorder were not as pronounced.

When control, alcoholic only, and antisocial families were examined, none of the differences in the frequency of specific disorders in children were significant for reports by parents, but for child reports rates for several of the disorders were significant (attention deficit disorder, oppositional disorder, and anxiety). Overall, the proportion of children affected by psychiatric disorder was three times more common in children of antisocial and alcoholic parents than in children of parents with neither disorder based on child reports and twice as common based on parent reports.

Conclusion. The data from this study do not indicate differences in the rates of childhood disorders between alcohol and antisocial parents. Neither did a combination of alcoholism and antisocial personality produce elevated rates over alcoholism alone. What was evident was the effect on childhood disorders when both parents were alcoholic. Either the adverse psychological and social environment in a two-alcoholic family or the increase in genetic loading or both result in a greater risk of the child developing a psychiatric disorder.

ERVIN, CYNTHIA S.; LITTLE, RUTH E.; STREISSGUTH, ANN P.; AND BECK, DON E. 1984. Alcoholic fathering and its relation to child's intellectual development: A pilot investigation. ***Alcoholism: Clinical and Experimental Research*** **8(4):362-365. 27 refs.**

This study explored the possible effects of being raised by an alcoholic father and a nonalcoholic mother on the intellectual functioning and academic achievement of the child. The impact of the biological father's drinking before conception is considered.

The subjects consisted of 50 children raised for at least part of their lives by alcoholic fathers and 50 children raised entirely by nonalcoholic fathers. The children ranged in age from under three to 15 and older, but most were aged 6-14 years. The children were administered the Bayley Scales of Infant Development, the Stanford-Binet, the Wechsler Intelligence Scale for Children-Revised, the Wechsler Adult Intelligence Scale, and the Wide Range Achievement Test.

Findings. Intellectual and academic functioning was found to be significantly related to the presence of an alcoholic father in the home. All sub-tests IQ scores were lower for offspring raised by alcoholic fathers. The differences in intellectual functioning persisted regardless of child's race, sex, birth order, family socioeconomic status, maternal smoking in pregnancy, mother's age at birth, or parental education. The disruptive and chaotic nature of an alcoholic home has been suggested as sources of stress for children, which in turn may affect cognitive performance.

GFROERER, JOSEPH. 1987. Correlation between drug use by teenagers and drug use by older family members. ***American Journal of Drug and Alcohol Abuse*** **13(1/2):95-108. 17 refs.**

This study examines the relationship between drug use by teenagers and by older family members (parent or older sibling), with particular reference to alcohol, cigarettes, marijuana, and cocaine. The data were derived from youth-adult pairs in the 1979 and 1982 National Survey on Drug Abuse, which is a survey based on a national probability sample of households. The youth were age 14 to 17, the older siblings were age 18 to 25, and the parents were age 30 to 64. The sample for analysis consisted of 1,177 youth-adult pairs (303 fathers, 450 mothers, and 424 older siblings). The relationship between teenage and adult drug use was tested for significance after controlling for age of youth, geographic region, and population density.

Findings. The results indicated strong positive correlations between drug use by youths and drug use by fathers, mothers, and older siblings. If a parent or older siblings use drugs, the youths were also likely use drugs. The strongest and most consistent relationship was that between marijuana use by youth and marijuana use by adult. The weakest relationship was for cocaine; youth cocaine use was not significantly related to drug use by fathers or older siblings, but it was related to drug use by mothers. (Only lifetime use of marijuana for mothers and fathers was used in the analysis, so it is possible that in many cases the use occurred before the youth was born.)

Few differences were found for teenage boys and girls. Also, most of the relationships between teenage and adult drug use remained unchanged when family circumstances were included in the analyses as controls.

The likelihood of a teenager using marijuana at least once increased with the number of days in the past month that the fathers and

mothers used alcohol and with the number of days that the older siblings used marijuana. Cigarette use by youth was correlated with the number of days of marijuana use by older siblings, and moderate alcohol use by youth was correlated with the number of days of alcohol use by older siblings.

Conclusions. The results suggest that the social learning process plays a major role in influencing youth to initiate and continue drug use. There is some evidence of a "generalized imitation" by youth of older adult behavior, which is specific to a particular drug and which occurs for mothers, fathers, and older siblings. For marijuana, however, there does appear to be a direct influence of parental use on teenage use. The results also suggests that even infrequent use of drugs by parents and older siblings may influence teenagers to experiment with drugs. Though a variety of other possible influences on teenage drug use (e.g., peer influences) were not investigated in this study, the results suggest that abstention from alcohol, cigarette, and marijuana use by parents and older siblings would help prevent drug use by teenagers.

HEGEDUS, ANDREA M.; ALTERMAN, ARTHUR I.; AND TARTER, RALPH E. 1984. Learning achievement in sons of alcoholics. *Alcoholism: Clinical and Experimental Research* 8(3):330-333. 12 refs.

This study sought to determine whether the academic underachievement of sons of alcoholic fathers observed in a previous study (Tarter, Hegedus et al. 1984) was related to cognitive impairment or to other factors (family disruption, psychopathology, or adolescent deviancy). The subjects consisted of 16 adolescents (mean age 16 years) who had been referred by juvenile court for psychiatric evaluation and who had alcoholic fathers; they were compared with 25 adolescent delinquents whose fathers had no apparent history of alcoholism. None of the adolescents in either group had a history of substance abuse. Subjects completed a battery of tests that measured neuropsychological capacity, educational achievement, behavioral disorder, psychopathology, and family environment.

Findings. The sons of alcoholics scored significantly lower than the sons of nonalcoholics on indices of academic achievement (Peabody Individual Achievement Test), even though both groups were equivalent on intellectual ability. Correlations computed between the academic achievement scores and a Family Environment Scale indicated that perception of the family as being organized was positively related to academic performance. Psychopathology was measured by scores on the MMPI; results showed that subjects who viewed themselves negatively or whose responses indicted deviancy had low academic achievement scores. On the measure of behavioral disorder, academic achievement scores were significantly correlated with the Emotional Distance and the Bizarre Speech and Cognition scales. Finally, the Pittsburgh Initial Neuropsychological Test System was used to determine cerebral dysfunction and its relation to academic achievement. Significant positive correlations were found between academic achievement scores and measures of language processes, memory, visuospatial capacity, and perceptual-motor capacity.

Conclusions. Underachievement in sons of alcoholics was most strongly related with neuropsychological capacity, but family organization and emotional stability were also important. Since none of the sons of alcoholics in this study had a history of alcoholism, it appears that certain cognitive impairments, which have been attributed to the effects of alcohol abuse, may precede the onset of drinking. Although the risk for alcoholism may be associated with cognitive impairment, additional research that controls for hereditary and environmental influences is needed to determine the cause of the cerebral deficit.

JACOB, THEODORE, AND LEONARD, KENNETH. 1986. Psychosocial functioning in children of alcoholic fathers, depressed fathers and control fathers. *Journal of Studies of Alcohol* 47(5):373-380. 24 refs.

A considerable body of clinical literature suggests that many children of alcoholics have severe psychological impairment and social maladjustment, but little methodologically sound empirical research exists to confirm this. This study examined the psychosocial and academic functioning of children of alcoholic fathers who were not in treatment. The families of the children had been intact for at least five years, and neither parents currently exhibited psychiatric disorders. The COA group was compared with a group whose fathers were depressed and with a control group in which the father was a social drinker who did not exhibit depression. Data were gathered from 134

families (43 alcoholic fathers, 46 depressed fathers, and 45 control fathers), and from 296 children in those families (100 children of alcoholics, 36 children of depressives, and 105 children of controls). Both parents and teachers of the children completed instruments that measured social competence, behavior problems, and learning disabilities. Separate analyses were conducted for boys and girls.

Findings. On the basis of parents' reports, sons of alcoholics and depressives scored higher than sons of controls on measures of Total Behavior Problems, Number of Problems, and Internalizing. Sons of alcoholic fathers were not significantly different from sons of depressed fathers. Older sons of alcoholics (over 12 years old) were rated higher on delinquency than were older sons of depressed or control fathers. On the Total Social Competency score, sons of alcoholics and of depressives rated lower than sons of controls.

For daughters, significant group differences were found for Total Behavior Problems, Number of Problems, Internalizing, and Externalizing, with the daughters of alcoholic and of depressed fathers scoring higher than the daughters of controls. On each of these four scales, daughters of depressed fathers were rated higher than daughters of alcoholics. Age comparisons also yielded significant differences between the three groups. Younger daughters of depressed fathers had higher scores on Social Withdrawal, Somatic Complaints, Hyperactivity, Sex Problems, and Aggressive than daughters of the other two groups. Younger daughters of alcoholics had higher scores than daughters of controls on Social Withdrawal, Schizoid-Obsessive, Hyperactive, and Aggressive. Among older daughters, significant differences were found between the three group on four scales: Anxious-Obsessive, Depressed-Withdrawal, Immature-Hyperactive, and Aggressive, with daughters of depressed fathers scoring higher than daughters of alcoholics and controls and daughters of alcoholics scoring higher than daughters of controls. Deficits in social competency were found only among the younger daughters of depressed fathers.

Despite differences on several of the scales among the three groups, most of the children would not be regarded as clinically impaired. In an examination of those families in which at least one child was rated as severely impaired (two standard deviations above the mean on the Total Problem Behavior score), it was found that 23% of the alcoholic fathers had an impaired child, as did 15% of the depressed fathers; none of the control fathers had an impaired child. In relation to all of the children examined, 13% of the children of alcoholics, 8% of the children of depressives, and none of the children of controls were rated as severely impaired. The most severely impaired children, however, had fathers who experienced both serious problems with alcohol and high levels of psychopathology; their mothers also had high levels of psychopathology.

Teacher ratings of the children did not differentiate either the sons or the daughters of alcoholics, depressives, or controls.

Conclusions. The main conclusion of this study was that the degree of impairment of children of alcoholics, according to parent reports, was substantially less than that reported in the clinical literature. Both children of alcoholic fathers and children of depressed fathers experienced more problems and manifested fewer social competencies than children of fathers who were not depressed and who were social drinkers. For specific problems, younger sons in the three group did not differ, while older sons differed only with respect to delinquency; both younger and older daughters of alcoholics and depressives exhibited problems in a variety of areas. The differences that were observed, even though significant, were seldom large, and the mean scores were in the normal range. With the exception of a small minority of children, the problems exhibited by children of alcoholics and depressives were neither severe nor pervasive. Severe impairment in children of alcoholics was more likely when the father had frequent alcohol problems and a high level of psychopathology and when the (nonalcoholic) mother also had severe psychopathology. It is likely that a mother who is competent and less distressed can compensate for the lack of an appropriate paternal role model.

JOHNSON, JEANNETTE L., AND ROLF, JON E. 1988. Cognitive functioning in children from alcoholic and non-alcoholic families. *British Journal of Addiction* 83(7):849-857. 36 refs.

Results from studies of cognitive functioning in children of alcoholics have presented inconsistent results, with some studies showing lowered levels of intellectual functioning compared with children from nonalcoholic homes and others finding no significant differences

between the two groups. This study examined both academic abilities and intellectual functioning in children from alcoholic and nonalcoholic families from middle-class backgrounds. Participants ranged in age from 6 to 18 years; 50 were children of alcoholics (mean age 13.0 years) and 48 were children of nonalcoholics (mean age 13.4 years). The groups did not differ in their use of alcohol and other drugs.

Parents of the children provided data on demographic information, alcohol and drug use history, and home environment. All of the alcoholic parents had been in recovery for at least six months. Cognitive functioning of the children was assessed through instruments completed by both the children and their mothers. The children completed four instruments: the Wide Range Achievement Test (WRAT), the WISC-R or the WAIS, the Perceived Competence Scale for Children--Child Version, and the Project Competence Child Interview. Mothers completed three instruments: the Child Behavior Checklist, the Parent Questionnaire, and the Perceived Competence Scale for Children--Parents Version. Only measures related to learning, cognitive performance, or learning problems from the various instruments were analyzed.

Findings. No significant differences between the children of alcoholics and children of nonalcoholics with respect to IQ or basic academic skills (reading, spelling, and arithmetic). All scores fell within normal range.

Compared with children of nonalcoholics, children of alcoholics liked school less, were less likely to say they were doing as well as they could in school, and indicated lower self-estimates of their cognitive competence.

Mothers' reports of their children's academic and cognitive abilities indicted significantly lower scores on school competence and cognitive competence.

For both groups, mothers' perceptions of their children's cognitive competence was significantly and positively correlated with the children's actual performance. The correlation between children's perceived competence and actual performance differed for the two groups. For children of nonalcoholics, the relationship was significant and positive, but for children of alcoholics, the relationship for most of the scores on the WISC-R or WAIS and the WRAT was not significant.

Conclusions. Unlike previous reports, this study did not find significant differences between children of alcoholics and children of nonalcoholics on measures of IQ and academic performance. All of the children for this study came from middle-class homes, were not delinquents or substance abusers, and did not have a history of maternal drinking during pregnancy. It may be that previous studies reporting cognitive differences were measuring the effects of socioeconomic status or sampling heterogeneity rather than the effects of family alcoholism. The fact that the sample consisted of children of *recovering* alcoholics may also have affected the results. The results obtained in this study may also be explained by the fact that the type of parental alcoholism in the sample can be characterized as "milieu-limited," which describes those alcoholism with mild alcohol abuse and minimal criminality.

Significant differences between the two groups were found for perceptions of these abilities by mothers and their children, with lower scores being recorded by children of alcoholics and their mothers. Presumably, this belief in lack of cognitive competence affects motivation, self-esteem, and future performance in the child. The results of this study, as well as the inconsistent findings of previous studies, suggest that the focus on cognitive functioning as a single risk for alcoholism should be questioned. It may be that cognitive performance operates in different people or at different times as a risk factor for alcoholism.

JOHNSON, JEANNETTE; BONEY, T.; AND BROWN, B. 1991. Evidence of depressive symptoms in children of substance abusers. *International Journal of the Addictions* 25(4A):465-479. 50 refs.

The affective and academic functioning of children of substance abusers were investigated as possible precursors to alter substance-abusing behavior. Thirty-five children of substance abusers and 37 children of non-substance abusers were compared on measures of depression, state and trait anxiety, and three standardized measures of academic ability reading, spelling, and arithmetic). Children of substance abusers scored significantly lower on depression, trait anxiety, and arithmetic. This suggests potential risks for psychological difficulties, especially affective and academic problems. Immediate efforts to intervene on behalf of these children appear warranted. Intervention strategies need to be developed for use with children that avoid the risk of negative labeling. This can be done in the context of providing family

services to parents already in drug abuse treatment programs to improve parenting practices and modify children's inappropriate behaviors.

MANNING, D. THOMPSON; BALSON, PAUL M.; AND XENAKIS, STEPHEN. 1986. The prevalence of Type A personality in the children of alcoholics. *Alcoholism: Clinical and Experimental Research* 10(2):184-189. 32 refs.

Type A personality is a behavior pattern that involves "a relatively chronic struggle to achieve a serious of poorly defined goals in the shortest period of time possible and is marked by competitive achievement, striving, time urgency, impatience, aggression, and hostility." This personality type has been found in children as young a five years old. Clinical observation has found a high incidence of Type A behavior in children of alcoholics, notably in those who assume the role of "Family Hero." It is assumed that both Type A personalities and COAs have a strong need to control their environments.

This article reports on three studies conducted in order to determine whether the high prevalence of Type A personality in children of alcoholics could be established empirically. Two of the studies assessed traits associated with type A behavior (competition and impatience-aggression) using the Matthews Youth Test for Health (MYTH), which is given to nonalcoholic parents to rate their children's behavior. The third study used the Hunter Wolf A-B Rating Scale, which is completed by the children themselves, to obtain measures of energy, impatience-aggression, leadership, and alienation.

Findings. *Study 1*. Mothers enrolled in a treatment for spouses of alcoholics completed a separate MYTH for each of their children aged 5-17. There were 21 COA families and 46 children. The comparison group consisted of 65 children of 41 mothers who were attending an evening public school meeting. Both groups consisted of white, blue-collar families.

Analysis of the data revealed no significant differences between the COA children and the controls by age, sex, or birth order. The mothers of COAs rated their children significantly higher on impatience-aggression than did mothers of controls; the difference on competition was not significant.

Study 2. The first study was replicated using recovering alcoholic fathers. The treatment groups consisted of children of alcoholic fathers enrolled in a military alcohol treatment program. Controls were drawn from soldiers who were not identified alcoholics but involved in a different study on adult alcoholism. In all, 58 alcoholic and 81 control soldiers completed the MYTH for 95 COA and 143 control children.

No significant differences were found between the COA and the control children on either of the MYTH subscales or on the total score. On the competition subscale, first-born COAs scored significantly higher than later-born controls.

Study 3. In the third study, 35 children (ages 4-12) from white, middle- and upper-middle class alcoholic parents involved in a recovery program completed the Hunter-Wolf A-B Rating Scale. A similar number of controls completed the same instrument.

No significant differences between the two groups were found by alcohol condition, sex, or birth order.

Conclusion*s*. The three studies offered limited support for the observation in clinical literature that COAs exhibit high prevalence of Type A behavior. With one exception, no significant differences between COAs and controls were found for Type A traits, whether rated by nonalcoholic mothers, recovering fathers, or children. The exception was mothers' rating of impatience-aggression. Also, it was found that first-born COAs were no more likely to exhibit Type A personality than were other COAs, which is contrary to statements found in the clinical literature. Further work to clarify the effect of parental alcoholism on children's personality would benefit from investigating subgroups of COAs, the type of alcoholism in the parent, and the reaction of the spouse to the parent's alcoholism.

MARCUS, ADRIENNE M. 1986. Academic achievement in elementary school children of alcoholic mothers. *Journal of Clinical Psychology* 42(2):372-376. 10 refs.

Most research on the academic achievement of children of alcoholics has focus on the offspring of alcoholic fathers, with little attention being given to children of alcoholic mothers. To correct this lack, the present study compared the academic achievement of elementary children with alcoholic mothers with children with nonalcoholic mothers. The alcoholic

mothers were not necessarily currently drinking, but reported having had a problem with alcohol at some time the child's lifetime. The experimental group (n=40) and control group (n=40) were assessed for academic achievement using the Peabody Individual Achievement Test (PIAT). The mothers provided demographic information, pregnancy history, child's school history, maternal drinking history, and present drinking practices. The mothers were mainly white, well-educated, and middle to upper class.

Findings. Children of alcoholic mothers scored significantly lower on the Mathematics, Reading Recognition, and Reading Comprehensive subtests and on the Total Test on the PIAT than did the control group. Scores on Spelling and General Information were not significantly different between the two groups.

Conclusions. While this study indicated lower academic achievement among elementary-aged children of alcoholic mothers compared with children with no history of maternal alcoholism, the possible covariates and causes of this poorer performance remain to be studied, such as family structure, cognitive impairment, and fetal alcohol syndrome.

MERIKANGAS, KATHLEEN R.; WEISSMAN, MYRNA M.; PRUSOFF, BRIGITTE A.; PAULS, DAVID L.; AND LECKMAN, JAMES F. 1985. Depressives with secondary alcoholism: Psychiatric disorders in offspring. *Journal of Studies of Alcohol* 46(3):199-204. 36 refs.

Because of the familial nature of both alcoholism and depression, offspring of parents with either disorder have been identified as being at high risk for developing these illnesses. This study compared the rates of psychiatric illness among the offspring of parents with major depression in order to focus on the risk of depression and alcoholism in the offspring of depressed parents with secondary alcoholism.

Patients at the Yale University Depression Research Unit were divided into two groups: mildly depressed (n=89) and severely depressed (n=44). The depressed subjects were also classified according to the presence or absence of alcoholism. In addition, 82 controls with no history of psychiatric illness were matched with depressed subjects on the basis of sex and age. There were a total of 1,331 adult first-degree relatives of the study participants. Each was interviewed using a modified Schedule for Affective Disorders and Schizophrenia. A different methodology for diagnosis was used to elicit information from children aged 6-17 of the subjects.

Findings. The subjects with depression only were no more likely to transmit alcoholism to their offspring than were the controls. In addition, subjects with depression plus secondary alcoholism did not convey a greater risk of major depression or anxiety disorders to their offspring over the age of 18 than did subjects with depression alone. However, offspring of the secondary alcoholics had a three times greater risk of alcoholism than did offspring of subjects with depression alone; they also had a five times greater risk of antisocial personality. Offspring had a two-fold greater risk of alcoholism and a three-fold greater risk of antisocial personality-conduct disorder when both parents were alcoholics than when only one parent was affected.

Conclusions. This study indicates that alcoholism in both parents is a potent risk factor for the development of alcoholism and antisocial personality-conduct disorder in offspring. Whether the increased incidence of disorders results from increased genetic loadings or detrimental environmental factors could not be determined from this study.

PANDINA, ROBERT J., AND JOHNSON, VALERIE. 1989. Familial drinking history as a predictor of alcohol and drug consumption among adolescent children. *Journal of Studies on Alcohol* 50(3):245-253. 43 refs.

Male and female adolescents from families with histories of alcohol-related problems (FH+) were compared with three other adolescent groups from families with no such drinking histories (FH-) on a broad array of drinking behaviors. It was hypothesized that FH+ subjects would exhibit earlier onset of drinking, more intensive drinking, and a more extreme pattern of adverse consequences from drinking. It was also hypothesized that these differences would be more apparent among male than female subjects.

The sample consisted of adolescents (n=1,308) in New Jersey involved in a longitudinal study of alcohol and drug use. They were first interviewed when they ages 12, 15,

or 18, and reinterviewed three years later. On both occasions, subjects completed questionnaires eliciting information about the adolescent's self-reported drug and alcohol use, parental drinking and drug-taking behaviors, and family disease, disorders, illness, and treatment history.

Participants were classified into one of four groups based on parental drinking patterns and history: (G1) history of alcoholism in the family and/or past treatment for alcoholism and/or alcoholism as a factor of divorce; (G2) father/mother reports high quantities/frequency of alcohol use and/or parental frequency/patterns are perceived as high or heavy; (G3) no above criteria are met but history of ulcers in the family and/or history of "nervous breakdown" or "treatment for depression" in the family; and (G4) no risk criteria met.

Findings. No risk group or gender differences were found in the age at which subjects first experienced intoxication for the youngest or middle age cohorts. Only gender differences were found for the oldest age cohort at both Times 1 and 2. Gender effects were found for both number and frequency of intoxication episodes among the oldest cohort at Times 1 and 2. Use of alcohol and other drugs as a means of coping with problems and life stresses did not appear to discriminate between subjects with varying parental histories of alcohol use. Significant differences in the number of consequences of alcohol use were found as a function of gender for the oldest and middle cohorts and as a function of risk group membership on several consequences subscales. From the longitudinal analyses, there appears to be a shift in risk group membership from Time 1 to Time 2. Most of this shifting was evident as an exodus of G2 youth into G4.

Conclusions. Contrary to the hypothesis, the emergence of intensive or problematic drinking among FH+ adolescents was found to be relatively weak. It also appears that the transition from late adolescents to early adulthood (18 to 21 years) may be a critical period during which FH+ individuals may begin to exhibit reliable differences in a least some important markers of problematic drinking.

PANDINA, ROBERT J., AND JOHNSON, VALERIE. 1990. Serious alcohol and drug problems among adolescents with a family history of alcoholism. *Journal of Studies on Alcohol* 51(3):278-282. 27 refs.

Most studies that have found that children of alcoholics are at high risk for alcoholism and alcohol-related problems are based on clinical samples of adults and (less often) adolescents. This study sought to determine, using a general population sample of adolescents and young adults, the extent of serious alcohol- and drug-related problems in individuals with a family history of alcohol compared with those without such a history.

Data were collected as part of a prospective longitudinal study (the Rutgers Health and Human Development Project), with the subjects (n=1,380) being initially tested between 1979 and 1981 (Time 1) at ages 12, 15, and 18. The subjects were retested in 1982-84 (Time 2) and again in 1985-87 (Time 3). Nearly all (92%) of the subjects were tested at all three times. Subjects completed self-report questionnaires that asked about family alcoholism (parents also provided such information), current alcohol and marijuana use, and problems associated with drinking or drug use (including treatment).

Findings. Out of the total sample, 7.5% reported that they had an alcohol or drug problem or had been in treatment. Twice as many subjects with a family history of alcoholism reported alcohol or drug problems as did those without such a history (12% vs. 6%). Subjects in both groups were as likely to have a serious drug or combined alcohol-drug problem as to have a problem with alcohol only. Among COAs, females were more likely than males to report alcohol-only problems, whereas among non-COAs, males were at least three times as likely to report any type of substance use problem as females.

When siblings who experienced alcohol or drug problems (as reported by the subject) were included, a substance use problem was reported for over 20% of subjects and/or siblings in the family alcoholism group, but in only 10% of families without a history of alcoholism.

No significant differences were found between the two groups in frequency of alcohol or marijuana use, in frequency of problems associated with either substance, or in the degree

to which alcohol or marijuana were used to cope with problems.

Conclusions. Adolescents and young adults with alcoholic parents were twice as likely to report serious alcohol or drug problems as those without alcoholic parents, but the two groups did not differ on rates of use or in the frequency of consequences of use. Although the number of problems increased with age, the age of onset of problems was the same in both groups. Female COAs were as likely to report serious abuse problems as male COAs, whereas such problems among female non-COAs were much lower than among the other groups. While COAs were found to be more likely to have problems associated with alcohol or marijuana, a large majority (88%) of COAs did not qualify under the study criteria as experiencing serious substance problems. At the same time, 6% of the non-COAs reported problems with alcohol or marijuana that were as severe as those reported by affected COAs.

REICH, WENDY; EARLS, FELTON; AND POWELL, JACK. 1988. A comparison of the home and social environments of children of alcoholic and non-alcoholic parents. *British Journal of Addiction* 83(7):831-839. 55 refs.

This study examined the home and social environments of children of alcoholic parents to identify factors that place them at greater risk for chiidhood psychopathology, alcoholism, or both; protective factors in the home environment were also examined. The sample consisted of 32 children with one or both parents alcoholic and 22 children with neither parent alcoholic; the age range was 6 to 17. Data came from children's responses on the Home Environment Interview for Children and from the Diagnostic Interview for Children and Adolescents.

Findings. Children of alcoholic parents differed significantly from those with neither parent alcoholic on five measures reflective of a poorer home environment: greater exposure to parental drinking, parents viewed as poorer role models, more physical and emotional abuse, more child-parent conflict, and more marital conflict.

Children in both groups were divided into "well" and "disturbed," based on whether or not they had at least one major DSM-III diagnosis. Alcoholic families with disturbed children were significantly more likely than alcoholic families with well children to have greater exposure to parental drinking, poorer parent-child relations, and greater parent-child conflict. No significant differences were found in home environment between the well and the disturbed children of nonalcoholic families.

Protective factors against the development of childhood psychiatric disorders among children of alcoholics included absence of parent-child conflict, not being exposed to parental drinking, and having positive parent-child interaction. Contrary to expectations, well and disturbed children from alcoholic families did not differ on peer relations, school performance, or participation in extracurricular activities; nor did children of alcoholic parents differ from children of nonalcoholics with respect to coping skills.

Conclusions. Although children of alcoholics are at high risk for developing alcoholism, childhood behavior disturbances adds an additional risk burden. In general, homes with an alcoholic parent were found to function more poorly than homes without an alcoholic parent. Further, three factors seem to place children of alcoholics at greater risk for psychopathology: exposure to parental drinking, a low level of parent-child interaction, and a high level of parent-child conflict.

RHODES, JENNIFER, AND BLACKHAM, GARTH J. 1987. Differences in character roles between adolescents from alcoholic and nonalcoholic homes. *American Journal of Drug and Alcohol Abuse* 13(1/2):145-155. 26 refs.

On the basis of clinical theory and family systems theory, Black (1981) identified four roles that children of alcoholic parents develop in order to cope with stress, unpredictability, and inconsistency of their families. The roles are responsible child, placater, adjuster, and acting-out child. To examine the validity of these roles empirically, this study sought to determine whether adolescent children of alcoholics (COAs) were more likely than controls to perceive themselves as exhibiting one or more of the four roles.

The subjects consisted of two groups of high school students, both of whom completed the Children of Alcoholics Screening Test (CAST). The COA group included 32 students who scored 6 or more on the CAST, while the control group consisted of 32 students who scored 0 on the CAST. All students

completed the Children of Alcoholics Family Role Instrument (CAFRI), which was developed for this study in order to measure behaviors and attributed that are characteristics of the four COA roles.

Findings. Only for the acting-out role did the COA subjects score significantly higher than the controls. For the placater and the adjuster roles, the differences approached significance, with the COA subjects again scoring higher. There was virtually no difference between the two groups for the responsible child role. Neither birth order nor age was significantly associated with role behaviors. Females had significantly higher mean ratings than males for the placater role.

Conclusions. With the exception of the responsible child role, the results were in the expected direction, although only for the acting-out role did COAs rate themselves significantly higher than adolescents from nonalcoholic families. The literature provides support for a high prevalence of acting-out behaviors among COAs, such as school problems, aggression, and antisocial behavior, and for the importance of the role (sometime called the scapegoat) in dysfunctional families generally. Black also postulates that while the COA may take on a combination of the other three roles, the acting-out role tends to be adopted singly. The fact that females were more likely than males to perceive themselves in the placater role probably reflects the effects of socialization rather than of family alcoholism. Finally, failure to find birth order effects conflicts with the theory of Black and others that the roles adopted by children in alcoholic families are affected birth order.

ROLF, JON E.; JOHNSON, JEANNETTE L.; ISRAEL, ELIZABETH; BALDWIN, JULIE; AND CHANDRA, ANJANI. 1988. Depressive affect in school-aged children of alcoholics. *British Journal of Addiction* 83:841-848. 25 refs.

Depressive affect in young children of alcoholics (COAs) was studied in 50 COAs and 48 children of nonalcoholic families. The average age of the children was 13.2 years, with a range of 6 to 18 years. The alcoholic parents were in recovery at the time of the study and were not drinking. None of the parents in the control group were heavy drinkers, problem drinkers, or alcoholics. Depressive affect in the children was measured by two rating inventories completed by the mothers and by two self-report inventories completed by the children.

Findings. All of the ratings indicated that the children of alcoholics had more problems with depressive affect than the children from nonalcoholic families. For both boys and girls, mothers of COAs reported a significantly greater number of depressive symptoms for their offspring than did mothers of nonalcoholic children. Similarly, COAs reported significantly more self-perceived depression symptoms than did control children.

ROOSA, MARK W.; GENSHEIMER, LEAH K.; SHORT, JEROME L.; AYERS, TIM S.; AND SHELL, RITA. 1989. A preventive intervention for children in alcoholic families: Results of a pilot study. *Family Relations* 38(3):295-300. 60 refs.

Using a stress process model to understand the risk status of children of alcoholics for mental health problems, the authors developed a school-based prevention curriculum for children of alcoholics. The program, called the Stress Management and Alcohol Awareness Program (SMAAP), is conducted over eight sessions and addresses five areas believed to be relevant to at risk children in upper elementary grades: alcohol knowledge, self-esteem, emotion-focused coping, problem solving, and social support seeking. The general purpose of the program is to teach children from alcoholic families how to reduce the stress they experience in particular situations and to enhance their self-esteem.

Three elementary schools participated in the pilot study of SMAAP. Students in all fourth, fifth, and sixth classrooms at the schools viewed a film about alcoholic families (Lots of Kids Like Us) and afterwards were invited to attend a discussion of the film and a related program (SMAAP) that would be offered in the school. Parental permission was received for those children who wished to participated in the program. Children were randomly assigned to intervention (n=26) or control (n=55) groups. In addition, at one school, the program included a "Personal Trainer" component in which children (n=10) were matched with an adult who visited the school weekly and helped the child learn a skill of the child's choosing (this component, however, was not separately evaluated). Before and

after the intervention, the children completed evaluation instruments that measures COA status, self concept, coping behaviors, and emotional adjustment; also, the teacher's of each child completed a questionnaire on the child's classroom behavior at the beginning and at the end of the intervention.

Findings. Over one-half of the students who viewed the film attended the follow-up meeting and one-third of these children obtained parental permission to participate in the program. Eighty percent of the self-selected subjects answered positively to at least one of the screening items indicating that they were concerned about their parent's drinking. Students who participated in the SMAAP groups exhibited an increase in the use of positive coping strategies (social support seeking, problem solving, and emotion-focused coping), whereas the control children showed no change. SMAAP participants experienced a greater (but nonsignificant) drop on depression scores that those in the control group. There was a trend for teacher rating of moodiness to be more positive for children in the SMAAP. Self-concept measures showed no improvement. The results should be regarded as tentative because of the small sample size and the possibility of between school differences and other confounding factors.

Conclusion. The results indicated that the SMAAP curriculum has the potential for being an effective prevention program for children who express concern about their parent's drinking. A more rigorous, large-scale evaluation of the short-term and long-term effects of the program and the program plus the personal trainer component is being conducted. The procedure of showing students a film and inviting them to a follow-up session proved an effective means of attracting at risk children to a prevention program. It is not clear to what extent the screening test was able to accurately identify children whose parents were alcoholics.

ROOSA, MARK W.; SANDLER, IRWIN N.; BEALS, JANETTE; AND SHORT, JEROME L. 1988. Risk status of adolescent children of problem-drinking parents. ***American Journal of Community Psychiatry*** **16(2):225-239. 38 refs.**

Two studies examined the psychological symptoms and drinking behaviors of two groups of high school students. The first group consisted of students (n=208) who completed the Children of Alcoholics Screening Test (CAST). The second group consisted of students (n=75) at five high schools (not including the one used in the first study) who were voluntarily attending support groups for students concerned about chemical abuse problems, mainly alcohol, by parents, siblings, or friends.

Findings. In the first study, on the basis of responses on the CAST, 18% of the students met the criterion for being a child of an alcoholic, which is higher than the traditional national estimate of about 12% (Russell, Henderson, and Blume 1985). The CAST measures the child's concern about his or her parents' drinking, not whether the parents meet the DSM-III criteria for alcoholism, thus the students are more properly labelled "self-identified children of alcoholics." All subjects completed instruments that measured depression, anxiety, self-esteem, and frequency and quantity of alcohol consumption. Compared with their peers, children of alcoholics scored significantly lower on self-esteem and significantly higher on depression; there was a trend for children of alcoholics to drink more than their peers.

In the second study, the students in the support groups completed the same questionnaires as in the first study. Given the self-selected nature of the sample, it is not surprising the 45% were self-identified children of alcoholics on the basis of the CAST scores. In this group, parental drinking status did not significantly differentiate children of alcoholics from their peers in the support groups, although, as in the first study, children of alcoholics tended to drink more than their peers. Children who attended the support groups out of concern over a parent's substance abuse did not experience more psychological problems than those who attended out of concern over the substance abuse of a sibling or a friend, possibly because the children of nonalcoholic parents who attended the group experienced more psychological symptoms than did those who did not attend.

Conclusions. In a general school population, self-identified children of alcoholics experience more depression and have lower self-esteem than their students with nonalcoholic parents, confirming the findings of studies based on children of alcoholic parents involved in treatment. While children of alcoholics in this study were not more likely than their peers

to experience anxiety, they did have a slightly higher level of drinking. The voluntary support groups generally succeeded in attracting high risk students, although there were many who chose not to participate. Self-selection does have the advantage of avoiding the ethical and practical problems involved in referring all students at risk for alcoholism to treatment.

STREISSGUTH, ANN P.; BARR, HELEN M.; SAMPSON, PAUL D.; DARBY, BETTY L.; AND MARTIN, DONALD C. 1989. IQ at age 4 in relation to maternal alcohol use and smoking during pregnancy. ***Developmental Psychology,*** **25(1):3-11. 52 refs.**

IQ was assessed in children who had been who had been exposed to alcohol and tobacco prenatally. The children were subjects in a longitudinal study examining the development of children whose mothers who consumed alcohol during pregnancy. The average amount of alcohol consumed per day, determined by self-report, ranged from 0 to 25.8 ounces (mean of 0.63 ounces, median of 0.17 ounces) before the recognition of pregnancy and from 0 to 8.55 ounces (mean of 0.27 ounces, median of 0.06 ounces) during the initial assessment at the fifth month of pregnancy. In other terms, the average amount drunk was just over one drink per day before recognition of pregnancy and about half a drink per day at the fifth month of pregnancy. Data was also collected on the use of nicotine, caffeine, medicinal drugs, and "street drugs" during pregnancy. The mothers were mainly middle class and well educated.

Two psychometrists, who were blind to the background of the children, administered the Wechsler Preschool and Primary Scales of Intelligence (WPPSI). While the children were being tested, parents filled out a questionnaire providing information on family environment and the child's health history. The final sample analyzed consisted of IQ scores from 421 children.

Findings. IQ scores for this sample ranged from 69 to 151 (mean of 110.5, standard deviation of 14.4). Analysis of the IQ scores in relation to maternal alcohol use and other potentially confounding variables found that alcohol use during pregnancy was significantly correlated with IQ at age 4. Consumption of 1.5 ounces of absolute alcohol per day before the recognition of pregnancy was associated with a mean decrement of 4.80 IQ points and with three-fold risk of subnormal IQ (less than 85). Prenatal alcohol exposure was more strongly associated with performance IQ than with Verbal IQ. Prenatal smoking was not found to be related to IQ.

Conclusions. Although maternal consumption of an average of three drinks per day during pregnancy was significantly associated with IQ scores in children at age 4, this figure should not be taken as indicating a "save" level of alcohol use, since behavioral outcomes that are more sensitive than IQ show effects at lower levels of consumption.

TARTER, RALPH E.; JACOB, THEODORE; AND BREMER, DEBORAH L. 1989. Cognitive status of sons of alcoholic men. ***Alcoholism: Clinical and Experimental Research*** **13(2):232-235. 16 refs.**

This study investigated the cognitive status of male children (8-17 years) of alcoholic men who were not in treatment. The sample consisted of the sons of alcoholic (n=33), depressed (n=30), and normal (n=29) men recruited through newspaper advertisements. Men with antisocial personality disorder were excluded from the study. None of the boys had a history of neurological injury or disease, mental retardation, chronic illness, or psychiatric disorder. Although use of alcohol or other drugs did not preclude the boys from participating in the study, none of them reported problems with alcohol or other drug use. The boys completed a battery of neuropsychological tests to assess intelligence, perceptual efficiency, language, memory, psychomotor skill, attention, and abstracting ability.

Findings. The sons of alcoholic fathers scored significantly lower than the other two groups on seven out of 37 neuropsychological measures; specifically, impairments were found on tests requiring planning ability, psychomotor efficiency, and inhibitory control. Greater back and forth ataxia (upper body sway while standing as still as possible) was also observed in the sons of alcoholic fathers compared with the two other groups.

Conclusions. Although the sons of alcoholics scored lower than sons of normal and depressed fathers, the impairments were not severe, nor was a generalized cognitive impairment in sons of alcoholic fathers con-

firmed. The relatively mild degree of impairment found in this study may be related to the fact that none of the fathers had a diagnosis of antisocial personality disorder, which appears to result in more severe impairment when combined with alcoholism. The types of deficits observed indicates impairment in the ability to plan and self-monitor goal directed behavior and suggest that they may originate in an anterior cerebral dysfunction. The finding of greater static ataxia in sons of alcoholic fathers confirms previous studies and suggests that static ataxia may be a neurological marker for alcoholism.

TARTER, RALPH E.; JACOB, THEODORE; AND BREMER, DEBORAH L. 1989a. Specific cognitive impairment in sons of early onset alcoholics. ***Alcoholism: Clinical and Experimental Research*** **13(6):786-789. 40 refs.**

A variety of neuropsychological instruments were used to compare cognitive and behavioral functioning in school-aged sons of fathers in four groups: early onset alcoholics, late onset alcoholics, normal social drinkers, and depressed fathers. Early onset alcoholics were those who developed alcoholism before the age of 24. The number of biological sons (ages 8-17 years) in each group was as follows: early onset, 16; late onset, 17; normal, 30; and depressed, 29.

The sons completed a battery of intellectual and neuropsychological tests to assess such cognitive abilities and performance as vocabulary, attention, comprehension, motor control and coordination, perceptual decision time, abstracting ability, arithmetic, and concentration.

Findings Subjects in all four groups scored in the normal range of intelligence. Sons of early onset alcoholics had significantly lower verbal IQ scores than sons in the other three groups; they also had significantly lower performance IQ scores than sons of depressed fathers.

The scores from the different neuropsychological measures were subject to factor analysis, which yielded four factors: Factor 1: attention/memory processes; Factor 2: psychomotor skills; Factor 3: perceptual-praxic skill; and Factor 4: nonverbal intellectual ability. Significant differences between the four groups were found only for Factor 1. Sons of early onset alcoholics scored lower than sons of normal fathers on this factor.

Conclusions. Compared with sons of normal fathers, sons of early onset alcoholics exhibited deficits in measures of verbal intellectual ability and attention/memory. The impairment in these areas could lead to problems in school, work, and social life, which in turn could promote alcohol use and abuse. Unlike previous studies, the findings did not support impairments in sons of alcoholics on spatial, abstracting, and praxic abilities, possibly because the fathers were recruited from the community rather than from clinical populations or because none of the fathers were diagnosed with antisocial personality disorder. Also significant is that the sons of late onset alcoholics did not differ from the sons of normal social drinking fathers or from the sons of depressed fathers. In general, the findings support the hypothesis that hyperactivity and impairment in goal-directed behavior are important factors in vulnerability to alcoholism.

WERNER, EMMY E. 1986. Resilient offspring of alcoholics: A longitudinal study from birth to age 18. ***Journal of Studies on Alcohol*** **47(1):34-40. 19 refs.**

Most studies of children of alcoholics (COAs) focus on the problems these children face or on the causal factors that place them at higher risk for alcohol problems or alcoholism. Also, there have been few longitudinal studies of children of alcoholics. The present study examined a group of offspring of alcoholic parents from birth to age 18 to determine the child characteristics and the qualities of the family environment that differentiated those COAs who did and those who did not make successful adjustment during childhood and adolescence.

The sample consisted of 49 youth with alcoholic parents selected from a cohort of 698 Asian and Polynesian children born on the island of Kauai, Hawaii, in 1955. Of these 49 youth, 38 had fathers with serious drinking problems, 6 had mothers with serious drinking problems, and 5 had parents who were both problem drinkers. Three-quarters of these children of alcoholics were raised in chronic poverty. Children and their parents were assessed just after birth and again at ages 1, 2, 10, and 18. Data were gathered through interviews and observations by psychologists, through various psychological and intelligence tests, and through records from schools, social

service and mental health agencies, hospitals, courts, and police.

Findings. Compared with children in the same birth cohort whose parents were not alcoholics, children of alcoholic parents were more likely to develop serious learning and behavior problems. By age 10, nearly a third were in need of long-term remedial education and 8% were in deed of long-term mental health care (compared with 3% of children with nonalcoholic parents). By age 18, nearly three times as many COAs as non-COAs had serious mental problems requiring inpatient or outpatient care (25% vs. 9%). Overall, by age 18, 41% of the COAs had serious coping problems that caused problems at home, at school, at work, or in the community. Yet, 59% of the children from alcoholic families were doing well in school, at work, and in their social life, and had positive, realistic expectations and goals for the future.

Nearly three-fourths of these "resilient" youth were females, while 70% of the problem group were males. While children of alcoholic fathers were as likely to fall in the resilient group as the problem group, all but one of the children of alcoholic mothers developed serious psychosocial problems by age 18. Those whose mothers drank alcohol during pregnancy were particularly likely to experience problems and to exhibit lower academic achievement performance. Thus, boys and children of alcoholic mothers were at higher risk of developing problems of girls and children of alcoholic fathers

Several characteristics of the family environment differentiated COAs who developed problems by age 18 from those who exhibited resilience: (1) much attention from the primary caretaker during infancy and no prolonged separation from the caretaker; (2) no additional births into the family during the first two years of life; and (3) the absence of parental conflict during the first two years of life. A number of behavioral characteristics of the child were also found to distinguish the two groups: (1) a temperament that elicited positive attention from the primary caretakers; (2) at least average intelligence and adequate communication skills; (3) achievement orientation; (4) a responsible, caring attitude; (5) a positive self-concept; (6) a more internal locus of control; and (7) belief in self-help.

Conclusions. Those children who were able to elicit mainly positive responses from those in their family or from other caregivers developed successful coping behaviors that enabled them to handle the stresses of childhood and adolescence, despite living with alcoholism and chronic poverty. By contrast, children who elicited mainly negative responses from their caregivers, particularly when the mother or both parents were alcoholics and there were no adequate substitute parents, were likely to grow up lacking resources to cope with life stresses and consequently developed a variety of psychological, academic, and social problems. Familial alcoholism alone does not determine the psychosocial adjustment of children and adolescents. The lack of knowledge about how these children of alcoholics fared after age 18 when they enter a new stage of life with its own stresses and challenges emphasizes the importance of prospective longitudinal studies (a follow up of this sample at age 30 was being planned).

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Author Affiliations

The following is a list of the institutional affiliations of the first author of the abstracted documents.

Aronson, M.
Department of Pediatrics and Psychology
University of Gotenborg
Gotenborg, Sweden

Bauman, Pamela S.
160 Sir Francis Drake Blvd.
San Anselmo, California 94960

Bennett, Linda A.
Department of Anthropology
Memphis State University
Memphis, Tennessee 38152

Burk, Jeffrey P.
Psychology Service (116B)
Veterans Administration Medical Center
4500 S. Lancaster Road
Dallas, Texas 75216

Clair, David
Department of Psychology
University of Saskatchewan
Saskatoon, Saskatchewan
Canada S7N 0W0

Drake, Robert E.
West Central Community Mental Services
2 Resevoir Road
Hanover, NH 03755

Earls, Felton
Department of Psychiatry
Washington University School of Medicine
4940 Audubon Avenue
St. Louis, Missouri 63110

Ervin, Cynthia S.
Alcoholism and Drug Abuse Institute
3937 15th Avenue NE, NL-15
University of Washington
Seattle, Washington 98105

Gfroerer, Joseph
Division of Epidemiology and Statistical Analysis
National Institute on Drug Abuse
Rockville, Maryland 20857

Hegedus, Andrea M.
Western Psychiatric Institute and Clinic
3811 O'Hara Street
Pittsburgh, Pennsylvania 15213

Jacob, Theodore
Division of Child Development and Family Relations
210 Family and Consumer Resources Building (No. 33)
University of Arizona
Tuscon, Arizona 85721

Johnson, Jeanette L.
NIDA/ARC
P.O. Box 5180
Baltimore, Maryland 21224

Manning, D. Thompson
Associate Professor of Public Health
Alcee Fortier Hall, Room 211
Tulane University
6823 St. Charles Ave.
New Orleans, LA 70118

Marcus, Adrienne M.
The Week-End Center, Inc.
359 Main Street, Suite 2E
Mt. Kisco, New York 10549

Merikangas, Kathleen R.
Depression Research Unit
Department of Psychiatry
Yale University School of Medicine
350 Congress Avenue, A-103
New Haven, Connecticut 06519

Pandina, Robert J.
Center of Alcohol Studies
Rutgers University
Piscataway, New Jersey 08855

Reich, Wendy
Department of Psychiatry
Washington University School of Medicine
4940 Audubon Avenue
St. Louis, Missouri 63110

Rhodes, Jennifer
Biodyne Center
Phoenix, Arizona 85026

Rolf, Jon E.
Department of Maternal and Child Health
School of Hygiene and Public Health
John Hopkins University
615 N. Wolfe St.
Baltimore, Maryland 21215

Roosa, Mark W.
Program for Prevention Research
Department of Family Relations and Human
Development
Arizona State University
Tempe, Arizona 85287

Streissguth, Ann P.
Department of Psychiatry and Behavioral
Sciences
2707 N.E. Blakeley, GG-20
University of Washington
Seattle, Washington 98195

Tarter, Ralph E.
Department of Psychiatry
University of Pittsburgh Medical School
3811 O'Hara Street
Pittsburgh, Pennsylvania 15213

Werner, Emmy E.
Department of Applied Behavioral Sciences
University of California
Davis, California 95616

Organizations, Programs, and Resource Materials

This is a selected list of some of the main sources on services for children of substance abusers. For more information, contact the Children of Alcoholics Foundation, the National Association for Children of Alcoholics, and the National Clearinghouse for Alcohol and Drug Information.

PROGRAMS

CASPAR Alcohol Education Program
(Cambridge and Somerville Program for Alcoholism Rehabilitation)
226 Highland Avenue
Somerville, Massachusetts 02143
617/623-2080

National Elementary School Project for Children of Alcoholics ("It's Elementary")
National Association for Children of Alcoholics
31582 Coast Highway, Suite B
South Laguna, California 92677

Salvin Special Education School
Los Angeles Unified School District
439 West 97th Street
Los Angeles, California 90003
213/754-2854

Stress Management and Alcohol Awareness Program
Program for Prevention Research
Arizona State University
Tempe, Arizona

ORGANIZATIONS

Al-Anon Family Groups
P.O. Box 182
Madison Square Garden
New York, New York 10159
212/683-1771

Children of Alcoholics Foundation, Inc.
1200 Park Avenue
31st Floor
New York, New York 10166
212/351-2680

National Association for Children of Alcoholics
31582 Coast Highway, Suite B
South Laguna, California 92677
714/499-3889

National Association for Perinatal Addition Research and Education (NAPARE)
11 East Hubbard Street, Suite 200
Chicago, Illinois 60611
312/329-2512

National Clearinghouse for Alcohol and Drug Information (NCADI)
P.O. Box 2345
Rockville, MD 20852
301/443-6500

PERIODICALS AND BOOKS

Alcoholism: The National Magazine

COA Review: The Newsletter about Children of Alcoholics

Focus on Family and Chemical Dependency

Student Assessment Journal

Ackerman, Robert J. 1987. *Children of Alcoholics: A Bibliography and Resource Guide*. Pompano Beach, FL: Health Communications.

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Prevention Research Updates

Gregory Austin, Editor
Western Regional Center for Drug-Free School and Communities
Southwest Regional Laboratory

1. ***Prevention Goals, Methods, and Outcomes.*** Gregory Austin. Fall 1988.

2. ***Substance Abuse Among Minority Youth: Native Americans.*** Gregory Austin. Winter 1988.

3. ***Substance Abuse Among Latino Youth.*** Gregory Austin and M. Jean Gilbert. Spring 1989.

4. ***Substance Abuse Among Black Youth.*** Michael Prendergast, Gregory Austin, Ken Maton, and Ralph Baker. Fall 1989.

5. ***Substance Abuse Among Asian Youth.*** Gregory Austin, Michael Prendergast, and Harvey Lee. Winter 1989.

6. ***Substance Abuse Among Juvenile Delinquents and Gang Members.*** John A. Pollard and Gregory Austin. Spring 1990.

7. ***Substance Abuse Among Youth with Disabilities.*** Michael Prendergast, Gregory Austin, and John de Miranda. Summer 1990.

8. ***Young Children of Substance Abusers.*** Gregory Austin and Michael Prendergast. Winter 1991.

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Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
(503) 275-9500
GTE: NWREL.LAB FAX: (503) 275-9489