

## Adult Children of Problem Drinkers in an Urban Community

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In a medium-sized Canadian city, 581 randomly selected households were contacted and responded to a survey on the impact of parental alcohol problems. Twenty-two per cent of the respondents indicated that at least one of their parents had a drinking problem. The biological father was affected in 81%. Compared with the rest of the sample, the adult children of problem drinkers were younger but they did not differ in income or education. Adult children of problem drinkers were more likely to have parents who were divorced or separated; to be divorced, separated, or remarried themselves; to be heavy drinkers and have indications of alcohol problems; and to use more sources of help for problems with stress and anxiety and problems with alcohol. They did not differ from those without parental drinking problems on measures of current positive and negative affect.

The plight of the offspring of alcoholics while growing up is well described in the scientific literature (el-Guebaly & Offord, 1977, 1979; Woodside, 1982; National Institute on Alcohol Abuse and Alcoholism, 1985). Detailed studies describe a range of neuro-psychological deficits (Grant, 1986; Bennett *et al*, 1988) and specific coping mechanisms and behavioural clusters (Black, 1982). There have been attempts to unravel the impact of parental alcoholism on children from the social disorganisation which may accompany it (Offord *et al*, 1978). Systematic investigations of the transmission of alcoholism conclude that, compared with the general population, biological sons and daughters of alcoholics are four times more likely to become alcoholics (Schuckit, 1987). Familial alcoholism has an earlier onset and poorer prognosis than environmental alcoholism (Penick *et al*, 1978; Frances *et al*, 1984). Teasing out the genetic versus environmental elements that contribute to this susceptibility along with the identification of the specific pathways involved is a promising scientific endeavour (Goodwin, 1984; Cloninger, 1987).

Recently, there has been increasing interest in the impact of parental alcoholism on the adult children of alcoholics. A syndrome of co-dependency has been described involving specific maladaptive behaviour in members of families with addict members (Cermak, 1986). Self-help associations have been formed by adult children of alcoholics, resulting in a good deal of publicity (Chu & Johnson, 1988; Leerhsen & Namuth, 1988). Much of this information is based on clinical reports and

self-disclosures, and little empirical evidence is available on the nature and prevalence of psychosocial problems among adult children of alcoholics as compared with the general population.

Some data are available from longitudinal studies of the sons of alcoholics. A controlled follow-up study of Swedish men, aged 24–32 years, whose fathers were diagnosed as alcoholic 20 years earlier, found a high prevalence of alcoholism, social problems, need for social assistance, sick leave from work, somatic complaints, and visits to a pre-paid health clinic (Rydelius, 1981). In a prospective study of Danish men at high risk for alcoholism, a 'pre-morbid assessment' at age 19–20 years characterised the group as having poor verbal ability and impulsive behaviour, with no alcoholics at that point among them (Schulsinger *et al*, 1986). Another prospective longitudinal study of inner-city youths in Boston (Beardslee *et al*, 1986) described general adjustment difficulties for some adult offspring related to the amount of exposure to parental alcoholism. On the basis of interviews at age 31 and 47, the authors concluded that alcoholism in the environment of the developing child and a family history of alcoholism make independent contributions to poor adult outcome. The main negative effect of exposure to parental alcoholism was observed in the small group of individuals who developed alcohol abuse. When those who did not abuse alcohol were included, the adult children of the alcoholics group did not differ from the control group on physical and mental health, years unemployed, and mood.

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An earlier version of this paper was presented at the annual meeting of the American Psychiatric Association, Montreal, 12 May 1988.

This paper reports our attempt to assess the psychosocial functioning of adult children of problem drinkers in the community by surveying a representative non-clinical sample. The study of non-institutional samples has become the hallmark of a new generation of epidemiological studies aiming at measuring the true prevalence of psychological symptoms in communities rather than the treated prevalence (Regier *et al*, 1984; Paulsen *et al*, 1988).

### Method

#### Subject sample

The data reported were collected as part of the 1987 Winnipeg Area Study, an annual community survey carried out since 1981. Winnipeg is a city of 625 000 inhabitants with a stable economy and population base, located in the Canadian midwest. Following two field pilot tests, 19 trained interviewers spent nine hours practising for this specific project with the help of an instruction handbook.

A random sample of 754 addresses was selected from a computerised list of all city residences. Nursing homes and temporary residences were excluded. If the address had no telephone number (no telephone or number unlisted or unpublished), an interview was conducted in person at the respondent's residence. A random pre-designation of each household as either male or female was recorded on the front of the interview form. If the person answering was of the specified gender, only that person could be interviewed. If the person was not of the specified gender, that person was asked to choose someone of the appropriate gender in the household. If there was no one of the specified gender, the respondent could only be the person who answered the telephone or door. An eligible respondent was someone 18 years of age or older who resided at that address. No substitution was permitted if the selected person refused. Most interviews were by telephone (480, 82.6%) with the remainder in person (101, 17.4%) (581 respondents, 78.3% response rate).

Over recent years the telephone interview has become a major technique in North American survey research. A wide variety of studies (reviewed by Sudman & Bradburn, 1983) indicate that telephone interviews and interviews in person produce similar results. The reliability of telephone interviews for diagnoses has also been tested (Paulsen *et al*, 1988). Telephone interviews are less costly and allow for closer supervision of interviewers, with improved quality control. Interviews in person have the advantage that they may be longer. Comparison of the two types of interview in this study revealed no significant differences in refusal rates or responses chosen on factual, behavioural, or personal opinion items (Currie, 1987).

#### Questionnaire design

Parental problem drinking was detected by a 'yes' response to the question "Have you ever thought that one or both of your parents, including step, foster, or adoptive parents,

had a drinking problem for a period of at least two weeks?" (i.e. more than occasional intoxication). The same question was asked regarding other prescribed and non-prescribed drugs. Six questions identified the parent and the number of years lived with him/her, while another eight questions assessed physical and psychosocial complications of substance abuse for the parent. Aside from a number of demographic questions, we were also interested in comparing the scores of adult children of problem drinkers (ACPD) with the rest of the sample (adult children of parents without drinking problems, non-ACPD) on several measures:

- (a) the Bradburn Affect Balance Scale, which has ten questions measuring positive and negative aspects of psychological well-being (Bradburn, 1969) — while not perfect, the scale has shown consistency across national and cultural boundaries, and identifies lower levels of distress than other scales (McDowell & Praught, 1982, 1985)
- (b) extent of alcohol and other prescribed and non-prescribed drug use
- (c) CAGE, an acronym for four interview questions useful in helping to make a diagnosis of alcoholism: the questions focus on cutting (C) down on alcohol, annoyance (A) by criticism, guilty (G) feeling, and intake of 'eye-openers' (E); the questions have been tested for validity and found to have a predictive value above that of biochemical tests or physician screening (Bush *et al*, 1987; Ewing, 1987)
- (d) a self-report of help-seeking behaviour concerning child rearing, stress and anxiety, or parental or own alcohol or drug problem through the use of professional help, reading materials, or attendance at treatment groups.

The median length of the interview was 18 (range 10–45) minutes. There were a large number of conditional questions so that the interview was longer if the respondent acknowledged a parental or personal drinking problem, for example.

### Results

To the question, "Have you ever thought that one or both of your parents, including step, foster, or adoptive parent, had a drinking problem for a period of at least two weeks?", 443 respondents replied 'no' and 129 replied 'yes' (77.4% v. 22.6%). The parental breakdown of the positive answers was biological father ( $n = 105$ , 81.4%), biological mother ( $n = 19$ , 14.7%), non-biological father ( $n = 4$ , 3.1%), and non-biological mother ( $n = 1$ , 0.8%). Both biological parents were involved in 16 cases (12.4%). Because of the small number of non-biological parents with drinking problems, this group was eliminated from subsequent data analyses.

The age distribution of respondents in each group is shown in Table I. As only 2% of the ACPD respondents were over 65, this group was eliminated from subsequent data analyses to reduce the influence of this age difference in evaluating the other variables. The age difference between

TABLE I  
Comparison on selected demographic variables for respondents with and without parental alcohol problems (ACPD and non-ACPD groups)<sup>1</sup>

Variable	ACPD		Non-ACPD		Comparison	
	No.	(%)	No.	(%)	$\chi^2$	P
<i>Age range: years</i>						
18-24	28	(23)	56	(13)		
25-34	44	(36)	115	(27)		
35-44	35	(28)	97	(23)		
45-64	14	(12)	85	(19)		
65+	2	(2)	79	(18)		
<i>Gender (age 18-64 only)</i>						
Female	71	(59)	194	(54)	1.06	NS
Male	50	(41)	170	(47)		
<i>Parents' separation or divorce</i>						
Age 18-24	14	(52)	8	(14)	13.20	0.001
25-34	21	(48)	15	(13)	21.56	0.001
35-44	10	(29)	7	(7)	10.28	0.001
45-64	3	(21)	6	(7)	1.52	NS
<i>Respondents currently divorced, separated or remarried</i>						
Age 18-24	1	(4)	2	(4)	0.00	NS
25-34	5	(11)	14	(12)	0.02	NS
35-44	16	(46)	21	(22)	7.19	0.007
45-64	4	(29)	22	(26)	0.00	NS

1. Values tabled indicate number and percentage of subgroup members responding yes to the item.  $\chi^2$  calculated using Yates' correction if there were less than 5 cases in any cell.

the groups was considered by using analyses of covariance for continuous variables and grouping the categorical variables into age ranges for  $\chi^2$  analyses, as preliminary analyses indicated that age was related to many of the other variables.

A 2x2 multivariate analysis of covariance (MANCOVA) was performed with the major continuous dependent variables which were available for most of the subjects: education, Bradburn measures of positive and negative affect, CAGE score, frequency of alcohol use and heavy alcohol use, and number of sources of help used for problems with stress and anxiety. The two grouping variables were the presence or absence of parental drinking problems and gender. Age was used as a covariate. The combined dependent variables were significantly related to the covariate (age),  $F=7.63$ ,  $d.f.=7$ , 428,  $P<0.001$ , to parental drinking problem,  $F=4.01$ ,  $d.f.=7$ , 428,  $P<0.001$ , to gender,  $F=7.64$ ,  $d.f.=7$ , 428,  $P<0.001$ , but not to the gender by parental drinking problem interaction. The statistically significant difference on the parental drinking factor was followed up by the univariate analyses described below.

#### Demographic characteristics

The groups with and without parental drinking problems are compared in Table I. The ACPD group was significantly younger, even with the elimination of those over 65.

The groups did not differ significantly in the ratio of male to female respondents.

The ACPD group reported significantly more parental separation or divorce at every age level except for those aged 45-64 (where the sample size was rather small). In the 18-34 age groups approximately 50% reported parental separation or divorce, compared with approximately 14% in the group with no parental drinking problems.

The proportion of respondents never married decreased across the age range, as one would expect, and there were no significant differences between the groups on this variable. When the groups were compared on the proportion of respondents divorced, separated, or remarried, there was a significant difference between the groups in the 35-44-year range, with 46% of those with parental drinking problems v. 22% of those with no parental drinking problem being separated, divorced, or remarried. A  $\chi^2$  analysis detected no significant relationship between parental separation or divorce and respondent's separation, divorce, or remarriage in either group.

Table II provides additional demographic comparisons. ACPD respondents left home at a significantly younger age (18.6 years v. 20.0 years, covariate adjusted means) but there was no significant difference in the age at which parental financial support ended. They did not differ from those without parental drinking problems in level of education or household income.

TABLE II  
Means of scores on demographic, alcohol-related, affect, and help-seeking variables for ACPD and non-ACPD groups<sup>1</sup>

Variable	ACPD	Non-ACPD	Comparison	
			F	P
<i>Demographic</i>				
Age left home (years)	18.6	19.9	9.09	0.003
Age parental financial support ended (years)	18.6	20.3	1.83	NS
Education (1–15)	8.06	8.45	2.00	NS
Household income (2–5)	4.1	4.2	0.84	NS
<i>Alcohol-related</i>				
How often drink (1–10) <sup>2</sup>	5.32	5.09	1.18	NS
How often 5+ drinks (1–9) <sup>2</sup>	3.78	3.33	6.85	0.009
CAGE score (0–4)	0.71	0.44	8.97	0.003
<i>Affect (Bradburn scale)</i>				
Positive affect (5–15)	9.48	9.65	0.90	NS
Negative affect (5–15)	11.13	11.29	0.65	NS
<i>No. of sources of help used</i>				
Stress and anxiety (0–3)	1.00	0.68	11.16	0.001
Problems with parent's or own alcohol or drug use (0–3)	0.55	0.29	4.85	0.029
Problems in child rearing (0–3)	0.92	0.80	0.073	NS

1. All comparisons were made with a 2 × 2 analysis of covariance with gender and presence or absence of parental drinking problems as grouping variables and age as a covariate. Calculations were performed with the use of the SPSS MANOVA program. *F* tests and *P* values are for the parental drinking problem comparison.

2. 1 = never, 9 or 10 = twice or more a day.

#### Alcohol-related measures

Table II also presents results on a number of alcohol-related measures. Respondents were asked how often they had at least one (scored 1–10), and how often they had five or more (scored 1–9), alcoholic beverages during the previous 12 months. There was no significant difference between the groups in how often they drank, but there were significantly more individuals in the ACPD group who were heavy drinkers. The overall CAGE score indicated that significantly more of those with parental drinking problems acknowledged having some problems with alcohol themselves.

As an illustration of the actual frequency of heavy drinking, the proportion of subjects indicating that they drink five or more drinks once monthly or more was calculated. Significantly more ACPD respondents reported this level of consumption in the 25–34-year-old group (64% v. 38%,  $\chi^2 = 8.27$ ,  $P < 0.004$ ) and 35–44-year-old group (44% v. 26%,  $\chi^2 = 3.99$ ,  $P < 0.046$ ) but not in the 18–24- and 45–64-year-old groups. In general, frequency of heavy drinking for both ACPD and non-ACPD groups decreased as age increased. Similar patterns were seen when even more frequent drinking was considered (e.g. two or three times a month or more) with fewer respondents reporting each increasing level of consumption.

The 'relative risk' for having a heavy drinking pattern in the ACPD group as compared with the non-ACPD group was calculated. The procedure, outlined by Rose & Barker (1986), compares the proportion of individuals in a group with a particular characteristic, adjusting for difference in

age levels between the groups (Feinstein, 1985). The ACPD group's risk was higher by a factor of 1.28 when the whole 18–64 age range was considered. When those in the 25–44 age range only were considered the relative risk was 1.65.

On the overall CAGE score, in the 25–34 age range, significantly more ACPD respondents felt at one time that they should cut down on drinking (43% v. 23%,  $\chi^2 = 6.64$ ,  $P < 0.01$ ) and significantly more felt bad or guilty about drinking at one time (34% v. 14%,  $\chi^2 = 8.26$ ,  $P < 0.004$ ).

There were no significant differences between the groups in the number indicating that they had a problem with abuse of prescribed or non-prescribed drugs at any of the age levels. The number of respondents in each group acknowledging this problem was small (5–15% for most age levels).

#### Bradburn affect scale and sources of help used

There were no significant differences between the groups on the two measures of current affect (Table II).

Table II also compares ACPD and non-ACPD groups on the number of sources of help used (out of a possible three) for frequently encountered problems in living. The ACPD group used significantly more sources of help in coping with stress and anxiety and in coping with problems with alcohol or drugs (including "a parent's problems, the effect of a parent's problem on you, or for your own problems"). They did not use more sources of help, however, in dealing with problems in child rearing (asked only of parents). Respondents were asked whether they had ever used these sources of help, not whether they were currently using them.

In order to compare the two groups' frequency of use of various sources of help for problems with stress and anxiety, the relative risk procedure, as previously outlined, was used. The proportions of use in the ACPD group relative to the non-ACPD group were: discussed with a professional, 1.77; tried an approach you read about, 1.22; and attended a group programme, 1.64.

Help for problems with alcohol or drugs (own or parent's) was used by a small proportion of those without parental drinking problems (0–6%, depending upon age group and type of help) but a much larger proportion of those with parental drinking problems (8–29%). The relative risk proportions of the ACPD group compared with the non-ACPD group were: discussed with a professional, 12.0; tried an approach you read about, 8.0; and attended a group programme, 10.5.

#### Severity of parental drinking problem

ACPD respondents were asked a number of additional questions about the effect of the problem on the parent. The items reflected the health and social impact of alcohol problems. The most frequently reported problems were psychological (60%) and health problems (46%). Forty-five per cent were advised by a friend or a professional to reduce their drinking. A considerable proportion of the sample reported that they feared that their parents would separate because of the problem (43%) or that their parents did separate or divorce because of the problem (33%). Legal problems were reported by 28% of respondents. Alcohol problems resulted in an inability to perform usual job or occupation in 21% of cases and a lost job or promotion in 15% of cases. The proportions reporting problems may be somewhat conservative, as for each problem 3–17% of respondents indicated that they did not know whether the parent had experienced this problem.

An index of severity of the parental problem was developed by summing the number of health and social problems reported. Scores ranged from 0 problems to 8. The mean number of problems reported was 2.9 (s.d. 2.). In order to examine the relationship between the severity of the parental alcohol problem and the functioning of the respondent a regression analysis was carried out. The analysis related the index of severity to respondent's age, education, positive affect, negative affect, frequency of consumption of at least five drinks, CAGE scores, use of help for stress and anxiety problems, and use of help for alcohol or drug problems. None of these variables was found to be significantly related to parental severity in a stepwise linear regression procedure.

Respondents were also asked how long they lived with the affected parent while he/she was having alcohol problems. The respondents lived with the affected parent for an average of 10.5 years (s.d. 7.3 years). Once again, there were no statistically significant relationships between the time with the parent and the other major variables in a regression analysis.

A regression analysis was also carried out to consider the variables which might be related to respondents' use of help for drug and alcohol problems (their parent's, the impact

of their parent's problem on them, or their own). The other variables entered in the equation were: severity of parental problem, number of years with parent while he/she had the problem, respondent gender, age, education, positive affect, negative affect, frequency of consumption of at least five drinks, CAGE score, and use of help for stress and anxiety problems. The backward stepping multiple linear regression procedure suggested a relationship between the use of help for alcohol and drug problems and three of the predictor variables: use of help for stress and anxiety problems ( $t=4.01$ ,  $P<0.001$ ), CAGE score ( $t=3.77$ ,  $P<0.001$ ), and frequency of consumption of at least five drinks ( $t=2.43$ ,  $P<0.05$ ). The proportion of variance accounted for by the overall regression equation was approximately 25% (multiple  $r=0.53$ , adjusted  $r^2=0.26$ ,  $F=14.12$ ,  $P<0.001$ ).

#### Discussion

To our knowledge, this is the first systematic prevalence survey of adult children of problem drinkers in a non-clinical urban population. The prevalence is significant, close to a quarter of the adult population, with the biological father as the parent most frequently affected and a higher prevalence among younger respondents. Per capita alcohol consumption has been increasing in Canada and worldwide throughout this century (Helzer, 1987; McKie, 1987), and it is likely that alcohol problems are increasing in step (Helzer, 1987).

The adult children of problem drinkers reported higher rates of parental marital breakdown, personal marital breakdown, heavy alcohol consumption, and problems related to alcohol consumption. They left home at an earlier age but did not differ in education or household income. There was no significant one-to-one relation between the parent's marital breakdown and that of the children. This vulnerability is empirical evidence for the risk in dysfunctional relationships hypothesised in the syndrome of co-dependence.

The groups did not differ in current positive and negative affects on the Bradburn scale. Beardslee *et al* (1986), in their follow-up of children of alcoholics 40 years later, concluded that adult children of alcoholics did not have a higher level of mood disturbance except for those with alcohol dependence themselves. In the current study, however, more respondents in the ACPD group sought help for stress and anxiety problems and in coping with alcohol or drug dependency (their own or their parent's). This may have been a more sensitive measure of psychosocial problems, because the items asked whether the respondent had *ever* used each source of help. It is reassuring to note the readiness among the ACPD group to seek help, although we

do not have data on the intensity and quality of help received. The results of the regression analysis on use of help for drug and alcohol problems indicates that those with heavier drinking and higher CAGE scores were more likely to seek help, suggesting that they may be seeking help for their own drinking problems rather than for their parents' drinking problems or the impact of their parents' drinking problems on them.

The time available for the structured interview used in this study was limited owing to the cost involved. It would be helpful in future research to consider in more detail the specific types of alcohol and drug problems encountered by adult children of alcoholics, along with any current or past emotional problems which were not detected by the affect measure used in this study. This considerably higher proportion of help seeking by those with parental drinking problems suggests that more problems may be identified by a lifetime prevalence than a current prevalence approach.

A major question in interpreting the results of this study is about the relationship between 'problem drinking' and alcoholism. It is quite possible that some offspring did not acknowledge a significant problem which existed, or overemphasised a problem which would not meet the criteria for alcohol dependence or abuse. In future studies, an independent evaluation of the parental drinking problem by interview would be helpful. Given the high number of health and social parental problems related to alcohol (mean 2.9 problems), it is likely that a very significant proportion of the parents would meet the criteria for alcoholism. Although the question about parental drinking problem specified that the problem should be present for at least two weeks, the respondents reported that they lived with the affected parent while they were having the drinking problem for an average of 10.5 years (not considering those respondents who were still living with the affected parent). Clearly the problem with drinking was generally not a transient one.

The regression analysis considering the relationship between severity of parental alcohol problem and the adult child's functioning suggests that the problems experienced by the adult child did not necessarily become more severe (on this set of measures at least) as the parental problem got worse. Again, this would suggest that there were no dramatic differences between those with parental problem drinking and those whose parents would be likely to receive a diagnosis of alcoholism. It also questions a straightforward environmental explanation of the tendency of alcohol problems to run in families.

The relatively high risk of drug or alcohol dependency and relationship problems among the adult children of problem drinkers may indicate the most appropriate targets of our therapeutic approaches to this problem. The results are also a testimony to the resiliency of this group on many of the psychosocial variables considered. As is often the case in community surveys (Schachter, 1982), the results are more encouraging than findings based on more limited clinical samples.

#### Acknowledgement

This study was supported in part by a grant from the R. Hurd Fund, University of Manitoba.

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