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# Delinquency, Childhood Violence, and the Development of Alcoholism in Women

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*The interrelationships of delinquent activities and their consequences on the development of alcoholism in women were examined. Interview data were analyzed from a sample of 45 alcoholic women selected from local treatment agencies and Alcoholics Anonymous groups and 40 nonalcoholic women selected randomly from a household population to form the comparison group. Delinquent activity included status offenses such as running away and cutting classes, as well as more serious offenses, including fighting, stealing, and driving offenses. Official involvement as a juvenile was also assessed. Alcoholic women were significantly more likely than the random sample of women to report stealing, legal interventions, running away, and fighting. Multivariate analyses indicated that both stealing and legal interventions were important predictors of alcoholism problems in women, even when family background and childhood experiences, such as childhood sexual abuse and father-to-child violence were considered.*

Numerous studies have documented the presence of alcohol and drug use among samples of detained or adjudicated juveniles (e.g., Blane, 1982-1983; Dawkins and Dawkins, 1983; Dembo et al., 1985; Geller and Ford-Somma, 1984; Johnson et al., 1984; O'Brien, 1977; Tinklenberg et al., 1974). Associations between deviance (e.g., truancy, conduct problems, poor school performance, and illicit drug use) and alcohol use among youth have also been documented in general population studies of high school students (e.g., Barnes, 1984; Barnes and Welte, 1986; Blane and Hewitt, 1977).

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Despite this association between delinquency and alcohol use as adolescents, there is little information on whether delinquency patterns are relevant to the development of alcohol/drug problems for adults. There are several reasons why delinquency may be an important risk factor for the development of alcohol problems for women. First, women who have been identified as delinquent or status offenders have experienced being labeled as deviant. There is evidence that once referred to the juvenile justice system, females receive more severe dispositions than males (Sarri, 1983; Figueira-McDonough, 1985). Since women are not as likely to be identified as delinquent, this label could have a negative impact on their perception of self and the reactions of others. Distorted self-image and low self-esteem have been found among some women alcoholics (Kinsey, 1968; Wood and Duffy, 1966). Heavy consumption of substances might be pursued to address this negative perception of self and in response to these reactions.

Second, involvement in the delinquent subculture at an early age might result in adherence to norms and values for heavy consumption of alcohol/drugs. Dawkins and Dawkins (1983) suggest that the interrelationships between drinking patterns of adolescents and involvement in serious delinquent activity are influenced by a constellation of problems such as previous arrests and illicit drug use. Thus peer groups that supported stealing could have supported the heavy consumption of alcohol as well. These patterns of consumption could set the stage for the development of alcohol problems and alcoholism. This involvement in a delinquent subculture might be facilitated by identification for status offenses that places the adolescent females within the juvenile justice system, allowing for the introduction to a network of delinquent peers (e.g., Miller, 1986). Thus delinquent networks may facilitate the involvement in heavy alcohol and drug consumption.

To complicate further the interrelationships between delinquent patterns as adolescents and the development of adult substance abuse problems, childhood experiences of child abuse and childhood sexual abuse have been connected to the development of patterns of substance abuse (Miller et al., 1987; Downs, Miller, and Gondoli, 1987; Dembo et al., 1985; Cavaiola and Schiff, 1988). In addition to child abuse being connected to substance abuse problems, research has suggested a connection between child abuse and delinquent behaviors (e.g., Bolton and Reich, 1977; Garbarino and Plantz, 1986; Geller and Ford-Somma, 1984; Cavaiola and Schiff, 1988) and between childhood sexual abuse

and delinquency (e.g., McCormack, Janus, and Burgess, 1986; Reich and Gutierrez, 1979; Runtz and Briere, 1986; Cavaola and Schiff, 1988).

While the link between delinquency and adolescent alcohol use has been suggested, less is known about the impact of delinquent behavior on the development of adult alcohol problems. Further, most of the previous work has concentrated on male patterns of delinquency and alcohol use. The connections between delinquency and alcohol problems are further complicated by the relationships of both child abuse and childhood sexual abuse to the development of alcoholism for women. Thus there is a need to control for other detrimental childhood experiences that may influence the development of substance abuse problems.

In this study we examine whether alcoholic women are more likely to have been engaged in delinquent activity than are women in a comparison group. Next we examine the frequency of adolescent drinking patterns. Finally, the relative contribution of delinquent activity in differentiating between alcoholic women and women in the comparison group is examined, controlling for independent variables that have previously been found to distinguish between the two groups.

## METHODS

### *Sample*

A sample of 45 alcoholic women and 40 women from a random household population was obtained for interviews. Participants were defined as alcoholic if they had at some time or were currently participating in alcoholism treatment. Alcoholic women were identified through women's treatment groups at alcoholism outpatient treatment agencies and through Alcoholics Anonymous (AA) groups in Erie County, New York. Slightly more than a fourth (29%) of the alcoholic sample was obtained from the treatment agencies; the remainder were from AA groups. Women at the treatment agencies were interviewed immediately before or after their scheduled appointments at the clinic. Only one woman from the alcoholism treatment agencies failed to participate from the women who were made available to the study. Clinics allowed us access to women in their treatment groups with at least six months sobriety.

Women from the AA groups were selected using a snowball sampling technique.<sup>1</sup> Initial contacts (N = 17) were made through alcoholism treatment personnel and female AA members. Additional respondents were then obtained via contacts through initial respondents; each AA respondent was asked to contact two or more other women who might be willing to participate in the study. Women from the AA groups were compensated \$15.00 for travel costs to the Research Institute to complete the interviews.

The comparison group, which was made up from a random sample of household women, was identified through random digit dialing. If there was a woman in the household between the ages of 18 and 45, screening questions were administered. Once the screening was completed, the study was briefly described and participation was solicited. The potential participant was told that the study involved a comparison of alcoholic women with women from the community on childhood and current family relationships. She was also informed that they were contacted randomly from a list of telephone numbers for the purposes of obtaining a community group. Out of a total of 164 contacts with a woman aged 18-45 living at the residence, 28% were interviewed, 42% refused the screening questions, 28% refused the interview (after screening), and 3% failed to show or establish interview times. Interviewees in the comparison group were paid \$15.00 for transportation costs.<sup>2</sup>

### *Interview Procedure and Operationalizing Measures*

Interviews were conducted from January until June 1986. Interviews lasted approximately two hours. Prior to the interview, participants were given more detailed information before signing the informed consent. They were told that the purpose of the study was to assess the long-term impact of childhood family relationships on alcoholic and nonalcoholic women. Interview questions included measures on the woman's alcohol consumption, the woman's alcohol problems, father-to-daughter conflict tactics, mother-to-daughter conflict tactics, childhood sexual abuse, and delinquency activity. In addition, each respondent was asked to indicate whether her family of origin included any parent with alcohol-related problems.<sup>3</sup>

Our sample of alcoholic women was drawn from clinic populations and from AA groups, where definitions of alcoholism may vary widely.

We needed to ensure that all women identified via the alcoholism treatment system met some objective measure of alcoholism. Further, we needed to ensure that women from the comparison group were not "hidden" alcoholics. The Michigan Alcoholism Screening Test (MAST), which was devised by Selzer (1971) to provide a consistent quantifiable, structured interview instrument to detect alcoholism, was used to address these issues. While developed for a male population, this screening test has been found to assess women adequately (Selzer, Gomberg, and Nordhoff, 1979). The validity of the MAST has been substantiated by comparisons with record data and other diagnostic tests (Selzer, 1971). However, there is some concern that the MAST produces a high false positive rate of alcoholism (Brady et al., 1982; Gibbs, 1983; Jacobson, 1983). Therefore, questions on alcohol consumption were needed to exclude individuals that may be identified as alcoholic by the MAST but who had low intake levels of alcohol.

The questions and calculations for the Quantity-Frequency Index for alcohol consumption were drawn from Armor and Polich (1982) and represent the measure of alcohol consumption recommended by a special advisory panel to the National Institute on Alcohol Abuse and Alcoholism. Neither the MAST nor the quantity-frequency measures were used to identify our samples; rather, they represent methods of excluding individuals who may have been inaccurately categorized by their group membership. Respondents with borderline MAST scores (i.e., 6-12; Jacobson, 1983) were examined for their quantity-frequency of use. If the quantity-frequency of use also were low (i.e., less than three drinks per day), the respondent was included in the comparison group.

Questions on delinquent activity included information about cutting classes; running away from home; stealing (i.e., taking something worth more than \$50 that didn't belong to you, shoplifting, check forgery, burglary); driving offenses (i.e., drunk driving, taking car without permission, driving without license); fighting (i.e., beat up or fought someone; carried a gun, knife, or weapon); and legal interventions (i.e., ticketed or warned by police; went to court; been on probation, in detention or jail). Any report of these incidents was considered for these analyses.

Previous research has shown that multiple questions of a specific nature produce more reports of sexual abuse than single, more general questions (Peters, Wyatt, and Finkelhor, 1986). Therefore, our questions on sexual abuse were generated from the list of sexual abuse questions created by Finkelhor (1979) and supplemented with questions developed

by Sgroi (1982). Sexual abuse was defined as both contact and noncontact experiences that occurred prior to the age of 18. These questions included a range of interactions between an adult and a child. Specific sexual experiences included invitations to do something sexual, sexually oriented touching (e.g., breast, abdomen, thighs), masturbation ("other person touched your genitals"), oral sex, digital penetration ("other person inserted a finger or object into your vagina or anus"), and intercourse ("other person inserted his penis into your vagina or anus"). Sexual experiences with peers (persons that are less than five years older) or boyfriends that were not coercive or threatening were excluded.<sup>4</sup>

The Conflict Tactics Scale (CTS) was used to measure parent-to-child positive verbal interaction (3 items), negative verbal (7 items), moderate physical violence (6 items), and severe physical violence (6 items) (Straus, 1979; Straus, Gelles, and Steinmetz, 1980). For the purposes of our analyses, each CTS item was dichotomized into "never happened" (code = 0) and "happened at least once" (code = 1). In a previous paper, the four subscales of the CTS (positive verbal, negative verbal, moderate and severe violence) were used to assess father-to-daughter and mother-to-daughter conflict tactics for this sample of alcoholic and household women (Downs, Miller, and Gondoli, 1987). Our previous analyses found that only father-to-daughter violence was significantly different for the two groups.<sup>5</sup> For the current analyses, a father total violence score was computed, based on the sum of the dichotomized items in the negative verbal, the moderate violence, and severe violence indices. This father total violence score was used in the multivariate analyses as a covariate.

## RESULTS

### *Characteristics of the Sample*

Most demographic comparisons between the samples of alcoholic and household women did not differ significantly (i.e.,  $p \leq .05$ ). For example, chi-square tests indicated that the alcoholic sample did not differ significantly from the household sample in race (73% and 82% white, respectively,  $\chi^2 = 0.48$ ); level of education (67% and 58%, respectively, had some college,  $\chi^2 = 0.42$ ); employment status (44% and

63%, respectively, were employed outside the home,  $\chi^2 = 2.09$ ); or marital status (40% and 53%, respectively, were currently married or cohabiting,  $\chi^2 = 0.88$ ). Parental SES (23.5% and 34.5%, respectively, were from the upper or upper middle class,  $\chi^2 = 8.59$ ) did not differ significantly between the two groups.

However, there were some significant differences across samples. The alcoholic sample (average age = 39.44 years) was older than the sample of household women (age = 30.98 years,  $F = 22.7$ ,  $p < .0001$ ). There were significant differences in the number of changes experienced in the childhood family, which were defined as parental divorce, parental separation, death in family, mother's remarriage, father's remarriage. Summing these changes, the alcoholic sample reported a greater number of changes (1.49) than did the household sample (.78,  $F = 5.66$ ,  $p = .02$ ). Three of the four father-to-daughter CTS indices (negative verbal interaction, moderate violence, and serious violence) had a significant relationship with level of alcoholism. Finally, the alcoholic women (71%) were more likely than the household women (23%) to report having at least one alcoholic parent ( $\chi^2 = 18.14$ ,  $p < .0001$ ).

As anticipated, there was also an important significant finding across sample type relating to alcohol use. The sample of alcoholic women had a higher average score (35.56) on the Michigan Alcoholism Screening Test (MAST) than did the household sample (1.73,  $F = 565.85$ ,  $p < .001$ ). The range of MAST scores among the alcoholic sample was from 14 to 49; thus MAST scores for the entire sample were higher than the cutoff score of 5 to indicate alcoholism. The range among the household sample was from 0 to 8, with three women scoring higher than the cutoff score of 5 to indicate alcoholism. The Quantity-Frequency Index (QFI) scores of alcohol use for these three women were calculated. The highest QFI Index score was 0.57, which corresponds to an average of 1.2 drinks per day. This drinking was not high enough to indicate the presence of alcohol problems among these three women. Thus these three women were included in the household sample for all further analyses.<sup>6</sup> These comparisons indicate that the sample of women from the alcoholism treatment centers were indeed alcoholic as compared with the sample of household women.

### *Differences in Delinquency Activity and Adolescent Drinking*

Three types of delinquent activity are significantly more likely for alcoholic women than for the comparison group: stealing, running



**TABLE 1: Percentage of Alcoholic and Comparison Group Women: Delinquent Activity/Official Response**

<i>Delinquent Activity/ Official Response</i>	<i>Alcoholic Women</i>	<i>Comparison Group of Women</i>	<i>Tau C</i>
Cutting Class	64	50	.14
Running Away	44	20	.24**
Stealing	64	30	.34***
Driving Offenses	38	23	.15
Fighting	44	28	.17*
Legal Intervention	38	8	.30***
Vandalism	7	3	.04
Prostitution	4	3	.02
Sold Drugs	11	8	.04

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

away, and fighting (see Table 1). Two-thirds of the alcoholic women had reported stealing as compared to one-third of the comparison group ( $p < .001$ ). Running away had occurred for 44% of the alcoholic women as compared to 20% of the comparison group ( $p < .01$ ). Fighting was reported by 44% of the alcoholic women as compared to slightly more than a fourth of the comparison group ( $p < .05$ ). Alcoholic women were also significantly more likely to have experienced some form of legal intervention as compared to the comparison group; 38% of the alcoholic women and 8% of the random sample of women reported legal intervention ( $p < .001$ ) (see Table 1).

Differences in the adolescent drinking patterns were not indicated for the alcoholic women and comparison group (see Table 2). Approximately one-fourth of both samples reported abstaining during their adolescent years or partaking on a one time occasion. More of the alcoholic women reported drinking on a once a week or more often; approximately 40% of the alcoholic women as compared to one-fourth of the comparison group reported this frequency. However, the overall differences across the two groups were not significant ( $\text{tau } B = -.12$ ).

Although delinquent activity appears related to being in the alcoholic group, the ability of delinquent activity to predict belonging to the alcoholic group may be attenuated by the other related variables. To address the basic question, how do delinquent behaviors/official intervention statistically predict alcoholism in women, multivariate analyses are needed. As stated previously, alcoholic women were older, experienced more changes in the family structure, were more likely to report father and/or mother having alcohol problems, reported a higher

TABLE 2: Frequency of Drinking As Adolescents (in percentages)

	<i>Alcoholic Women (N = 45)</i>	<i>Comparison Group of Women (N = 40)</i>
Never	20	18
Once Ever	9	8
Once-Twice/Year	11	30
Once-Twice/Month	16	23
Once Week	4	3
Every Weekend	29	15
2-3 Times/Week	9	3
Once a Day	2	3

NOTE: Tau B =  $-.12$ ,  $p = n.s.$

level of father-to-daughter violence, and were more likely to have been sexually abused as children. These independent variables were forced into the equation prior to the entry of the delinquency/intervention variable in question. This results in a conservative measure of our delinquency/intervention variables, since all shared variance is attributed to the preceding independent variables.

Four separate hierarchical multiple regression analyses were completed with group membership being coded 1 = alcoholic group and 0 = comparison group, to test for the four variables related to the alcoholic group: stealing, fighting, running away, and legal interventions.<sup>7</sup> Neither fighting nor running away contributed significantly to the regression equations and are not presented in the tables. Independent variables were entered into the regression equations in the order listed in Table 3. The standardized regression coefficients for each variable (beta), the unstandardized coefficient (B), the one-tailed probability for the unstandardized coefficient, the  $R^2$  after each variable is entered, and the  $R^2$  adjusted for sample size are presented. The standardized coefficient can be compared across variables within the equation to assess the relative strength of the variables in predicting presence of alcoholism.

In Table 3, the relative contribution of the independent variable, stealing, on sample type is presented. Once age is controlled, the strongest predictor of sample type was stealing, followed by changes in parental family and father's total violence. Neither parental alcohol problems nor childhood sexual abuse contributed significantly to the

**TABLE 3: Multiple Regression of Type of Sample on Childhood Family Background and Stealing**

<i>Independent Variables</i>	<i>B</i>	<i>Beta</i>	<i>p (1-tailed)</i>	<i>R<sup>2</sup></i>
Present Age	.02	.35	.0002	.20
Changes in Parental Family	.07	.21	.0118	.28
Parent Alcohol Problems	.13	.13	.1108	.34
Father's Total Violence	.02	.18	.0323	.40
Childhood Sexual Abuse	.09	.09	.1863	.42
Stealing	.24	.24	.0074	.47

NOTE: Adjusted  $R^2 = .42$ .

equation. Stealing contributed uniquely to 5% of the variance even after all other variables were controlled. The adjusted  $R^2$  for the equation was .42.

In Table 4, the impact of the independent variable, legal intervention, on sample type is presented. Legal intervention was the second strongest predictor in the regression equation, after age. Legal intervention contributed uniquely to 9% of the variance. The only other independent variable that contributed significantly to the equation was father's total violence. The adjusted  $R^2$  for the equation was .47.

## DISCUSSION

The most important finding is that alcoholic women were much more likely to report stealing or a legal intervention than the comparison group, even when other important childhood variables such as parental alcoholism, number of changes in family structure, experiences of childhood sexual abuse, and parental violence, were controlled. Thus both stealing and legal interventions appear to be important predictors of alcoholism problems. Alcoholic women were significantly more likely than the random sample of women to report running away and fighting, also. However, these relationships were weaker and were insignificant when other childhood variables were controlled. These findings must be tempered with some caution. Our sample is small, and these findings need to be replicated. All of the alcoholic women in our sample have been in treatment; alcoholic women who do not seek treatment may have had different types of delinquency patterns.

TABLE 4: Multiple Regression of Type of Sample on Childhood Family Background and Legal Intervention

<i>Independent Variables</i>	<i>B</i>	<i>Beta</i>	<i>p (1-tailed)</i>	<i>R<sup>2</sup></i>
Present Age	.02	.36	< .0001	.20
Changes in Parental Family	.05	.13	.0806	.28
Parent Alcohol Problems	.16	.16	.0567	.34
Father's Total Violence	.02	.19	.0195	.40
Childhood Sexual Abuse	.14	.14	.0748	.42
Legal Intervention	.35	.30	.0004	.51

NOTE: Adjusted  $R^2 = .47$ .

Women in the general population who are heavy drinkers and/or alcoholic were not obtained through our random sampling procedure. Their experiences of delinquency may be quite different from women included in our sample. Finally, retrospective accounts of childhood experiences are limited by recall and the distortion occurring over time; longitudinal studies would vastly improve our understanding of these phenomena.

Our analyses suggest that alcohol problems follow a series of socially unacceptable behaviors. The connection between delinquent activity and development of alcohol problems has been conceptualized as representing a group of maladaptive, deviant behaviors (e.g., Barnes, 1984; Barnes and Welte, 1986; Farrow and French, 1986; Jessor, 1984; Kandel, Simcha-Fagan, and Davies, 1986). For example, Barnes (1984) reported that the heavier drinking adolescents in her sample reported more alcohol-related problems (such as trouble with school, friends, and police because of drinking; driving a car after drinking); higher levels of deviance (such as staying out late, skipping school, and using marijuana); less satisfactory relationships with parents; and more school problems than adolescents who drank moderately.

However, our multivariate analyses indicate that from the various forms of delinquency, only stealing was important in distinguishing between the alcoholic and comparison groups. Two points need to be made. First, delinquency indices that are formed from a group of delinquent items may result in differences between groups being obscured. Thus separate analyses of specific types of delinquent activities and status offenses appear to be more appropriate. Second, stealing is one of the more serious activities on our list. Thus only the most serious forms of delinquent behavior appear to distinguish the two

groups. This would set the stage for involvement in a delinquent peer group, where heavy drinking patterns may be established (e.g., Dawkins and Dawkins, 1983).

Legal intervention as a juvenile was also predictive of developing alcoholism problems. Legal intervention, as we have defined, represents social stigma that may result in lowered self-esteem because of this labeling process. Distorted self-images and low self-esteem have been found among some women alcoholics (Kinsey, 1968; Wood and Duffy, 1966). Thus the experiences of adolescence may result in lowered self-esteem that results in the development of destructive patterns of coping, such as alcoholism.

Further research is needed to identify the importance of delinquency to the patterns of developing alcohol problems in women. Women who engage in delinquent behaviors and subsequent heavy alcohol use may form a special subgroup of women alcoholics. Further, the importance of child abuse and childhood sexual abuse to the delinquent behaviors is important to consider. Establishing the links between these events may be especially meaningful in developing adequate prevention programs for young female heavy drinkers.

## NOTES

1. Snowball sampling is efficient in locating rare populations such as women with alcohol problems. For example, the household survey screened 299 households and failed to locate one adult woman with alcohol problems eligible for inclusion in the study and willing to participate. The snowball sampling technique located 32 recovering adult female alcoholics in approximately two months. Snowball sampling has the disadvantage of bias, since persons with larger social networks are more likely to be included in the sample. This source of bias may be serious if there are major differences in other variables across size of social network (Sudman, 1976). For example, if isolated women alcoholics differed from those with numerous AA contacts in level of spousal violence, then the snowball sampling technique may result in biased findings.

2. The screening questions were originally designed to obtain a sample of heavy drinking women from the random sample of household women and included questions on the following: birth date, education, occupation, any consumption of alcohol during the past 30 days, and, if yes, highest amount of alcohol consumed. For the 42% that refused the screening questions, the reason for refusal was unlikely to be related to alcohol consumption, since no indication had been given at that point that the study focused on alcohol. Among the 28% that refused the interview (but had completed the screening), 5 women reported heavy consumption (5 or more drinks for highest amount consumed). Thus their refusals may have been based upon their desire to avoid participating in a study that examined women's alcoholism.

3. Women were asked if any of their family members ever had a problem with alcohol use while the woman resided in the parental household. If women responded affirmatively, they were asked who had the problem and how they knew the individual had a problem. In all cases, women described several alcohol-related problems of the family member or reported that their family member had been in alcoholism treatment. Because of the nature of the problems and number of problems reported, we concluded that the women were not overidentifying family members as having alcohol-related problems. However, there is a possibility that some parents remained unidentified. Further, we think that there is a possibility that alcoholic women who have received treatment are probably more likely to identify alcohol-related problems of other family members than a random sample of women in the community. There were no alcoholism diagnoses available for the family members.

4. Despite the sensitive nature of the questions, only one woman ended the interview at midpoint and subsequently requested to be dropped from the study. Given the sensitive nature of the questions and to address the possibility that women may reveal sexual abuse experiences to us that had not been discussed previously with anyone else, we provided a community resource list. This list included names of various agencies that provided counseling services with regard to all family issues, specifically identifying a contact person who was experienced in dealing with sexual abuse problems for that agency.

5. The differences in both father-to-daughter and mother-to-daughter CTS subscales across level of alcoholism are reported in detail in Downs, Miller, and Gondoli (1987).

6. Both the MAST and the QFI were considered as possible dependent variables to indicate level of alcoholism. However, given the two samples of alcoholic and non-alcoholic women, the distributions of both the MAST and the QFI were bimodal. The departure of these distributions from normality was sufficient to violate seriously assumptions underlying parametric statistics, such as multiple regression. In addition, the sample size was too small for nonparametric statistics, such as log linear analysis. Thus we excluded the MAST and the QFI from further analysis. Instead, we used sample as an indicator of level of alcoholism, with the household sample coded as 0 (nonalcoholic) and the alcoholic sample coded as 1.

7. Since some types of delinquent/status offenses were not significantly more likely to have occurred for the alcoholic women, no attempt was made to combine the total number of delinquency items into an aggregate variable; separate variables were maintained for the different forms of delinquency.

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