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The Contribution of Self-Reported Childhood Abuse to the Onset of Alcohol-related Outcomes

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ABSTRACT

The association of childhood sexual abuse (CSA) and physical abuse (PA) with subsequent alcohol dependence risk was initially recognized in treatment samples. More recently, epidemiologic studies have confirmed these findings.¹⁻⁴ We have reported⁵ on the association between CSA and negative outcomes in data from a recently completed diagnostic telephone assessment of a volunteer panel of young adult Australian twins and confirmed the association between a history of CSA and alcohol dependence. In the current analyses, we attempted to extend these findings by examining the effects of a history of childhood abuse (CA), either CSA or PA, on the onset of various alcohol-related outcomes.

A history of CA was reported by 22.6% of women and 14.9% of men. The respective hazard ratios representing the risk of alcohol dependence associated with a history of CA in women and men were 2.48 (2.05-2.99) and 1.42 ((1.11-1.81). In analyses controlling for gender and respondents' report of maternal and paternal alcohol problems, a history of CA was associated with a significantly earlier onset of alcohol intoxication (-0.77 year) and alcohol dependence (-0.75 year). A history of CA was similarly associated with a significantly earlier onset of other alcohol problems, regular smoking, leaving home, and consensual sexual intercourse. These results suggest that the association between CA and some negative outcomes (e.g. involving alcohol) may be mediated in part by an earlier use of substances (perhaps in an attempt to regulate negative affect) and earlier transition to adult roles (potentially driven by the negative home environment).



INTRODUCTION

Initially observed in samples ascertained via clinical presentation, the association of childhood sexual abuse (CSA) or physical abuse (PA) with increased risk for subsequent alcohol dependence has more recently been confirmed in general population studies.¹⁻⁴ We have reported⁵ on the association between CSA and negative outcomes (including alcohol dependence) in data from a recently completed diagnostic telephone assessment of a volunteer panel of young adult Australian twins. We used analyses uniquely available within the twin study design (e.g. comparisons of risks for outcomes in pair members who are discordant for abuse history, but share other aspects of the family environment) to disentangle the risks related to the abuse from other family background risk factors. In the discordant pair analyses, we found an odds ratio of 1.56 (1.01-2.40) for the risk for alcohol dependence associated with a history of CSA. In the current analyses, we attempted to extend these findings by examining the effects of a history of childhood abuse (CA) defined as either CSA or PA, on the onset various alcohol use-related outcomes.



METHODS

Participants

The young adult '1989' cohort of the Australian Twin Register (born 1964-1971) is a volunteer twin panel registered as children by their parents, who were approached through Australian school systems, and via mass media appeals, between 1980 and 1982. Twins were first contacted (as young adults) in 1989 by means of mailed questionnaire. In a recently completed investigation (AA10249; Heath, PI) (1996-2000), a standardized psychiatric diagnostic assessment was administered via telephone. Data presented here are from this standardized interview, designed both to make DSM-IV diagnoses and to provide a preliminary characterization of various aspects of the subjects' childhood and adolescence (including their home environment).

Interviewed subjects (N=6265) had a mean age of 29.94 years (SD 2.47). 55.3% were female. A broad range of socioeconomic levels was represented in the sample. The median level of education was 11-12 years of school with an apprenticeship or diploma. At least an undergraduate university degree had been completed by 25.8% of respondents and another 8.6% had completed technical or teacher's college. The median yearly household income was \$US 20,000-\$US 24,500.



A standardized psychiatric Semi-Structured Assessment was administered via telephone. Diagnoses to be made included major depressive disorder, separate non-diagnostic section environment, whether their whether they had experience

All interviews were conducted by interviewers who had completed an extensive training course. Interviews with community members were assessed by the same interviewers. The interviews of other family

assessment, an adaptation of the Semi-Structured Assessment of Alcoholism (SSAGA-OZ) interview enabled lifetime DSM-IV diagnoses, alcohol dependence, and nicotine dependence. Interviewees were asked about their early home environment and problems with alcohol, and significant events.

Interviewers who had completed supervised telephone diagnostic interviews from the same pair were never interviewed. Interviewers were blind to the results of



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Primary statistical analyses were conducted using either SAS Version 6.12⁶ or STATA.⁷ All estimates of confidence intervals (95%CI) were adjusted for the non-independence of observations in pairs via the use of robust variance estimators.

In Cox Regression analyses, age at first occurrence reflected the age when criteria for CSA or PA were met. As most of the questions contributing to the diagnosis of CSA or PA failed to ask for age at first occurrence, PA onset was used for half of PA-positive subjects. Thus, in those individuals with both CSA and PA, age at first occurrence of CSA was used for the regression analysis results, and the intercept reflects the mean value for the dependent variable on the onset of the disease. The intercept reflects the mean value for the dependent variable on the onset of the disease. The intercept reflects the mean value for the dependent variable on the onset of the disease.

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RESULTS

Endorsement of Childhood Sexual Abuse (CSA) Components and Composite

Abuse components and composite	Total (N=6265)	Women (N=3462)	Men (N=2803)
Forced sex	10.0%	14.5%	4.4%
Sexual contact (non-family)	3.8%	4.5%	3.0%
Sexual contact (family)	4.4%	7.0%	1.1%
Rape before age 18 years	3.5%	5.2%	1.4%
Molested	9.2%	13.0%	4.4%
CSA composite	12.3%	17.3%	6.0%

Cronbach's alpha for



RESULTS

Childhood Physical Abuse

Endorsement of Physical Abuse (PA) Components and Composite

Abuse components and composite	Total (N=6265)	Women (N=3462)	Men (N=2803)
Mother hit - hurt next day	4.6%	5.1%	3.9%
Father hit - hurt next day	5.1%	5.5%	4.6%
Purposely hurt by adult	8.0%	7.7%	8.4%
Physical abuse	3.6%	4.2%	2.9%
PA composite	10.7%	10.3%	11.1%

Cronbach's alpha for the 5 PA items was 0.80.

RESULTS

Childhood Abuse (CA)

Overlap of Composite Variables, CSA and PA

	Total (N=6265)	Women (N=3462)	Men (N=2803)
CA (either CSA or PA)	19.2%	22.6%	14.9%
Both CSA and PA	3.6%	4.8%	2.1%
CSA only	8.7%	12.5%	3.9%
PA only	7.0%	5.5%	8.9%

The mean age at first occurrence of CA was age 9.9 years (SD 4.2).



Alcohol dependence associated with CA

The univariate Cox regression results displayed below showed that prior history of CA was associated with significantly increased risk of subsequently occurring alcohol dependence in women and men.

	Alcohol Dependence			
	Women		Men	
	HR	95%CI	HR	95%CI
CA	2.48	2.05-2.99	1.42	1.11-1.81

Univariate hazard ratios (HR) and 95% Confidence Intervals (95% CI)



Effect of CA status on the onset of various milestones

Onset Variables (in years)	Regression results (betas and 95%CI's)				
	CA	Mother alcohol probs	Father alcohol probs	Male gender	Intercept
Alcohol dependence	-0.75 (-1.28 - -0.22)	-0.40 (-1.24 - 0.43)	-0.30 (-0.77- 0.17)	-0.56 (-1.02- -0.11)	22.15 (21.74-22.57)
Drinking more than intended	-0.47 (-0.80 - -0.14)	-0.21 (-0.75 - 0.33)	-0.08 (-0. 38- 0.22)	-0.55 (-0.80- -0.31)	22.15 (21.74-22.57)
Drinking interfering at home	-0.85 (-1.61 - -0.09)	0.50 (-0.94 - 1.94)	0.43 (-0. 36- 1.21)	-0.66 (-1.35- -0.04)	20.20 (19.64-20.77)
Drinking causing problems at work/school	-2.02 (-3.26 - -0.78)	-0.99 (-2.69 - 0.71)	-0.70 (-1.96- 0.57)	-1.18 (-2.55- 0.20)	21.15 (21.74-22.57)



Effect of CA status on the onset of various milestones

Onset Variables (in years)	Regression results (betas and 95%CI's)				
	CA	Mother alcohol probs	Father alcohol probs	Male gender	Intercept
Alcohol intoxication	-0.77 (-0.98 - -0.57)	-0.39 (-0.83 - 0.06)	-0.26 (-0.44- -0.08)	-1.04 (-1.20- -0.89)	17.80 (17.68-17.93)
Regular Drinking	-0.41 (-0.63 - -0.20)	-0.28 (-0.77 - 0.20)	-0.05 (-0.24- 0.13)	-0.73 (-0.88- -0.58)	18.58 (18.46-18.70)
Regular smoking	-0.80 (-1.10 - -0.51)	-0.40 (-0.92 - 0.11)	-0.38 (-0.63- -0.13)	-0.18 (-0.42- 0.05)	16.92 (16.74-17.09)
Leaving home	-1.20 (-1.42 - -0.98)	-0.41 (-0.85 - 0.04)	-0.62 (-0.83- -0.41)	0.11 (-0.08- 0.30)	20.35 (20.20-20.49)
Consensual intercourse	-0.97 (-1.17 - -0.77)	-0.19 (-0.65 - 0.28)	-0.42 (-0.62- -0.23)	-0.77 (-0.95- -0.60)	18.74 (18.60-18.88)



CONCLUSIONS

- **22.6% of women and 14.9% of men reported a history of CA**
- **A history of CA was associated with significant risk for subsequently-occurring alcohol dependence in men and women.**
- **In analyses controlling for gender and respondents' report of maternal and paternal alcohol problems, a history of CA was associated with a significantly earlier onset of alcohol intoxication (-0.77 year) and alcohol dependence (-0.75 year).**
- **In similar analyses, a history of CA was associated with a significantly earlier onset of other alcohol problems, regular smoking, leaving home, and consensual sexual intercourse**
- **These results suggest that the association between CA and some negative outcomes (e.g. involving alcohol) may be mediated in part by an earlier use of substances (perhaps in an attempt to regulate negative affect) and earlier transition to adult roles (potentially driven by the negative home environment).**



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