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ALCOHOL USE DISORDERS AND TEENAGE SEXUAL INTERCOURSE

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OBJECTIVE

To determine whether teenage alcohol use, abuse and dependence is related to early initiation of sexual intercourse

METHODS

COA Study

- Fathers
 - 1464 twin fathers sampled from the Vietnam Era Twin Registry
 - All had at least 1 child 12-26 yrs old in 2000
 - Twin pairs either concordant or discordant for alcohol dependence. Controls were non-alcoholic twin pairs
- Mothers
 - 1,000 biological and/or rearing (i.e. lived regularly with child between ages 6 and 13) mother identified, 862 interviewed
 - Mothers asked to give permission to interview offspring
- Offspring
 - Mothers identified and gave permission for 1487 offspring to be interviewed. Of these, 1270 offspring were interviewed.

Assessment Domains

- Twin fathers' alcohol lifetime Dx and zygosity obtained from '92 data (Tsuang and Lyons).
- 1,464 twin fathers sampled with 84% response rate (n=1176). Updated lifetime drinking history (LDH) collected from twin fathers by telephone interview.
- Mothers and offspring were interviewed by telephone and completed a questionnaire by mail to provide:
 - Telephone interview: Alcohol abuse, dependence, substance use/abuse, psychopathology (depression, anxiety, conduct disorder, oppositional defiant disorder, attention deficit/hyperactivity disorder)
 - Mail questionnaire: psychosocial variables (family & relationship quality, peers, school attendance, work environment, personality, drinking expectancies, etc.)

Sexual Behavior Assessment

- Questions in offspring telephone interview:
 - Have you ever had consensual sexual intercourse?
 - How old were you when you first had consensual intercourse?
 - How many consensual sexual partners have you had?

Analytic Approach

- All offspring age 12-18 years used in analyses (n=542)
- Independent variables: alcohol use, abuse and dependence and abstinence (DSM-IV)
- Dependent variables: sex/no sex, age of first intercourse, number of sexual partners
- Crude associations assessed by chi-square and one-way ANOVA
- Survival analyses used to determine age onset of sexual intercourse as a function of alcohol variables, adjusting for gender and conduct disorder.

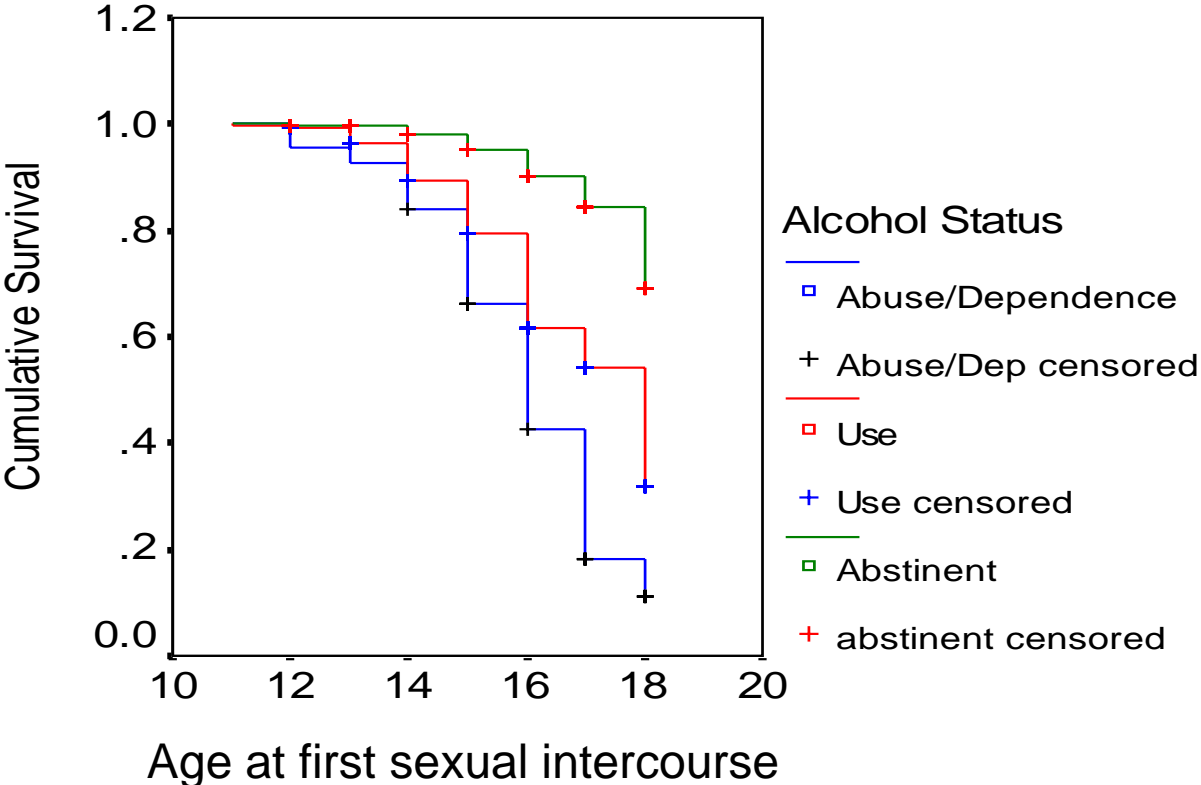
Cox Proportional Hazards Models

- Survival analysis – accounts for the possibility that some subjects have not yet had time to develop the outcome
- Assumption that risk remains constant over time
- Hazard ratios can be thought of as odds ratios
- STATA was used to compute Cox Proportional Hazards models for time to first consensual sexual encounter by alcohol use and abuse/dependence adjusting for gender, conduct disorder, and familial clustering
- Alcohol use was divided into 3 mutually exclusive groups: alcohol abstinence, use and abuse/dependence

RESULTS

	Alcohol Abstinence	Alcohol use	Alcohol Abuse/ dependence	P-value
n	217	255	69	
Female Gender	52.5%	42.8%	53.6%	0.066
Mean Age (SD)	14.5 (1.7)	15.8 (1.7)	16.8 (1.1)	<0.001
Conduct Disorder	3.2%	11.6%	29.4%	<0.001
Ever had sexual intercourse	6.5%	36.3%	81.2%	<0.001
Mean age onset Intercourse (SD)	14.4 (1.7)	15.4 (1.6)	15.8 (1.5)	<0.001
Mean number sexual partners (SD)	1.3 (0.8)	4.4 (10.7)	3.8 (3.5)	0.432

Figure 1. Kaplan Meier Survival Curve for onset of sexual intercourse by alcohol use status



Cox Proportional Hazards Results

Variable	Hazard Ratio**	Robust SE	z	p	95% CI
Alcohol Use	3.89*	1.13	4.67	<0.01	2.20, 6.87
Alcohol Abuse/Dependence	7.36*	2.26	6.50	<0.01	4.03, 13.44
Male gender	1.03	0.17	0.18	0.86	0.74, 1.43
Conduct Disorder	1.40	0.31	1.53	0.13	0.91, 2.14

*HR's differ significantly ($\chi^2 = 12.98$, $p < 0.01$)

**Comparison group is alcohol abstinence

Cox Proportional Hazards Results

- After adjusting for gender, conduct disorder and familial clustering:
 - teenagers who use alcohol are 3.89 times more likely to have ever had sexual intercourse than those who do not drink
 - teenagers with alcohol abuse/dependence are 7.36 times more likely to have ever had sexual intercourse than those who do not drink
 - Teenagers with alcohol abuse/dependence are significantly more likely to have sexual intercourse than those who drink but do not have an alcohol use disorder

CONCLUSIONS

- Alcohol use and abuse/dependence is significantly associated with both having sex as a teenager and earlier first sexual experience.
- Prevention of teenage drinking may reduce early sexual intercourse and its negative consequences

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