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Consistency in Reports of Early Alcohol Use

*Findings From a Longitudinal Study of Female
Adolescents Followed Through Young Adulthood*

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Andrew C. Heath, & Pamela A.F. Madden**



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Background

- The majority of studies on alcohol use and related problems use retrospective measures to gather drinking histories.
- Initiation and first intoxication are major milestones that have significant implications for long-term course of use.
- Establishing the reliability of reports of early use is critical to conducting this line of research.

Aims

1. To evaluate, using a longitudinal study of adolescent females followed through young adulthood, the consistency in reports of:
 - a) Age at 1st drink
 - b) Age at 1st intoxication
 - c) Number of drinks to become intoxicated at the start of regular alcohol use
2. To determine the degree to which consistency in reports varies by age at time of first and second report and lag time between reports

Participants

- Twins born between 1975 and 1985 recruited into the Missouri Adolescent Female Twin Study (MOAFTS)
- MOAFTS is a longitudinal study of alcohol use disorders and related psychopathology in female adolescents and young adults, with 5 waves of data collection (PI: Heath)
- 86% identified as Caucasian, 14% as African-American

Participants

- Data were derived from reports at Waves 1, 3, and 4. Respondents ranged in age from:
 - ❖ 12 - 23 at Wave 1
 - ❖ 15 - 23 at Wave 3
 - ❖ 18 - 29 at Wave 4
- Number of respondents providing reports from 2 different waves of data collection:
 - ❖ 1,716: Age at 1st drink
 - ❖ 908: Age at 1st intoxication
 - ❖ 905: Drinks to become intoxicated

Assessment Protocol

The Semi-Structured Assessment for the Genetics of Alcoholism (Bucholz et al., 1994), adapted for telephone administration, was used to gather drinking histories.

Alcohol Outcomes

- Age at 1st drink
- Age at 1st intoxication
- Number of drinks to become intoxicated at the start of regular alcohol use

Reports of Early Use

	Mean (SD)		
	Age at 1 st drink	Age at 1 st intoxication	Drinks to become intoxicated
Time 1	15.07 (2.18)	16.09 (1.85)	3.34 (1.53)
Time 2	16.01 (2.23)	16.72 (2.14)	3.50 (1.44)
T1-T2 discrepancy (absolute value) *	1.40 (1.46)	1.17 (1.22)	1.27 (1.33)

* Outliers (highest and lowest 1% difference scores) removed

Time 1 – Time 2 Correlations *

	<i>r</i>	<i>p-value</i>
Age at 1 st drink	0.65	<0.0001
Age at 1 st intoxication	0.71	<0.0001
Drinks to become intoxicated	0.39	<0.001

* Outliers (highest and lowest 1% difference scores) removed

Change in Report From Time 1 to Time 2

		Age at 1 st drink	Age at 1 st intoxication	Drinks to become intoxicated
Increase	3 +	17.2%	11.8%	5.5%
	2	13.1%	13.1%	7.7%
	1	21.3%	21.5%	18.1%
No Change		30.6%	34.5%	31.0%
Decrease	1	11.8%	13.0%	18.1%
	2	3.6%	3.8%	11.3%
	3+	2.4%	2.3%	8.3%

Correlation of Discrepancy In Report with Reporting Age and T1-T2 Lag Time

	Discrepancy in T1-T2 Reports *		
	<i>r (p-value)</i>		
	Age at 1 st drink	Age at 1 st intoxication	Drinks to become intoxicated
Age at Time 1	-0.21 (<0.001)	-0.02 (0.45)	-0.04 (0.18)
Age at Time 2	-0.07 (0.008)	0.084 (0.01)	0.02 (0.58)
Years from Time 1 to Time 2	0.16 (<0.001)	0.15 (<0.001)	0.08 (0.02)

* Outliers (highest and lowest 1% difference scores) removed

Age at First Drink: T1-T2 Change in Report By Age at First Report

		13 - 16 (n=596)	17 - 18 (n=510)	19 - 23 (n=610)
Increase	3 +	26.3%	15.5%	9.8%
	2	17.8%	12.8%	8.7%
	1	23.7%	21.8%	18.5%
No Change		21.6%	32.9%	37.4%
Decrease	1	7.7%	11.6%	15.9%
	2	2.2%	3.3%	5.3%
	3+	0.7%	2.2%	4.4%

Results: Aim 1

- Correlations between Time 1 and Time 2 reports were moderately high for age at first drink ($r=0.65$) and for age at first intoxication ($r=0.71$).
- Time 1 and Time 2 reports for number of drinks to become intoxicated were modestly correlated ($r=0.39$).
- For all 3 outcomes, approximately one third of respondents reported the same values at Time 1 and Time 2.

Results: Aim 1

- In 51.6% of cases, an older age at first drink was reported at Time 2 than at Time 1.
- 46.4% of respondents reported an older age at first intoxication at Time 2 than at Time 1.
- By contrast, a similar proportion of respondents reported higher (31.3%) as lower (37.7%) number of drinks to become intoxicated at Time 2 compared to Time 1.

Results: Aim 2

- The discrepancy between Time 1 and Time 2 reports was significantly correlated with:
 - ❖ Age at 1st report and lag time from 1st to 2nd report for age at 1st drink
 - ❖ Lag time from 1st to 2nd report for age at 1st intoxication
- Younger age and longer lag times were associated with larger discrepancies in reporting.

Conclusions

- The relatively high consistency in reports across 2 waves of data collection indicates good reliability for retrospective reports of age at 1st drink and age at 1st intoxication in MOAFTS.
- The modest correlation between Time 1 and Time 2 reports of number of drinks to become intoxicated suggests that retrospective reporting is less reliable for this measure of early use.
- Although reports did not vary substantially across the 2 time points, we found evidence for systematic biases in reporting of age at 1st drink and age at 1st intoxication.

Conclusions

- Findings are suggestive of forward telescoping, that is, a bias toward reporting events closer to the time of interview than they actually were.
- Results underscore the greater reliability of reports of drinking milestones assessed in close proximity to their occurrence and the importance of adjusting for these possible biases.