Age of adolescent alcohol initiation and progression to binge drinking: A prospective cohort study

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Background
Alcohol is one of the leading contributors to the burden of disease in young people internationally and is associated with a range of short and long term harms1-4 Early adolescent alcohol initiation is common; the average age of adolescent initiation in 2013 in Australia was 15.5 years and over 50% of 14-19 year olds reported current alcohol use1 Risky alcohol use in adolescence and adulthood is also common; one third of 14-19 year olds report binge drinking in the past year, increasing to 61% of 18-24 year olds2 Early age of alcohol initiation is thought to be associated with an increased risk of alcohol problems in adolescence and adulthood. However, evidence for this relationship is mixed2 A recent systematic review questioned the quality of the research in this area, concluding that there was no strong evidence that early age of initiation leads to later alcohol problems3

Aims
Using data from the Australian Parental Supply of Alcohol Longitudinal Study (APSALS) cohort, the current study aims to:
- Explore the age of initiation amongst drinkers in the APSALS cohort
- Examine the rates of drinking and bingeing during school years 7 to 11
- Investigate whether early initiation of alcohol leads to later alcohol problems, specifically binge drinking in year 11.

The APSALS cohort
- Recruited in 2010-2011 through 49 schools in NSW, TAS and WA.
- 1,927 eligible parent-adolescent dyads in the cohort
- Grade 7 adolescents and their parent/guardian completed separate annual surveys over 5 years
- Survey response rates have remained above 85%
- Measures demographics, alcohol use, alcohol related harms, parental, child, family and peer factors
- The cohort closely matches the Australian population in sex, age, household composition, socioeconomic status and alcohol use

Discussion & Implications
- The unadjusted results suggested a link between early initiation and binge drinking in high school, but control of important confounders eliminated this apparent relationship.
- These findings highlight the importance of conducting rigorous epidemiological research. The results are consistent with previous well-controlled prospective studies, finding no evidence for the relationship between age of initiation and later binge drinking.5
- The findings are limited to drinking between early and mid-teens. Follow-up of this cohort into adulthood will help clarify impacts of early drinking on more mature consumption patterns.
- Other possible risk factors for binge drinking that came up in this analyses were:
  - Supply of alcohol to minors (by parents and other sources)
  - Peer substance use
  - Adolescent externalising behaviours (rule breaking, aggression).
- Early drunkeness (rather than just early use) has been suggested as another potential risk factor. Early experiences of being drunk may set up a heavier drinking trajectory, or perhaps reflects some underlying risk factor. These are questions that we will be pursuing with this cohort.
- Regardless of the age of initiation, there are well demonstrated acute risks associated with adolescent binge drinking.
- Alcohol attributable harms in Australia increased between 2001-2010, and recent evidence suggests that alcohol use and related harms are increasing amongst the heaviest drinkers.6 Understanding the progression to heavy alcohol use is vital to reducing alcohol related harms.
- Advice to delay initiation remains appropriate to ensure that early drinking does not compromise adolescent well-being.

Results

In year 11, 1673 participants provided data:
- 53% were male
- Mean age was 16.9 years
- 56% had initiated alcohol

Rates of alcohol use and binge drinking increased at each wave (Figure 1). Among those who had initiated alcohol (at <18 years of age), the mean age of initiation was 15 years, and 30% had started drinking by age 14 (Figure 2).

Does earlier alcohol initiation increase the risk of binge drinking in late high school?

A logistic regression analysis was conducted using 5 years of APSALS data to examine the impact of age of initiation on the risk of binge drinking in year 11 of school, controlling for a range of child, parent, family and peer factors
- Unadjusted results: later age of initiation appeared to be protective of binge drinking
- Adjusted results: After controlling for important covariates, this relationship was no longer significant
- There was no increased risk of binge drinking for those who initiated alcohol use earlier in adolescence, compared to those initiating later in adolescence

References

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