



Early parental supply of alcohol: Association with drinking in mid-adolescence?

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Why is parental supply important?

Parents are the major supplier of alcohol to their early teen children

- Introduce alcohol in a “safe” environment
- Promote moderate drinking behaviours
- Sometimes reference is made to European/Mediterranean countries introduction of alcohol
- Permissive attitude?

Underage alcohol use is associated with risks

- Injury/trauma, intoxication/alcohol poisoning, high-risk/unwanted sexual activity, brain function
- Subsequent alcohol use disorder, non-communicable disease
- Single leading risk factor for disability adjusted life years in 10-24 year-olds

Ministerial Council on Drug Strategy interest in secondary supply

- → NDARC review
- → that review concluded there was no evidence of better drinking outcomes from parental supply
- but, the research literature was limited in scope and quality →

Grant application in 2009, funded in 2010 until 2014

Impacts of parental supply have been poorly researched

2014 review indicates an ongoing lack of clear evidence (Kaynak et al., 2014)

- 22 studies
- 15 studies were cross-sectional
- 7 studies were longitudinal – but of brief duration
- Concluded that parental supply seemed to predict heavier drinking
 - poor control for the major likely confounders/covariates,
 - specifically, lack of control for: cultural background; parental demographics; child psychosocial risk factors; parental heavy drinking; parental rules and monitoring of child activities

So Does parental supply lead to more moderated drinking, or to greater alcohol consumption?

How might we research the impact of parental supply?

- Need a prospective design
- Starting in early teenage years
- With little/limited regular drinking at start
- Followed-up over four to six years
- With clear evidence of change/increase in consumption over time
- Large sample
- Representative, if want to generalise the results
- Equal male:female participation
- From diverse backgrounds
- Control for known observable confounders/covariates
- Appropriate statistical methods



Predictors of early drinking, beyond parental supply

- Child age, child gender
- Child anxiety, depression, social problems, rule-breaking/aggression
- Children's peers alcohol/tobacco/illicit drug use
- Child's prior alcohol use
- Parental strictness/demandingness/responsiveness/relationship quality
- Parental parental rules about alcohol use, alcohol norms
- Parental communication about alcohol
- Parental monitoring of child activity, parental consistency of rule enforcement
- Household availability of alcohol
- Family history of heavy drinking, and parental alcohol use
- Familial conflict/positive relations
- Demographics (parental country of origin; parental education; family religiosity; family gross income; family SES; single parent household; presence of older siblings; and whether the child has money to buy alcohol)

Methods we used to research this issue

- Five-year project, using a longitudinal prospective design
- Controlling for the known predictors of teenage drinking
- ~1928 adolescent/parent dyads recruited in NSW, Tasmania, WA
- From 49 schools (government - 38.8%), independent - 49.0%), catholic - 12.2%)
- Child gender - 44.8% are female
- Mean age of the reporting parent at start = 43.4 years
- Measured in four school years
- Years 7, 8, 9, and Year 10
- Aged ~12/13, 13/14, 14/15, and 15/16 years of age
- Assessed annually on-line or paper
- Retention ~90% - chasing last follow-ups of Wave 4
- Child data today, based on 1421 subsample



Parental drinking compared to National Drug Strategy Household Survey sample

Parental frequency of drinking	NDSHS 2010 adults (40-49 years)	Current sample of parents at Wave 1/2010
Daily	7.5%	2.7%
Weekly	45.0%	48.5%
Less than weekly	33.3%	39.2%
No alcohol in past 12 months	7.4%	9.6%

Child/household compared to Australian population

This sample matched the Australian population in important ways:

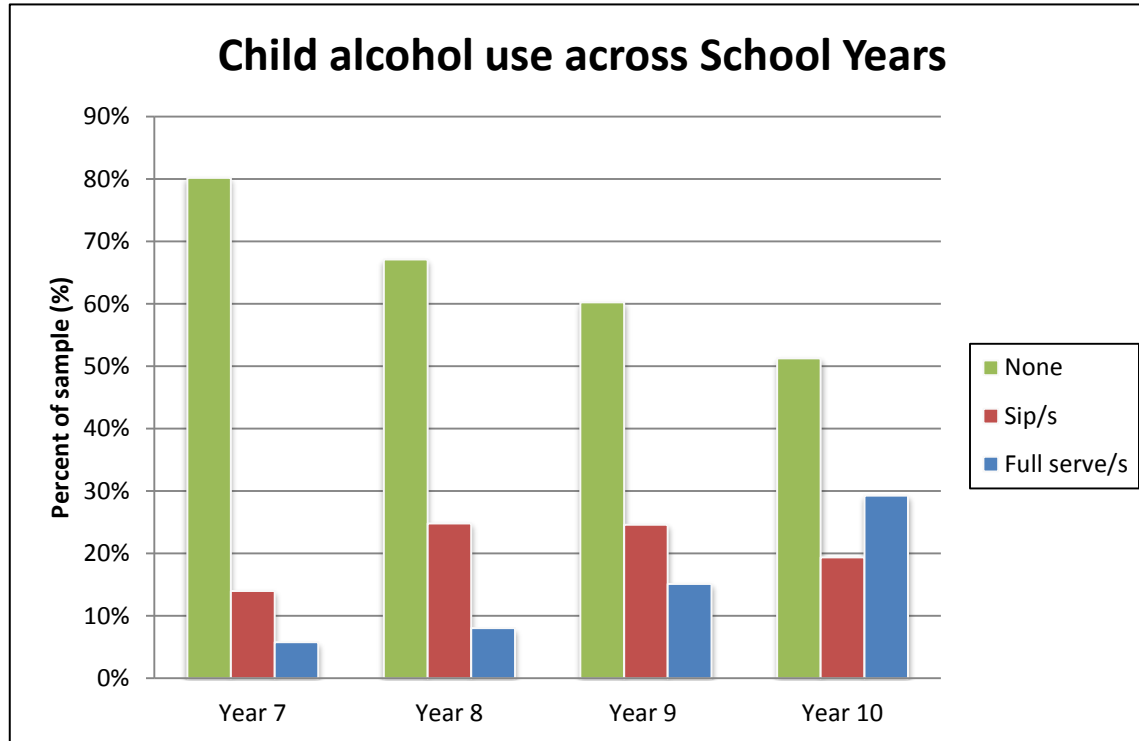
- Adolescent sample is 55.3% male
 - versus 51.2% of the population (ABS, 2012)
- 80.4% of adolescents living in a two-parent household
 - versus 80% of adolescents in general population (ABS, 2011)
- Socioeconomic status (SES) index of the current sample is 1023.6 (SD=79.9)
 - close to the Australian standardised mean SES index of 1000



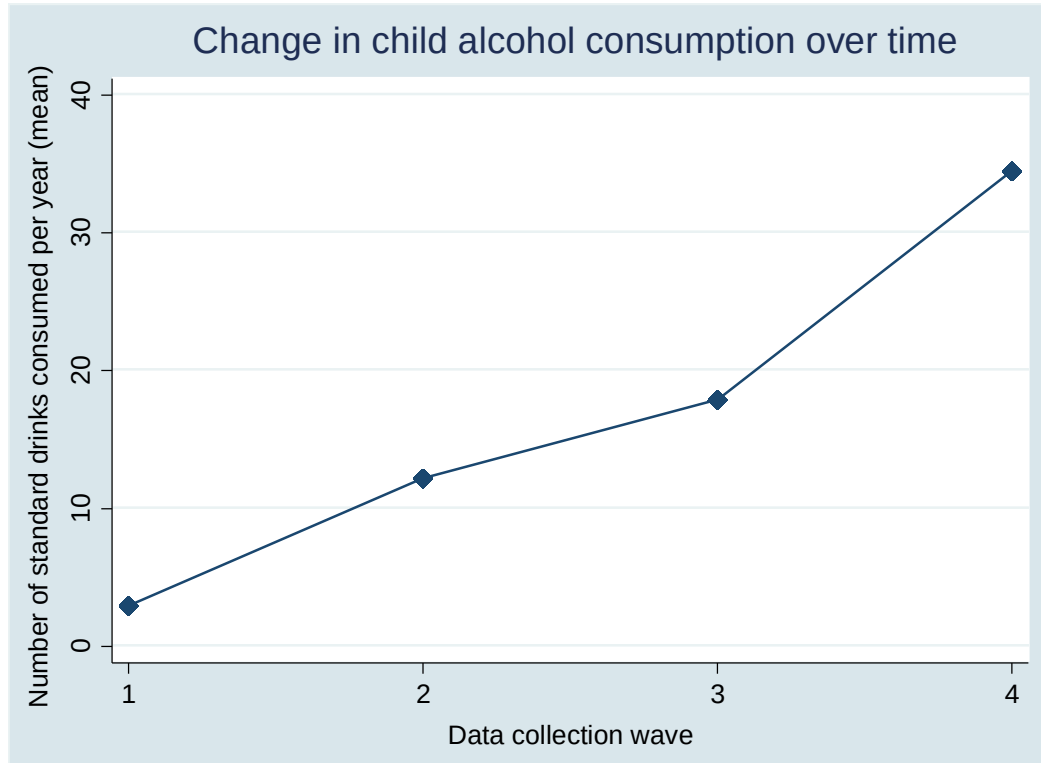
Percent of children supplied alcohol – from parents

School Year (age)	No alcohol	Sips only	Full serves	Total
Year 7 (12-13 years)	83.8%	14.8%	1.5%	16.3%
Year 8 (13-14 years)	73.1%	22.9%	4.0%	26.9%
Year 9 (14-15 years)	71.3%	21.5%	7.2%	28.7%
Year 10 (15-16 years)	63.8%	21.3%	14.9%	36.2%

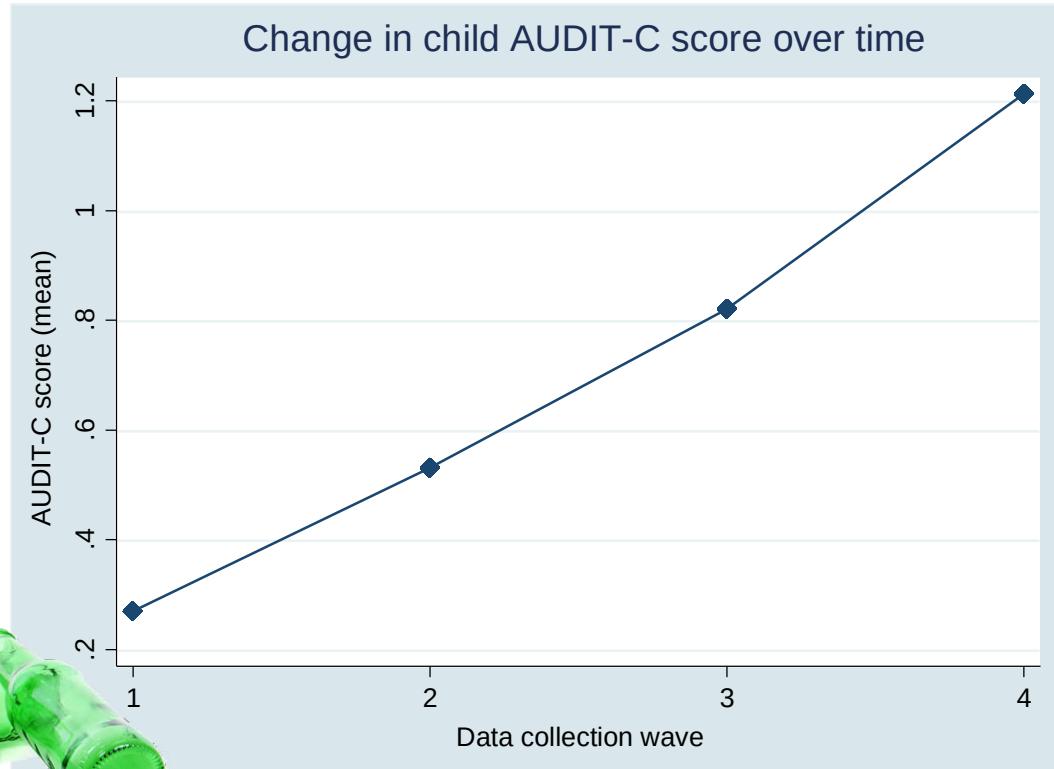
Percent of children supplied alcohol – all sources



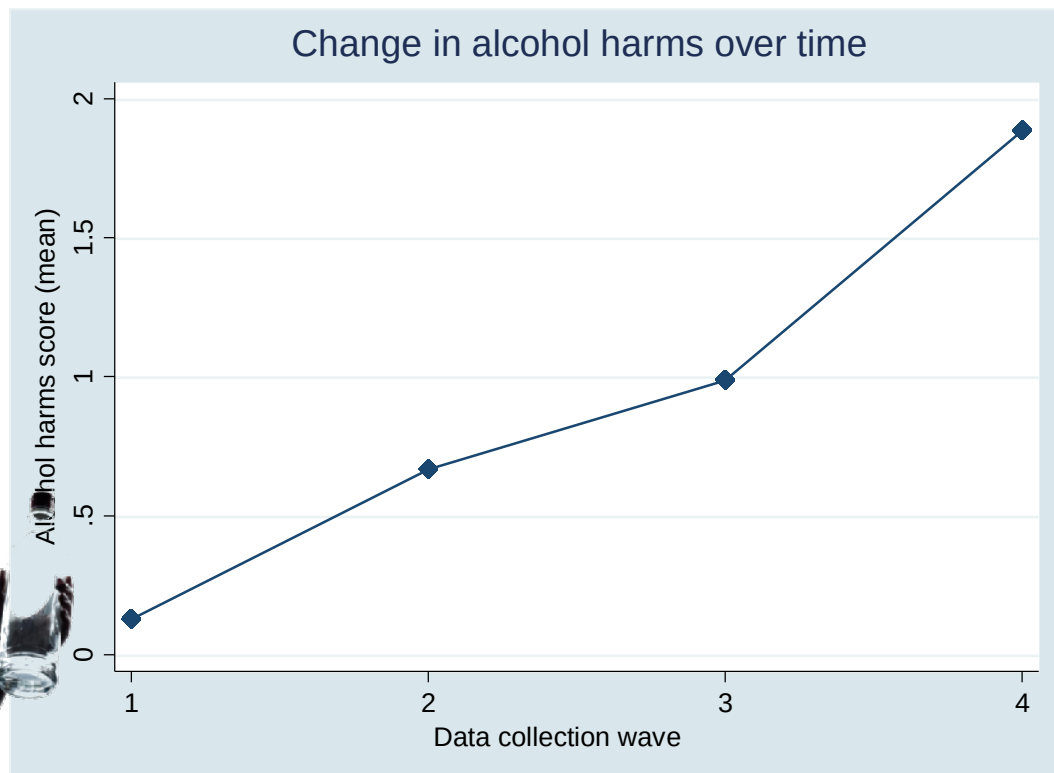
Quantity/frequency of standard drinks



AUDIT-C (range = 0–12)



Change in harms (range = 0–85)



Predictors of mid-teen drinking

	Odds Ratio	95% CI
<u>Demographics</u>		
Child is female	1.37*	1.08-1.75
Child age	2.62*	2.07-3.32
Two-parent household	0.61*	0.44-0.83
Parent is Australian-born	1.44*	1.08-1.92
Low SEIFA score	2.02*	1.45-2.82
Child has older siblings	1.33*	1.04-1.71
Family is religious	0.44*	0.30-0.66
Parental education level	NS	-
Child has disposable income	NS	-

Predictors of mid-teen drinking

	Odds Ratio	95% CI
<u>Parent/family factors</u>		
Parents supply of alcohol	3.62*	3.04-4.30
Parental alcohol Q/F	1.00*	1.00-1.00
Parental consistency	0.97*	0.96-0.98
Alcohol-specific rules	0.78*	0.74-0.82
Parental monitoring	0.92*	0.90-0.93
Parental responsiveness	0.93*	0.91-0.96
Parental demandingness	0.89*	0.86-0.92
Family conflict	1.09*	1.03-1.14
Family positive relationships	0.87*	0.80-0.94
Home access to alcohol	NS	-
Familial heavy alcohol use	NS	-
Alcohol communication	NS	-

Predictors of mid-teen drinking

	Odds Ratio	95% CI
<u>Adolescent behaviours</u>		
Externalising behaviour	1.05*	1.04-1.06
Internalising behaviour	1.01*	1.00-1.02
Social problems	1.02*	1.00-1.04
Prior alcohol use	1.06*	1.04-1.08
<u>Peer influences</u>		
Peer substance use	1.19*	1.17-1.22
Alcohol use normative	1.07*	1.06-1.08
Peers disapprove substance use	0.82*	0.80-0.85

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Child has disposable income	NS	-	Family positive relationships	0.87*	0.80-0.94
			Home access to alcohol	NS	-
			Familial heavy alcohol use	NS	-
			Alcohol communication	NS	-
<u>Peer influences</u>			<u>Adolescent behaviours</u>		
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Peers disapprove substance use	0.82*	0.80-0.85	Social problems	1.02*	1.00-1.04
			Prior alcohol use	1.06*	1.04-1.08

Controlling for all covariates: Non-significant predictors of mid-teen drinking

	Odds Ratio	95% CI		Odds Ratio	95% CI
<u>Demographics</u>			<u>Parent/family behaviours</u>		
Two-parent household	NS		Household alcohol use	NS	
Parent is Australian born	NS		Home access to alcohol	NS	
Low SEIFA score	NS		Parental consistency	NS	
Parent education	NS		Alcohol-specific rules	NS	
Child has disposable income	NS		Parental monitoring	NS	
Child has older siblings	NS		Familial heavy alcohol use	NS	
Family is religious	NS		Parental responsiveness	NS	
			Parental demandingness	NS	
			Alcohol communication	NS	
			Family conflict	NS	
			Family positive relationships	NS	
<u>Adolescent peer influences</u>			<u>Adolescent behaviours</u>		
Peers disapprove substance use	NS		Internalising behaviour	NS	
			Prior alcohol use	NS	

Controlling for all covariates: Significant predictors of mid-teen drinking

	Odds Ratio	95% CI		Odds Ratio	95% CI
<u>Demographics</u> Child is female Child age 	1.93* 1.69*	1.26-2.94 1.14-2.50	<u>Parent/family behaviours</u> Parental supply of alcohol 	2.68*	2.09-3.44
<u>Adolescent peer influences</u> Peer substance use Alcohol use normative 	1.11* 1.03*	1.07-1.14 1.01-1.04	<u>Adolescent behaviours</u> Externalising behaviour Social problems 	1.04* 0.95*	1.02-1.06 0.90-0.99

Other sources of alcohol?

Do teenagers whose parents have supplied them with alcohol, drink differently from those whose parents have not provided alcohol?

Controlling for the covariates:

- Teenagers who received alcohol from parents are 15 times more likely to drink alcohol acquired from other sources, than children who did not receive alcohol from parents
- These sources include
 - peers – 69%
 - family friend/other adults – 35%
 - self-supply – 27%
 - siblings – 19%
- Odds ratio = 14.95, 95% CI 11.47 – 19.49



Parental supply is associated with increased acquisition of alcohol from other sources

Interpretation

Of the almost 30 measures, seven remain significant predictors of mid-teen drinking

Mid-teen drinkers are more likely to:

- have parents who supply alcohol
- be female, be older, see alcohol use as normative, be a rule-breaker/aggressive, report fewer social problems, and have peers who use substances

Parental supply in early teens is the strongest predictor of mid-teen drinking



Interpretation

Mid-teens are almost three times (odds ratio=2.68) more likely to drink whole beverages if their parents have been supplying alcohol in the early teen years

Additionally, teens who have been supplied alcohol by parents have markedly increased acquisition of alcohol from other sources

They are 15 times more likely to acquire alcohol from other sources – sources such as other relatives (adult or siblings), peers, or self-supply



Study strengths

- Large sample
- Balanced for gender, and similar to population (ABS), and to other samples (NDSHS), but less parental daily drinking reported by parents of our sample
- Government, independent and catholic schools
- Excellent retention
- Internationally, the longest running cohort to date
- Growth of child drinking evident over time
- Comprehensive control of 28 observable predictors/confounders
- Clear that parental supply has the strongest association with drinking



Study limitations

- Little evidence of harms yet, so we have no clarity whether excessive/harmful drinking is moderated by parental supply
- Longer follow-up to Year 12 at school, ~18-years-of-age, is required
- Self-report bias may have resulted in under-reporting of alcohol use
- Sample was recruited from metropolitan and suburban areas – different predictors of alcohol use may be evident in rural/remote areas
- Not a random sample of the Australian population
- No control for some predictors (e.g., pubertal status; density of liquor outlets; density of advertising of alcohol products) which have been associated with early drinking

Questions to be pursued

- Impacts of supervised/moderated parental supply versus unsupervised supply?
- Impacts of parental supply of sips only v. provision of whole beverages?
- Impact of the age of first supply?
- Does parental provision of alcohol to underage adolescents affect adolescent drinking in other settings (e.g., drinking with peers)?
- What predicts parental supply?
- Are there longer-term harms from parental supply?
- We intend to follow the cohort until they are 18 years old to determine the extent of harms and whether parental supply is associated with increased harms (or not)



Conclusions

- Parental provision of alcohol in Years 7 to 9 is associated with a 2.7-fold increase in the odds of drinking whole beverages in Year 10, controlling for a wide range of the known demographic, familial, parental, peer, and child covariates/confounders
- Early parental supply is not associated with decreased drinking in mid-teen years
- Female gender, older age are the next strongest associations – but these are (obviously) fixed characteristics
- The weakest associations were with child rule-breaking, lack of social problems, peers who use substances and see alcohol use as normative – not easily altered

Conclusions

- Parents need to be aware that early provision of alcohol to their child risks a near tripling of the likelihood of consuming whole beverages in mid-teens
- Why? Does parental supply suggest a permissive attitude? Is there symbolic removal of a barrier to drinking?
- Precautionary principle?





Questions



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