



Typologies of Saturday night alcohol consumption in young Australians aged 18-30

Medicine

National Drug and Alcohol Research Centre

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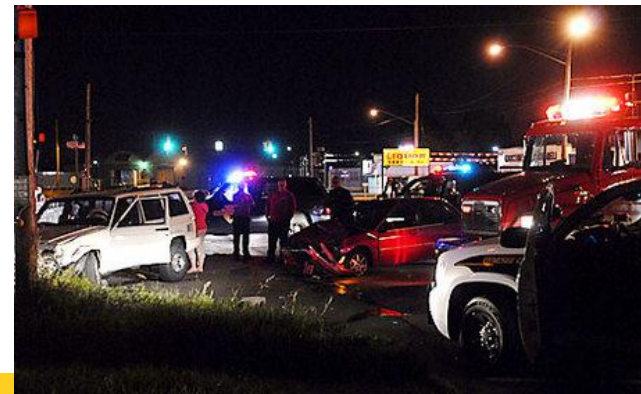
Single occasion drinking in Australia

- Binge drinking, heavy episodic drinking, risky single occasion drinking?
- No more than four standard drinks on a single occasion of drinking
 - 2009 NHMRC guidelines to reduce risk of alcohol-related injury
- In 2010 (NDSHS):
 - 29% of 18-19 year olds consumed more than 4 drinks on one occasion at least weekly
 - 22% of 20-29 year olds consumed more than 4 drinks on one occasion at least weekly
- Risky single occasion alcohol consumption peaks on Friday and Saturday

- Risky single occasion drinking linked to increased risk of experiencing aggression, assault and/or violence (Bye, 2007; Exum, 2006; Liang and Chikritzhs, 2011)



- High rate of non-fatal emergency department admissions relating to alcohol intoxication and/or injuries associated with alcohol consumption (Cherpitel, 1993; Cherpitel, 2007; Cherpitel et al., 2005; Verelst et al., 2012)
- Increased risk of fatal injuries including fatalities relating to drink-driving and homicide (Birdsall et al., 2011; Dawson, 2001; Miles, 2012, Pridemore, 2004)



Policies and Interventions

- Reduce alcohol consumption through price changes/taxation
- Reduce alcohol availability:
 - Restrict licensed trading hours
 - Limit packaged alcohol licenses
 - Implement pub/club lock-outs
 - Ban alcohol promotions and price discounting
 - Limit sale or high alcohol content beverages
- Taxation has limited effectiveness for high range drinkers.
Interventions to reduce availability tend to demonstrate reduced effectiveness over the long term
- Fail to target the motivation to drink in young people, particularly the behaviours that emerge as a result







Current Study

- Sought to identify distinct groups of young Australians who could be classified by their drinking behaviour
 - Quantity, location, type, price.
- Investigate significant socio-demographic risk factors that describe each specific type of drinking behaviour
- Investigate if poly-substance use is associated with one or more types of drinking behaviour

Sample

- The study design utilised quota sampling
 - Intending to survey 2,400 respondents aged 18-30 who consumed alcohol within the past year, with equal numbers of men and women who had either:
 - a) not used illicit drugs in the past year,
 - b) who had used cannabis (but not ecstasy in the past year)
 - c) who has used ecstasy in the past year.

Methods

- Data was obtained on the patterns of consumption on the past Saturday night between 6pm and 6am (Sunday Morning).
 - Amount of alcohol consumed (standard drinks)
 - Types of alcohol consumed (beer, wine, spirits, etc)
 - Price paid per standard drink
 - Location where alcohol was consumed
 - Smoked tobacco
 - Used Marijuana/Cannabis
 - Used stimulants (Ecstasy, cocaine, meth/amphetamine)
- Alcohol data were used for Latent Class Analysis.
- Multinomial logistic regression used to estimate the predictors/risks of each identified class.

Model	LL	#	BIC	ssaBIC	Entropy	LMR-LRT		Proportion in each class (%)						
						p-value	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8
1 Class	-19395.15	38903	38855	-	-	-	100	-	-	-	-	-	-	-
2 Class	-16064.29	32348	32256	1.000	0.0000	0.0000	65	35	-	-	-	-	-	-
3 Class	-15836.43	31997	31861	0.933	0.0000	0.0000	49	35	16	-	-	-	-	-
4 Class	-15704.57	31838	31656	0.871	0.0000	0.0000	17	33	15	35	-	-	-	-
5 Class	-15606.71	31748	31522	0.897	0.0000	0.0000	17	35	4	29	15	-	-	-
6 Class	-15530.85	31702	31432	0.901	0.3097	0.3097	35	11	17	4	9	23	-	-
7 Class	-15444.99	31635	31320	0.904	0.3146	0.3146	35	4	11	6	4	23	17	-
8 Class	-15370.113	31593	31234	0.896	0.4217	0.4217	35	4	21	6	14	6	4	10

Notes: LL = loglikelihood, # = number of free parameters, BIC = Bayesian Information Criterion, ssaBIC= sample size adjusted Bayesian Information Criterion, LMR-LRT = Lo-Mendell-Rubin adjusted Loglikelihood ratio test. Bold indicates the selected best fitting model.



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	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
Quantity (standard drinks)	0.00	12.99	9.13	6.59	5.66	20.88	6.86
Cost per standard drink (\$)	0.00	8.73	5.18	3.17	5.75	3.60	4.23
Drink at home (%)	0.00	1.00	0.23	0.00	0.19	0.62	1.00
Drink at someone else's home (%)	0.00	0.96	0.19	1.00	0.12	0.50	0.06
Drink in Public (%)	0.00	0.64	0.00	0.02	0.02	0.27	0.00
Drink at Cafe/Restaurants (%)	0.00	0.96	0.12	0.01	1.00	0.20	0.01
Drink at Bars/Clubs (%)	0.00	0.89	1.00	0.00	0.09	0.50	0.00
Beer consumed (%)	0.00	0.68	0.55	0.35	0.34	0.60	0.44
Cider consumed (%)	0.00	0.10	0.23	0.17	0.08	0.24	0.10
Wine consumed (%)	0.00	0.62	0.30	0.35	0.74	0.48	0.34
Spirits consumed (%)	0.00	0.22	0.50	0.27	0.21	0.55	0.19
RTD consumed (%)	0.00	0.27	0.15	0.23	0.05	0.43	0.19
Fortified wine consumed (%)	0.00	0.02	0.00	0.01	0.00	0.02	0.01
Total sample in each class (%)	35	4	11	6	4	23	17



Class 7: Moderate “own home” drinkers



Class 2: Heavy expensive drinkers



Class 4: Moderate “house party” drinkers



Class 1: Did not consume alcohol



Class 5: Restaurant/Cafe drinkers



Class 3: Moderate/heavy “Bar and club” drinkers



Class 6: Heavy cheap drinkers

Predictors of latent classes

	Chi-sq	df	p-value
Male	8.9	6	0.1805
Age (18-24)	28.8	6	<0.0001
Married	15.3	6	0.0184
Trade/technical certificate	5.4	6	0.4942
University degree	26.6	6	0.0002
Living with dependent kids	38.3	6	<0.0001
ATSI	8.0	6	0.2396
Born outside Australia	20.2	6	0.0025
NESB	21.6	6	0.0015
Smoked tobacco	26.0	6	0.0002
Cannabis use	6.7	6	0.3538
Stimulant use	40.8	6	<0.0001
Not heterosexual	7.4	6	0.2871
AUDIT >=8	250.3	6	<0.0001

Cost and location of consumption

Price per standard drink by type of alcohol

	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
Cost per beer	8.44	4.70	2.75	4.77	4.13	4.37
Cost per cider	9.51	4.67	2.90	9.28	4.38	3.48
Cost per wine	7.59	6.16	2.68	6.74	3.27	4.14
Cost per RTD	10.39	7.49	4.61	5.50	4.93	4.18
Cost per spirit	11.50	7.79	4.44	6.65	6.20	4.63
Cost per fortified wine	23.80	0.00	7.14	0.00	3.96	8.99

Total number of standard drinks consumed at each location

	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
Consumed at pub	3.31	6.68	0.00	0.04	6.14	0.00
Consumed at home	2.95	0.52	0.00	0.42	6.27	6.58
Consumed at someone else's home	2.42	0.65	6.28	0.20	5.82	0.20
Consumed at restaurant	2.42	0.41	0.00	4.52	1.67	0.01
Consumed at public location	1.91	0.00	0.00	0.02	2.14	0.00

Conclusions

- Alcohol consumption behaviours can be defined into seven distinct groups
- Highest consumption associated with groups who “go out” on a Saturday night
 - Evidence that the highest consuming groups drink at multiple locations, pre-loading.
 - Location specific policies less likely to change their behaviours
- Poly-substance use associated with heavy drinking
- Spirits are consumed by the heavier drinking groups (particularly those who “go out”)
- Beer and wine consumption associated with the lighter drinking groups, particularly those who go out to restaurants.
- Large disparity in the prices paid for alcohol by each of the groups. Therefore taxation will like have different effects on the different groups.

Thank you!

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