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Brief report: Drinkers' identification with varying alcohol consumption prototypes

Running head: Drinkers' identification with alcohol consumption prototypes

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Abstract

Introduction and Aims: Efforts to reduce excessive alcohol consumption need to take into account drinkers' perceptions of their risk of alcohol-related harm. The aim of the present study was to profile adult Australian drinkers according to their self-identification with various drinker prototypes to determine the extent to which these prototypes are associated with perceived and actual risk of alcohol-related harm.

Design and Methods: A large web panel provider disseminated an online survey to a national sample of 2168 drinkers aged 18+ years who consumed alcohol at least twice per month. Respondents reported whether they considered themselves to be a light, occasional, social, heavy or binge drinker. The nominated category was compared to perceived and actual risk of alcohol-related harm.

Results: The prototype most commonly nominated by respondents was 'social drinker' (45%) and the least common was 'binge drinker' (7%). Although the heaviest drinkers in terms of actual reported consumption typically selected prototypes indicative of harmful consumption, many of those selecting prototypes indicative of moderate consumption were at risk of alcohol-related harm.

Discussion and Conclusions: Many adult drinkers may be unaware of their risk of alcohol-related harm. The results suggest that there may be a need to recalibrate Australian drinkers' perceptions of high-risk drinking.

Keywords: alcohol, prototype, social drinker, binge drinker

Introduction

An important starting point in alcohol harm minimisation efforts is understanding how drinkers perceive their own drinking behaviours and associated alcohol-related risks. Recently, a growing body of work has developed around drinker prototypes and their potential utility as a tool for investigating individuals' drinker identities [1-10]. Research to date suggests that drinker prototypes are predictive of intended and actual alcohol intake [2,6,8,10], although more evidence is needed of the strength of the relationship between prototype identification and alcohol consumption behaviours [3].

The range of prototypes examined to date remains somewhat limited, with studies typically including combinations of abstainers, social drinkers, moderate drinkers, heavy drinkers and/or binge drinkers [1,3-5,7,10]. In addition, almost all previous work has been conducted with youth and college student samples and there is little evidence relating to the general drinking population. It is likely that prototypes have greater potential for use in harm reduction efforts than has been realised to date [1,4,8], and the use of a wider range of prototypes that apply to a broader cross-section of the drinking population may assist in achieving this outcome [7,9].

In Australia, average alcohol consumption levels are relatively high at approximately 10 litres of pure alcohol per capita per year [11]. National alcohol guidelines recommend that those choosing to consume alcohol should minimise their risk of alcohol-related harm by consuming no more than two standard drinks (each containing 10g of alcohol) per day and no more than four standard drinks on any single drinking occasion [12]. The aim of the study was to profile adult Australian drinkers according to their self-identification with various

drinker prototypes to determine the extent to which these prototypes are associated with alcohol intake levels and perceptions of harm. A broader range of prototypes than has typically been used was included, ranging from light and occasional drinkers to social, heavy and binge drinkers [13]. Respondents nominating each prototype were assessed according to various alcohol consumption and demographic attributes.

Method

As part of a larger study examining Australian adults' alcohol-related beliefs and behaviours, an online survey was administered via a large web panel provider (PureProfile) to 2168 current drinkers (for full methodological details see Pettigrew et al. [14]). Eligibility criteria were 18-65 years of age and alcohol consumption on 2+ days per month over the previous year. The resulting sample was somewhat younger and better educated than the general Australian adult population [15,16] (Table 1).

Insert Table 1 about here

To assess their identification with different drinker prototypes, respondents were asked, "At the present time do you consider yourself...?" with five response options: 'An occasional drinker', 'A light drinker', 'A social drinker', 'A heavy drinker' and 'A binge drinker' [as per 13,18]. Respondents could select multiple options. Other items also replicated or adapted from large national surveys [13, 18] asked respondents to report their alcohol intake (with serving sizes shown in a pictograph [12]), type of alcoholic beverage consumed most often, and perceptions of the level of harm associated with personal alcohol consumption (phrased

as “How harmful or beneficial do you think your current alcohol consumption is to your health?”, with five response options ranging from ‘Very harmful’ to ‘Very beneficial’ [13]).

Results

The most commonly selected prototype was ‘social drinker’, with 45% (n=985) of respondents selecting either this prototype on its own or in combination with another. Smaller proportions of respondents described themselves as occasional drinkers (24%, n=519), light drinkers (23%, n=508) and heavy drinkers (17%, n=370). Few respondents nominated the binge drinker prototype (7%, n=159), despite 79% (n=1720) of the sample meeting the National Health and Medical Research Council [12] definition of high-risk episodic drinking within the previous 12 months (i.e. more than 4 standard drinks on a single drinking occasion).

Although respondents could nominate multiple prototypes, most (86%, n=1860) selected only one. These responses were selected for further analysis to enable exploration of the prototype with which respondents most strongly identified (results shown in Table 2). Across the various prototypes, discrepancies were evident between apparent perceived risk of harm and actual risk status as per comparisons between reported intake and current guidelines [12]. The largest discrepancy was evident among social drinkers, with only 41% perceiving their alcohol intake to be harmful versus 90% reporting intake levels associated with high risk. Even among those selecting the light and occasional drinker prototypes, more than half reported high-risk levels of consumption (i.e. an average daily intake of more than two standard drinks and/or the consumption of more than four drinks on a single drinking occasion).

Insert Table 2 about here

Significant differences were found between nominated drinker prototypes for gender ($\chi^2(4)=46.84$, $P < 0.001$, $\Phi=0.16$), age ($F(4)=8.83$, $P < .001$, $\eta^2=0.02$), average drinks per week ($F(4)=220.78$, $P < 0.001$, $\eta^2=0.48$), perceived risk of alcohol-related harm ($F(4)=86.92$, $P < 0.001$, $\eta^2=0.16$), and actual risk of alcohol-related harm ($\chi^2(4)=348.92$, $P < 0.001$, $\Phi=0.43$). There was no overall difference by tertiary education status or SES.

Using a Bonferroni-adjusted significance of 0.01, males were found to be more likely to identify as social drinkers ($z=19.36$, $P < .001$), and females as occasional ($z=27.04$, $P < 0.001$) or light drinkers ($z=8.41$, $P = 0.004$). There were no significant gender differences for the binge and heavy drinking prototypes. Follow-up Tukey's tests showed that: social, occasional and binge drinkers were significantly younger than light and heavy drinkers ($P=0.041$ – $P < 0.001$); occasional drinkers drank significantly less than light, heavy, and binge drinkers; light drinkers drank significantly less than heavy and binge drinkers; social drinkers drank significantly more than occasional and light drinkers, but significantly less than heavy and binge drinkers; and heavy drinkers drank significantly more than binge drinkers ($P < 0.001$ – $P=0.004$).

Those nominating the heavy and binge drinker prototypes perceived their drinking to be significantly more harmful than those selecting the occasional, light, and social drinker prototypes (all comparisons $P < 0.001$). Social drinkers perceived their drinking to be significantly more harmful than occasional and light drinkers, but significantly less harmful than heavy and binge drinkers (all comparisons $P < 0.001$). In terms of actual risk status as

determined by reported consumption, a series of follow-up 2×2 chi-square analyses found that occasional drinkers were significantly less likely to be at high risk when compared to all other prototypes ($P=0.003$ – $P<0.001$; $\Phi=0.11$ – 0.52). In addition, light drinkers were less likely to be at high risk compared to social, heavy, and binge drinkers (all $P<0.001$; $\Phi=0.30$ – 0.44), and social drinkers were less likely to be at high risk compared to binge and heavy drinkers ($P=0.002$ – $P<0.001$; $\Phi=0.11$ – 0.17). Binge and heavy drinkers were not significantly different from each other ($P=0.457$; $\Phi=0.04$).

Discussion

This analysis of drinkers' self-identification with various drinker prototypes indicates that many Australian drinkers may be unaware of their risk of alcohol-related harm and thus need to be better informed of the dangers associated with their current levels of consumption. Although the heaviest drinkers were most likely to select prototypes that indicate excessive alcohol consumption (i.e. the heavy and binge prototypes), most of those drinking at high-risk levels selected prototypes that are suggestive of moderate levels of consumption. A majority of those describing themselves as occasional or light drinkers were at high risk (54% and 64% respectively), and almost all of those describing themselves as social drinkers reported consumption levels placing them at high risk of alcohol-related harm (90%). The latter is of particular concern given this was the most commonly selected prototype across the total sample (45%).

The high rate of nomination of the social drinker prototype is likely to reflect the strong social norms attached to alcohol consumption that result in alcohol being perceived as a natural and normal accompaniment to many social activities [19, 20]. The least commonly

selected prototype was binge drinker (7%), despite this being an accurate descriptor of the majority of the sample (79%).

These results highlight the need to redefine notions of ‘social drinking’ and ‘binge drinking’ in line with current guidelines. Previous research has demonstrated that Australians have limited knowledge of national alcohol guidelines [21], indicating that a substantial awareness campaign is required to address this deficit. The low rate of nomination of the binge drinker prototype suggests that an effective approach may be to inform those identifying as social drinkers that intake levels they consider to be ‘social’ actually constitute binge drinking.

A limitation of this study is the recruitment of respondents via a web panel, which prevented the calculation of response rates because potential respondents could select the survey from the web panel portal or respond to an emailed invitation. However, the large sample with coverage of major demographic groupings provides some assurance of the generalisability of the results. A further limitation was that respondents were not provided with prototype definitions, potentially resulting in widely varying interpretations. The binge drinker and social drinker prototypes may have especially wide variation in interpretation given the lack of specific definitions in the scientific literature and the highly social role of alcohol in Australian culture [19, 20]. Future research could provide prototype descriptions (or ask respondents to provide these) to prevent the need for assumptions relating to drinkers’ perceptions of their alcohol-related risk.

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Table 1: Sample profile

Sample characteristics	%
<i>Gender</i>	
Male	50
Female	50
<i>Age</i>	
18 – 30 years	43
31 – 45 years	26
46 – 65 years	31
<i>Socioeconomic status*</i>	
Low	30
Mid	42
High	27
<i>Education</i>	
Tertiary qualification	43
No tertiary qualification	57
<i>Drinking status**</i>	31
Consume an average of more than 2 drinks/day	
Consume more than 4 drinks on a single drinking occasion	79

*Socioeconomic status as per the Australian Bureau of Statistics' Socio-Economic Indexes for Areas classification [17].

**The Australia National Health and Medical Research Council [12] defines high risk drinking as consuming an average of more than two drinks per day and/or more than four drinks per drinking occasion.

Table 2: Drinker prototypes by consumption and demographic attributes (n=1860)*

Drinker prototype	n (%)	Consumption and actual risk**			Perceived risk ***	Gender		Age	Education	
		Drinks/week	Low risk (n=379)	High risk (n=1481)	Somewhat/very harmful	Male	Female	Years	Tertiary	Non-tertiary
	n (%)	M (SD)	n (%)	n (%)	n (%)	n (%)	n (%)	M (SD)	n (%)	n (%)
Occasional	377 (20)	3.06 (5.88)	175 (46)	202 (54)	80 (22)	141 (37)	236 (63)	37.71 (13.29)	157 (42)	220 (58)
Light	355 (19)	7.84 (10.13)	126 (36)	229 (64)	84 (24)	151 (43)	204 (58)	40.79 (13.26)	155 (44)	200 (56)
Social	734 (40)	12.69 (13.05)	76 (10)	658 (90)	296 (41)	409 (56)	325 (44)	37.58 (13.50)	316 (43)	418 (57)
Heavy	309 (17)	32.31 (21.16)	2 (1)	307 (99)	245 (80)	165 (53)	144 (47)	41.72 (12.40)	123 (40)	186 (60)
Binge	85 (5)	26.21 (26.15)	0 (0)	85 (100)	62 (76)	52 (61)	33 (39)	36.34 (11.21)	26 (31)	59 (69)

*Includes only respondents selecting a single drinker prototype (n=308 excluded).

**Low risk denotes those who consume an average of two drinks or fewer per day and four or fewer drinks per drinking occasion. High risk denotes those who consume an average of more than two drinks per day and/or more than four drinks per drinking occasion within previous 12 months [12].

***5-point scale: *Very harmful* to *Very beneficial*. Those selecting “don’t know” were excluded from analyses.