

Frequency and Severity of Alcohol Hangovers: a Weekly Survey

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Background and Aim

Alcohol hangover (AH) contributes to the societal costs of alcohol-related absenteeism and injury; in Australia, these are estimated ~\$2 billion per annum (1). Existing estimates of AH frequency and severity are often compromised by studies employing single surveys with long recall periods of up to 12 months (2). **This study examined the frequency and severity of AH in a group of individuals who completed a weekly online survey for ≥6 months.**

Methods

49 participants (19 males; age 38±10 years) completed a weekly online survey related to AH occurrence and factors associated with the *worst* perceived AH of the week, including the amount of alcohol consumed and AH severity. AH frequency was calculated as the total number of hangovers a participant experienced divided by the number of completed questionnaires. AH severity was calculated as the sum of the Short Hangover Symptoms Scale item scores (total ≤10 – classified as *mild*; 11-25 – *moderate*; 16-25 – *severe*). Cross-tabulation and chi-square tests for association were used to investigate relationships between AH severity and the amount of alcohol consumed.

Results

Fig.1 displays average AH frequency on any given week throughout the study period. From a total of 1881 weekly responses, 604 AHs were recorded. Individual participants reported between 0 and 41 AH's over the study period. In 101 weeks responses indicated >1 AH occurrence. Hence, 503 AH's were identified as the *worst* for that week. Of these, 35% were considered *mild*, 38% *moderate* and 27% *severe*. A significant relationship was observed between the amount of alcohol consumed and subjective ratings of AH severity ($\chi^2=64.353$, $p<0.05$). No *severe* AH's were reported when <4 standard drinks were consumed (Fig.2).

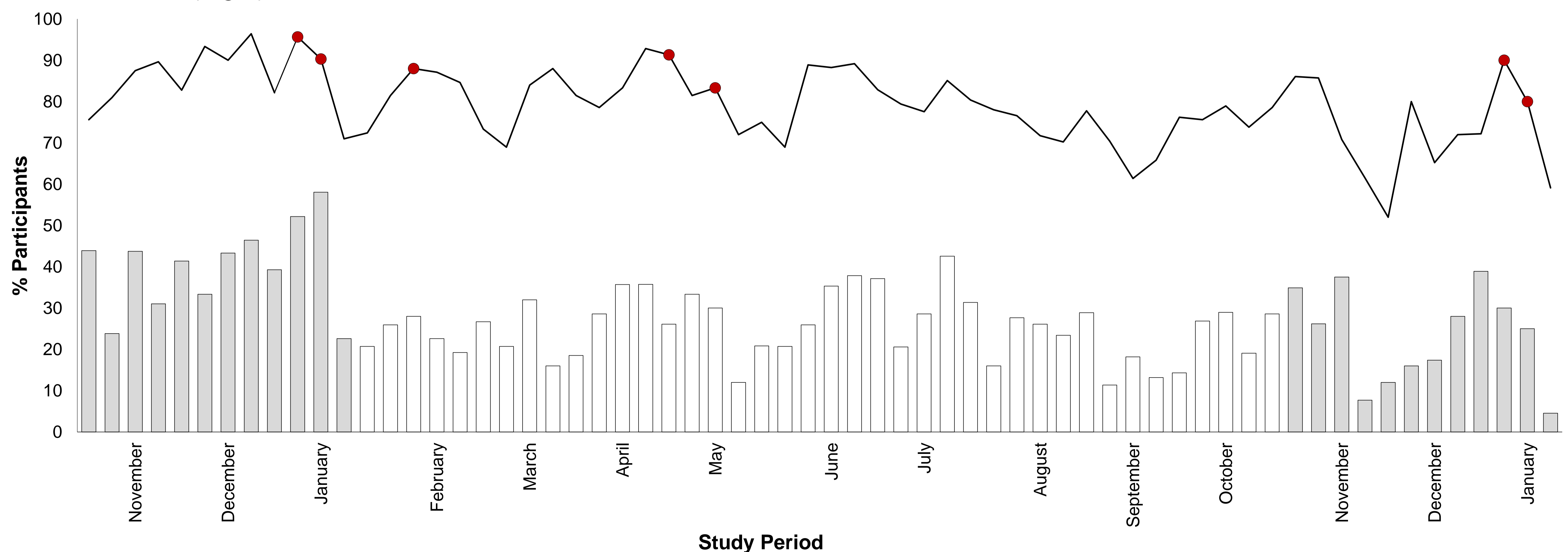


Fig. 1. Hangover frequency reports over the study period. Bars represent weekly hangover frequency. Solid line represents % participants who consumed alcohol on any given week. Dot markers represent weeks coinciding with national public holidays in Australia.

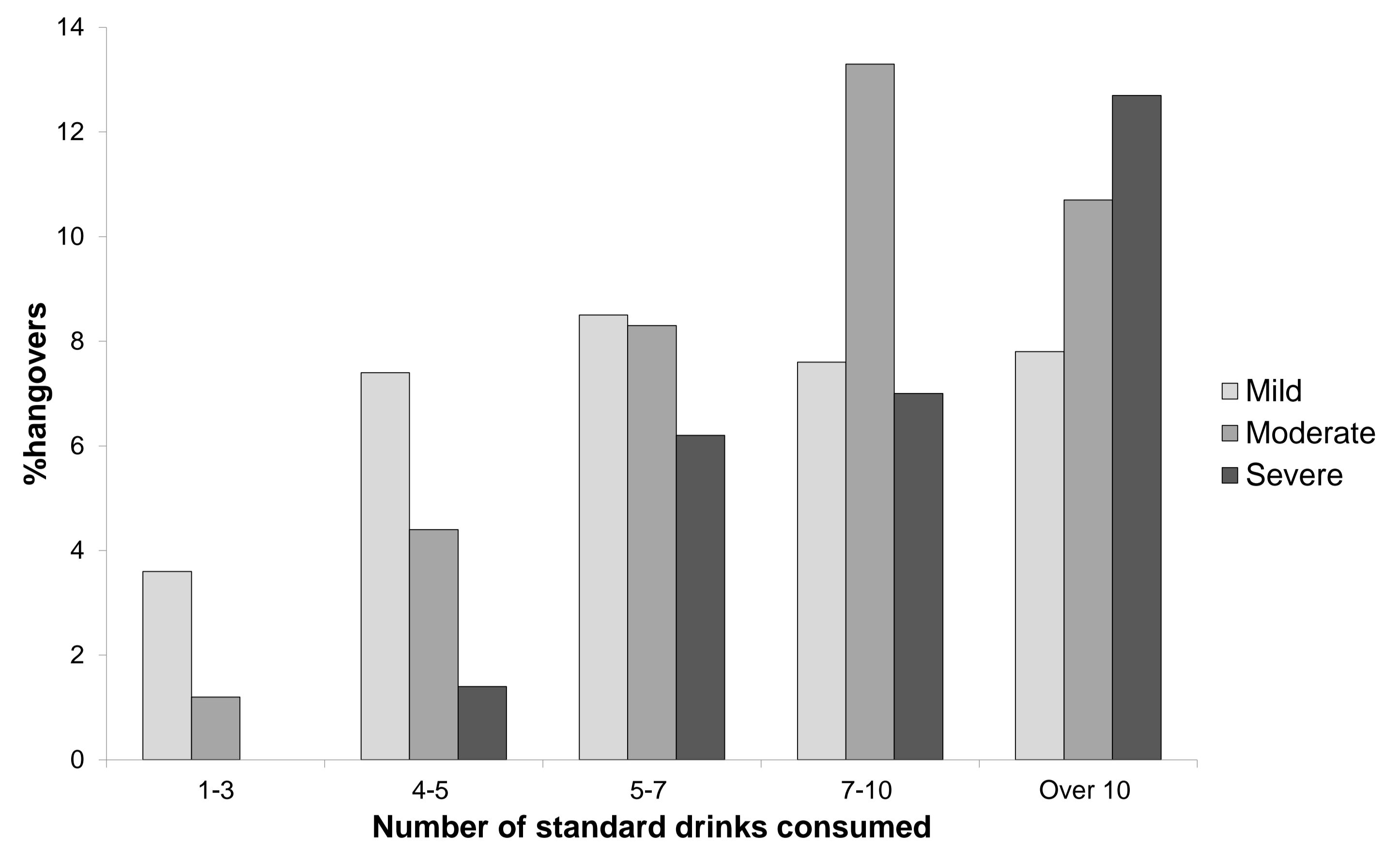


Fig. 2. Relationship between amount of alcohol consumed and hangover severity for the *worst* hangover of the week.

Table 1. Average hangover frequency rates: existing evidence.

Authors (year)	Participants	Data collection method	Recall period	Av. AH's per person, per year
Current study (2018)	Healthy social drinkers	Weekly online questionnaire	1 week	16
Wu et al (2014)	NAS-NRC Twin Registry members	Single phone interview	1 year	2
Slutske et al (2014)	Australian Twin Registry members	Single phone interview	1 year	6

Conclusions

- The present study suggests a higher frequency of AH than estimated in previous reports (Table 1).
- A significant relationship was observed between level of alcohol consumption and subjective severity of AH symptoms. Adhering to binge drinking guidelines (<4 std. drinks on a single occasion) may reduce the risk of experiencing a *severe* AH.
- If the frequency of AH has been underestimated, the socioeconomic implications of AH warrant re-examination.

References

1. Roche A, Pidd K, Kostadinov V. Alcohol- and drug-related absenteeism: a costly problem. Australian and New Zealand Journal of Public Health. 2016;40(3):236-8.
2. Wu, S. H., Guo, Q., Viken, R. J., et al. 2014. Heritability of usual alcohol intoxication and hangover in male twins: the NAS-NRC Twin Registry. Alcoholism, clinical and experimental research 38: 2307-13.

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