

Implementation of alcohol protective behavioural strategies among university students

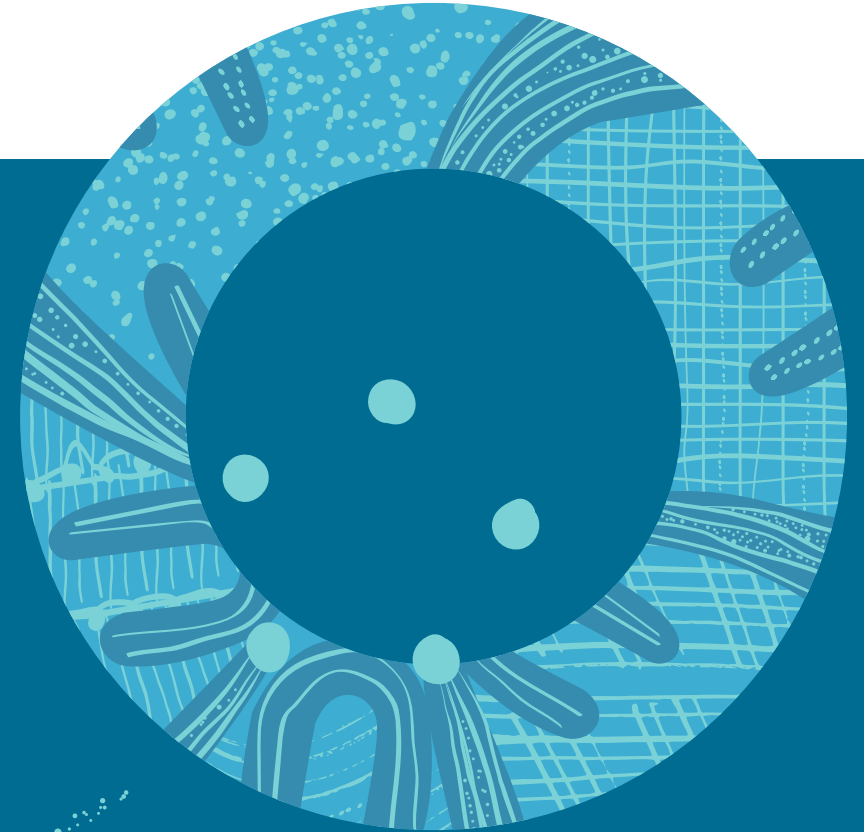
Amanda George¹, Byron L. Zamboanga²,
and Tricia Brown¹

¹Discipline of Psychology, University of
Canberra

²Department of Psychological Science,
University of Arkansas, USA

APSAD, Canberra, 2024.

Disclosure statement: None to declare.



Alcohol use among university students

- Vulnerable to increased alcohol use and associated harms¹
- Greater freedoms, transition to new environment, social lubrication, normative drinking²
- Drinking game participation common^{3,4}
- Harm reduction strategies required

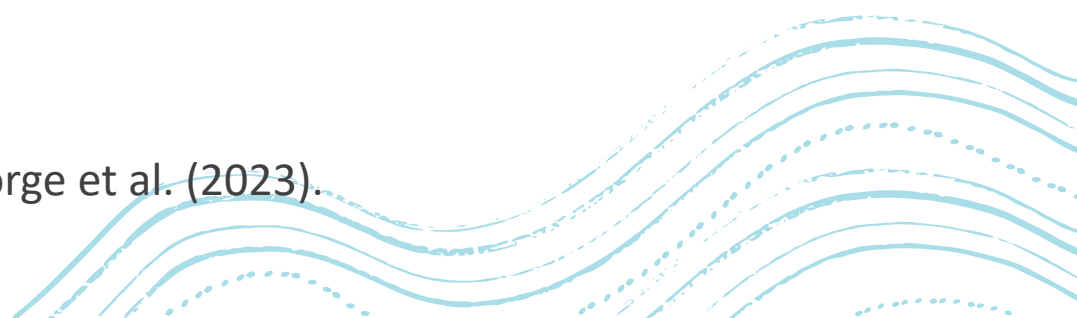


¹Whatnall et al. (2020), ²Merrill & Carey (2016), ³George & Zamboanga (2018), ⁴Zamboanga, Van Hedger, & George (2023).

Protective Behavioural Strategies (PBS)

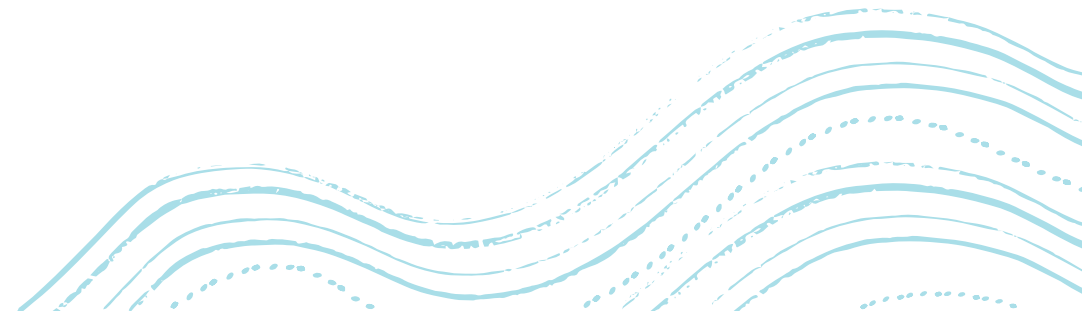
- Strategies to reduce alcohol consumption and/or negative consequences⁵:
 - Manner of drinking (e.g., avoid drinking games)
 - Stopping/limiting drinking (e.g., alternating drinks)
 - Serious harm reduction (e.g., knowing where drink is)
- More frequent PBS associated with reduced alcohol use and problems⁶, but most PBS research stems from the U.S.⁷
- Arguably hard to implement, given identified reasons/motives for drinking (e.g., to get drunk)⁸

⁵Martens et al. (2005), ⁶Peterson et al. (2021), ⁷Cox et al. (2024), ⁸George et al. (2023).



Aims

1. Investigate PBS use among a sample of Australian university students.
2. Examine the relationships of PBS with alcohol use/problems with consideration of drinking motives and drinking game participation.



Method

Participants:

- 353 university students aged 18-25 years ($M_{\text{age}}=19.9$ years; 74% female) who had consumed alcohol in prior 12 months.
- Most (70%) in their first-year, 25% lived on campus.

Procedure:

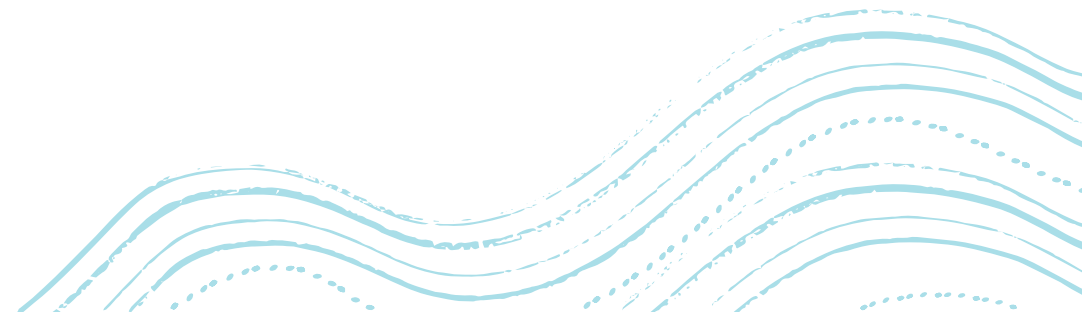
- Online survey
- Received ethics approval

Measures:

- Demographics: age, gender, year level.
- Predictors: Alcohol protective behavioural strategies (PBSS-15), drinking motives (DMR-R-SF), frequency of DG participation.
- Alcohol-outcomes: Negative drinking consequences (B-YAACQ) and alcohol use (AUDIT-C).

PBS scale/item	% (usually/always)
Manner of drinking	
Avoid drinking games	18.1
Avoid shots	25.8
Avoid mixing different types of alcohol	30.3
Drink slowly	42.0
Avoid trying to “keep up”/out-drink others	48.7
Stopping/limiting drinking	
Determine not to exceed set # of drinks	27.1
Alternate alcoholic and non-alcoholic drinks	22.0
Have friend let you know when you’ve had enough	30.5
Leave bar/party at predetermined time	27.9
Stop drinking at a predetermined time	24.6
Drink water while drinking alcohol	53.1
Put extra ice in your drink	14.5

PBS scale/item	% (usually/always)
Serious harm reduction	
Use a designated driver	82.4
Make sure go home with a friend	74.8
Know where drink has been at all times	81.3



Predictor	Alcohol use (<i>n</i> = 328) β	Alcohol consequences in past 30 days (<i>n</i> = 275) β
Live off campus	-.11*	.00
Drinking motives		
Social	.11	.00
Conformity	-.09	.13*
Coping	-.05	.20**
Enhancement	.22**	.06
PBS		
Manner of drinking	-.17**	-.00
Stop/limit	-.18***	-.05
Serious harm reduction	.01	-.03
Alcohol use (AUDIT-C)	-	.34**
DG participation	.27***	.07

Note. Age and gender controlled for in analyses. **Bold** indicates significant effects.

* $p < .05$, ** $p < .01$,
*** $p < .001$.

Implications

- Importance of **specific** PBS in predicting alcohol use and **some** drinking motives for predicting both alcohol use/consequences.
- Challenges of implementing PBS in these settings.
 - *Some PBS could be implemented discretely, such as alternating beverages.*
- There may be a need to consider PBS in the context of a DG⁹ and while predrinking¹⁰ which tends to co-occur with DG play¹¹.
- We need to examine perceived acceptability of PBS, including in high-risk contexts, and co-design strategies for implementation.

⁹Pedersen et al. (2020), ¹⁰Stephens et al. (2022), ¹¹Ford et al (2022).

Thank you.

amanda.george@canberra.edu.au

References

1. Whatnall, M. C., Patterson, A. J., Brookman, S., Convery, P., Swan, C., Pease, S., & Hutchesson, M. J. (2020). Lifestyle behaviors and related health risk factors in a sample of Australian university students. *Journal of American College Health*, 68(7), 734–741. <https://doi.org/10.1080/07448481.2019.1611580>.
2. Merrill, J. E., & Carey, K. B. (2016). Drinking over the lifespan: Focus on college ages. *Alcohol Research: Current Reviews*, 38, 103-114.
3. George, A. M., & Zamboanga, B. L. (2018). Drinking game participation and outcomes in a sample of Australian university students. *Drug and Alcohol Review*, 37, 599-606. DOI: 10.1111/dar.12811
4. Zamboanga, B. L., Van Hedger, K., & George, A. M. (2023). Prologue to the special issue on predrinking and drinking game behaviors among adolescents and young adults in the United States and across the globe: Definitions and overview of prevalence rates. *Addictive Behaviors*, 144, 107731. <https://doi.org/10.1016/j.addbeh.2023.107731>
5. Martens MP, Ferrier AG, Sheehy MJ, Corbett K, Anderson DA, Simmons A. Development of the Protective Behavioral Strategies Survey. *Journal of Studies on Alcohol*. 2005;66:698–705. doi: 10.15288/jsa.2005.66.698.
6. Peterson, R., Kramer, M. P., Pinto, D., De Leon, A. N., Leary, A. V., Marin, A. A., Cora, J. L., & Dvorak, R. D. (2021). A comprehensive review of measures of protective behavioral strategies across various risk factors and associated PBS-related interventions. *Experimental and Clinical Psychopharmacology*, 29(3), 236–250. <https://doi.org/10.1037/pha0000498>.

References (continued)

7. Cox, M. J., DiBello, A. M., Jones, E. P., Gette, J., Godbole, A., Barcenas, L., Roudebush, M., Simensky, J., Mancini, L., Gheewalla, A., & Pannu, K. (2024). A systematic review of the associations between protective behavioral strategies and heavy alcohol consumption and consequences among young adults. *Psychology of Addictive Behaviors*, 38(4), 488-506.
8. George, A.M., Zamboanga, B. L., & Scholz, B. (2023). “*It breaks the ice*”: A qualitative examination of drinking game motives, harms and protective behavioral strategies among university students in Australia. *Substance Use & Misuse*, 58(3), 419-427. <https://doi.org/10.1080/10826084.2023.2165412>
9. Pedersen, E. R., Davis, J. P., Hummer, J. F., DiGuseppi, G., Sedano, A., Rodriguez, A., & Clapp, J. D. (2020). Development of a measure to assess protective behavioral strategies for pregaming among young adults. *Substance Use & Misuse*, 55(4), 534–545.
10. Stephens, C. A., Eamiello, M. L., Venditti, L. F., Piibe, A. N., Zamboanga, B. L., & Reid, A. E. (2021). Will others approve? Effects of an injunctive norms intervention on intentions to use protective behavioral strategies during drinking games. *Addiction Research and Theory*, 30(2), 149–154.
11. Ford, K., Zamboanga, B. L., & Ham, L. S. (2022). Playing drinking games as a typical form of prepartying among young adults. *Substance Use and Misuse*, 57(6), 853–856.