



NCETA
National Centre for Education
and Training on Addiction

Suit, Tie, And Whiskey Rye: How Occupation Factors Contribute to High-Risk Alcohol Consumption Among Australian Workers

Gianluca Di Censo, Kirrilly Thompson,
Jacqueline Bowden

This research was funded by the Department of Health, Disability and Ageing

FHMRI



Flinders
University

BACKGROUND

- 1-in-3 employed Australians drink alcohol at levels that put their health at risk (AIHW, 2024)
- Alcohol misuse impacts workers' productivity, safety, and well-being
- Work-related stress is a known driver—but how strong is it?
- Need to compare work factors to sociodemographic and health risks



FACTORS INFLUENCING WORKERS' ALCOHOL CONSUMPTION

Internal Factors



- Workplace structural demands: work schedule, work commitment, physical demands, etc.
- Psychosocial work-related stressors: job security, job autonomy, job satisfaction, etc.

External Factors



- Sociodemographic variables: sex, age, SES, rurality, income, etc.
- Health & behavioural: Smoking, chronic health condition, perceived general health, etc.

ALCOHOL CONSUMPTION



(Frone, 2013; Frone & Bamberger, 2024)

STUDY AIMS

- Investigate associations between occupational factors and high-risk drinking
- Compare occupational predictors to sociodemographic and health variables

Occupational Factors

Workplace Structural Demands & Psychosocial Work-Related Stressors



Health Variables

Sex, Age, Education, Partnership Status, etc.



Sociodemographic Variables

Chronic Health Condition, Perceived General Health, and Smoking Status



High-Risk Drinking

The Central Focus of the Study:
Any, Single-Occasion, and Weekly High-Risk Drinking



(Frone, 2013; Frone & Bamberger, 2024)

DATA AND METHODS

- 23 waves of HILDA (longitudinal, national dataset)
- N = 27,237 employed individuals
- High-risk drinking defined using National Health and Medical Research Council (2020) guidelines
- GLMMs fitted for weekly, single occasion, and any high-risk drinking



WHAT DID WE FIND?

WORKPLACE STRUCTURAL DEMANDS

- Shift work associated with decreased odds of weekly but increased odds of single-occasion high-risk drinking

	Any	Weekly	Single-occasion
	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)
Shift Work (ref: Normal schedule)			
Shift worker	1.02 (0.96, 1.07)	0.91 (0.85, 0.97)**	1.07 (1.01, 1.13)*
Work commitment (ref: Part-time)			
Full-time or more	1.14 (1.08, 1.20)***	1.19 (1.12, 1.26)***	1.13 (1.07, 1.19)***

WORKPLACE STRUCTURAL DEMANDS

- Shift work associated with decreased odds of weekly but increased odds of single-occasion high-risk drinking
- Full-time workers associated with increased odds of all high-risk drinking categories

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Shift Work (ref: Normal schedule)			
Shift worker	1.02 (0.96, 1.07)	0.91 (0.85, 0.97)**	1.07 (1.01, 1.13)*
Work commitment (ref: Part-time)			
Full-time or more	1.14 (1.08, 1.20)***	1.19 (1.12, 1.26)***	1.13 (1.07, 1.19)***

PSYCHOSOCIAL WORK-RELATED STRESSORS

- Preferred working hours accounted for the largest proportion of variance in high-risk drinking

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Preferred working hours (ref: Less)			
About the same	1.14 (1.08, 1.20) ^{***}	1.09 (1.03, 1.16) ^{**}	1.19 (1.13, 1.26) ^{***}
More	1.26 (1.17, 1.35) ^{***}	1.13 (1.04, 1.24) ^{**}	1.38 (1.27, 1.49) ^{***}
Job Demands and Complexity Scale			
-	1.00 (0.99, 1.00)	1.00 (1.00, 1.01)	1.00 (0.99, 1.00)
Job Control Scale			
-	1.00 (1.00, 1.01)	1.01 (1.01, 1.02) ^{***}	0.99 (0.99, 1.00) [*]
Job Security Scale			
-	1.00 (0.99, 1.00)	0.99 (0.99, 1.00) [*]	1.00 (0.99, 1.01)

PSYCHOSOCIAL WORK-RELATED STRESSORS

- Preferred working hours accounted for the largest proportion of variance in high-risk drinking
- Even when the other variables were significant, their effect sizes were very small

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Preferred working hours (ref: Less)			
About the same	1.14 (1.08, 1.20) ^{***}	1.09 (1.03, 1.16) ^{**}	1.19 (1.13, 1.26) ^{***}
More	1.26 (1.17, 1.35) ^{***}	1.13 (1.04, 1.24) ^{**}	1.38 (1.27, 1.49) ^{***}
Job Demands and Complexity Scale			
-	1.00 (0.99, 1.00)	1.00 (1.00, 1.01)	1.00 (0.99, 1.00)
Job Control Scale			
-	1.00 (1.00, 1.01)	1.01 (1.01, 1.02) ^{***}	0.99 (0.99, 1.00) [*]
Job Security Scale			
-	1.00 (0.99, 1.00)	0.99 (0.99, 1.00) [*]	1.00 (0.99, 1.01)

OTHER KEY PREDICTORS

- Sex (males), age (younger), and smoking status accounted for a significant portion of the variance in high-risk drinking

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Sex (ref: Male)			
Female	0.11 (0.10, 0.13) ^{***}	0.08 (0.07, 0.09) ^{***}	0.16 (0.15, 0.18) ^{***}
Age categories (ref: 65+)			
15–24	2.46 (2.02, 3.00) ^{***}	0.48 (0.38, 0.61) ^{***}	16.27 (12.67, 20.90) ^{***}
25–44	1.29 (1.07, 1.55) ^{**}	0.50 (0.41, 0.62) ^{***}	5.89 (4.63, 7.48) ^{***}
45–64	1.28 (1.08, 1.53) ^{**}	0.88 (0.73, 1.08)	2.92 (2.32, 3.68) ^{***}
Partnership Status (ref: Partnered)			
Previously partnered	1.15 (1.03, 1.29) [*]	1.22 (1.07, 1.40) ^{**}	1.15 (1.02, 1.30) [*]
Never partnered	2.34 (2.17, 2.53) ^{***}	1.49 (1.36, 1.64) ^{***}	3.08 (2.85, 3.33) ^{***}
Smoking Status (ref: Non-Smoker)			
Smoker	3.03 (2.82, 3.26) ^{***}	3.07 (2.83, 3.34) ^{***}	2.79 (2.60, 3.00) ^{***}

OTHER KEY PREDICTORS

- Sex (males), age (younger), and smoking status accounted for a significant portion of the variance in high-risk drinking

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Sex (ref: Male)			
Female	0.11 (0.10, 0.13) ^{***}	0.08 (0.07, 0.09) ^{***}	0.16 (0.15, 0.18) ^{***}
Age categories (ref: 65+)			
15–24	2.46 (2.02, 3.00) ^{***}	0.48 (0.38, 0.61) ^{***}	16.27 (12.67, 20.90) ^{***}
25–44	1.29 (1.07, 1.55) ^{**}	0.50 (0.41, 0.62) ^{***}	5.89 (4.63, 7.48) ^{***}
45–64	1.28 (1.08, 1.53) ^{**}	0.88 (0.73, 1.08)	2.92 (2.32, 3.68) ^{***}
Partnership Status (ref: Partnered)			
Previously partnered	1.15 (1.03, 1.29) [*]	1.22 (1.07, 1.40) ^{**}	1.15 (1.02, 1.30) [*]
Never partnered	2.34 (2.17, 2.53) ^{***}	1.49 (1.36, 1.64) ^{***}	3.08 (2.85, 3.33) ^{***}
Smoking Status (ref: Non-Smoker)			
Smoker	3.03 (2.82, 3.26) ^{***}	3.07 (2.83, 3.34) ^{***}	2.79 (2.60, 3.00) ^{***}

OTHER KEY PREDICTORS

- Sex (males), age (younger), and smoking status accounted for a significant portion of the variance in high-risk drinking

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Sex (ref: Male)			
Female	0.11 (0.10, 0.13) ^{***}	0.08 (0.07, 0.09) ^{***}	0.16 (0.15, 0.18) ^{***}
Age categories (ref: 65+)			
15–24	2.46 (2.02, 3.00) ^{***}	0.48 (0.38, 0.61) ^{***}	16.27 (12.67, 20.90) ^{***}
25–44	1.29 (1.07, 1.55) ^{**}	0.50 (0.41, 0.62) ^{***}	5.89 (4.63, 7.48) ^{***}
45–64	1.28 (1.08, 1.53) ^{**}	0.88 (0.73, 1.08)	2.92 (2.32, 3.68) ^{***}
Partnership Status (ref: Partnered)			
Previously partnered	1.15 (1.03, 1.29) [*]	1.22 (1.07, 1.40) ^{**}	1.15 (1.02, 1.30) [*]
Never partnered	2.34 (2.17, 2.53) ^{***}	1.49 (1.36, 1.64) ^{***}	3.08 (2.85, 3.33) ^{***}
Smoking Status (ref: Non-Smoker)			
Smoker	3.03 (2.82, 3.26) ^{***}	3.07 (2.83, 3.34) ^{***}	2.79 (2.60, 3.00) ^{***}

OTHER KEY PREDICTORS

- Sex (males), age (younger), and smoking status accounted for a significant portion of the variance in high-risk drinking

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Sex (ref: Male)			
Female	0.11 (0.10, 0.13) ^{***}	0.08 (0.07, 0.09) ^{***}	0.16 (0.15, 0.18) ^{***}
Age categories (ref: 65+)			
15–24	2.46 (2.02, 3.00) ^{***}	0.48 (0.38, 0.61) ^{***}	16.27 (12.67, 20.90) ^{***}
25–44	1.29 (1.07, 1.55) ^{**}	0.50 (0.41, 0.62) ^{***}	5.89 (4.63, 7.48) ^{***}
45–64	1.28 (1.08, 1.53) ^{**}	0.88 (0.73, 1.08)	2.92 (2.32, 3.68) ^{***}
Partnership Status (ref: Partnered)			
Previously partnered	1.15 (1.03, 1.29) [*]	1.22 (1.07, 1.40) ^{**}	1.15 (1.02, 1.30) [*]
Never partnered	2.34 (2.17, 2.53) ^{***}	1.49 (1.36, 1.64) ^{***}	3.08 (2.85, 3.33) ^{***}
Smoking Status (ref: Non-Smoker)			
Smoker	3.03 (2.82, 3.26) ^{***}	3.07 (2.83, 3.34) ^{***}	2.79 (2.60, 3.00) ^{***}

OTHER KEY PREDICTORS

- Sex (males), age (younger), and smoking status accounted for a significant portion of the variance in high-risk drinking

	Any OR (CI 95%)	Weekly OR (CI 95%)	Single-occasion OR (CI 95%)
Sex (ref: Male)			
Female	0.11 (0.10, 0.13) ^{***}	0.08 (0.07, 0.09) ^{***}	0.16 (0.15, 0.18) ^{***}
Age categories (ref: 65+)			
15–24	2.46 (2.02, 3.00) ^{***}	0.48 (0.38, 0.61) ^{***}	16.27 (12.67, 20.90) ^{***}
25–44	1.29 (1.07, 1.55) ^{**}	0.50 (0.41, 0.62) ^{***}	5.89 (4.63, 7.48) ^{***}
45–64	1.28 (1.08, 1.53) ^{**}	0.88 (0.73, 1.08)	2.92 (2.32, 3.68) ^{***}
Partnership Status (ref: Partnered)			
Previously partnered	1.15 (1.03, 1.29) [*]	1.22 (1.07, 1.40) ^{**}	1.15 (1.02, 1.30) [*]
Never partnered	2.34 (2.17, 2.53) ^{***}	1.49 (1.36, 1.64) ^{***}	3.08 (2.85, 3.33) ^{***}
Smoking Status (ref: Non-Smoker)			
Smoker	3.03 (2.82, 3.26) ^{***}	3.07 (2.83, 3.34) ^{***}	2.79 (2.60, 3.00) ^{***}

WHAT FACTORS SHOULD POLICYMAKERS TARGET?

Category	Top Predictors	Why It Matters
Health/Behaviour	Smoking (OR 3.03) 🚬	Strongest predictor—those who smoke are 3x more likely to drink at risky levels
Age/Demographic	Ages 15–24 (OR 2.46 for any, 16.27 for single-occasion) 🧑	Young adults are particularly vulnerable to binge drinking
Occupational Demands	Working Full-Time+ (OR 1.14) ⌚	Increased hours linked with higher drinking—potential workplace stress factor

WHAT FACTORS SHOULD POLICYMAKERS TARGET?

Category	Top Predictors	Why It Matters
Health/Behaviour	Smoking (OR 3.03) 🚬	Strongest predictor—those who smoke are 3x more likely to drink at risky levels
Age/Demographic	Ages 15–24 (OR 2.46 for any, 16.27 for single-occasion) 🧑	Young adults are particularly vulnerable to binge drinking
Occupational Demands	Working Full-Time+ (OR 1.14) ⌚	Increased hours linked with higher drinking—potential workplace stress factor

SUMMARY AND CONCLUSIONS

- Workplace interventions should:
 - educate shift workers on the negative impacts of binge drinking
 - target those who work excessive work hours or at least those who desire to work additional hours
 - provide mental health and wellbeing programs



REFERENCES

- Australian Institute of Health and Welfare. (2024). National Drug Strategy Household Survey 2022–2023. Retrieved from <https://www.aihw.gov.au/reports/illicit-use-of-drugs/national-drug-strategy-household-survey>
- Frone, M. R. (2013). Etiology of employee substance involvement. In M. R. Frone (Ed.), Alcohol and illicit drug use in the workforce and workplace (pp. 55-82). American Psychological Association. <https://doi.org/10.1037/13944-003>
- Frone, M. R., & Bamberger, P. A. (2024). Alcohol and illicit drug involvement in the workforce and workplace. In L. E. Tetrick, G. G. Fisher, M. T. Ford, & J. C. Quick (Eds.), Handbook of occupational health psychology (3rd ed., pp. 361-383). American Psychological Association. <https://doi.org/10.1037/0000331-018>
- National Health and Medical Research Council. (2020). Australian Guidelines to Reduce Health Risks from Drinking Alcohol. <https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-reduce-health-risks-drinking-alcohol>



NCETA
National Centre for Education
and Training on Addiction

THANKS FOR LISTENING

Contact the presenter at:
gianluca.dicenso@flinders.edu.au

FHMRI



Flinders
University