Alcohol consumption in early middle-aged Australian women and access to primary healthcare services: A cross-sectional study

Suzannah Bownes, Alexa Seal, Catherine Harding

Background and objective

This study describes the prevalence of risky alcohol consumption in Australian women aged 40–45 years. It explores the relationship between demographic factors and access to and usage of primary healthcare services.

Methods

Data were obtained from the Australian Longitudinal Study on Women's Health, Survey 8 (1973–78 cohort). Descriptive statistics and univariate logistic regression were used to assess associations of specific factors with risky alcohol consumption.

Results

Eleven per cent of respondents reported drinking >10 standard drinks per week. These 'risky alcohol drinkers' attend general practice as frequently as low-risk drinkers despite perceived poorer health. They reported 'rarely or never' seeing the same general practitioner (GP) and described themselves as having 'poor' access to a GP that bulk bills.

Discussion

This study provides unique insight into the primary healthcare attendance patterns and health status of early middle-aged Australian women who are 'risky alcohol drinkers'. They do not consistently see the same GP, which might present challenges in identifying them in primary care. ALCOHOL CONSUMPTION is associated with morbidity and mortality and is a public health priority.¹ It is the fifth highest risk factor contributing to the disease burden in Australia.² Alcohol has a complex role in Australian society, and the normalisation of alcohol consumption contributes to its potential for serious harm.^{3,4} In 2019, 16.8% of Australians exceeded the lifetime risk recommendations and 25% were binge drinking at least monthly.⁵ This drinking culture makes screening for and addressing alcohol misuse difficult, as many people do not identify themselves as someone with a potentially harmful relationship with alcohol.

There is increasing awareness regarding the levels of alcohol consumption among middle-aged Australian women;5-7 however, there is limited research on the drinking levels of middle-aged Australian women and related factors. The reasons for risky alcohol consumption among middle-aged Australian women are complex and include social and biological explanations. It has become increasingly socially acceptable for women to drink alcohol to the same degree as that considered acceptable for men.8 This has, to some extent, been driven by improved gender equality in environments such as the workplace and an imitation effect whereby some women have adopted male patterns of behaviour.9 A study in the USA identified that binge drinking has increased in middle-aged women, especially in women of high socioeconomic status.10 Women have

been found to be more likely than men to drink when they are stressed and to regulate emotion.¹¹ However, there is a recognised phenomenon whereby having multiple roles, including work and home life, is protective against risky alcohol consumption in women.⁹ Therefore, the role in stressmediated risky alcohol consumption needs further exploration.

Alcohol misuse is associated with a range of short-term and long-term health consequences. Women who drink are more likely to develop medical problems than men,¹² whereas women with moderate-to-high levels of alcohol consumption are at increased risk of obesity and liver cirrhosis,¹³ cardiovascular diseases, haemorrhagic stroke and multiple cancers.⁸ This difference has been attributed to physiological gender differences,^{9,14} and the health risks are exacerbated by ageing.⁶

Identifying risky alcohol drinking in middle-aged Australian women is a challenge for both patients and primary healthcare providers. Many middle-aged Australian women do not recognise their drinking as harmful.¹⁵ Dare et al¹⁶ reported that women place importance on the context in which alcohol is consumed rather than the quantity, thus creating opportunities for overconsumption. Further, healthcare providers might also fail to identify women who are drinking above the recommended amount. It has been suggested that because older women stereotypically drink less than older men, healthcare providers might be less likely to recognise at-risk drinking and alcohol problems in this population.⁶ In addition, older women who abuse alcohol are less likely to seek help in specialised addiction treatment settings.⁶

Middle-aged women have historically been under-recognised as risky drinkers in alcohol research, which is biased towards all-male samples; thus, this group is under-screened for risky alcohol consumption.17 The primary care setting provides an opportunity to identify and support women, as general practitioners (GPs) are usually the first port of call in the Australian healthcare system. However, it is not known to what extent middle-aged risky drinkers in Australia present to general practice. The Bettering the Evaluation and Care of Health (BEACH) data suggested that alcohol intake for women who have presented to Australian generals practice has decreased from 23.5% in 2016-17 to 20.3% in 2015-16.18 However, this is likely due to decreasing alcohol consumption among younger women,4 and the report does not consider middle-aged women as a group. This study explores the relationship between early middle-aged Australian women who drink alcohol above the recommended amount, demographic factors, and their access to and usage of primary healthcare services.

Methods

Data were obtained from the Australian Longitudinal Study on Women's Health (ALSWH), a longitudinal population-based study of 57,000 women (four cohorts) funded by the Australian Federal Government Department of Health since 1996. Permission was obtained from the ALSWH Data Access Committee (EOI A853) for access to Survey 8 from the 1973–78 birth cohort (with participants aged 40–45 years when they completed Survey 8 in 2018). This group is respectfully referred to as 'early middle-aged' throughout this paper.

Risky alcohol drinking was the primary outcome variable. A composite variable titled 'risky alcohol drinking' was based on 'How often do you usually drink alcohol?' (Y8Q59) and 'When you drink alcohol, how many standard drinks do you usually have?' (Y8Q60). Both questions represent frequency and quantity of alcohol consumption. In this study, 'risky alcohol drinking' was based on the updated National Health and Medical Research Council 2020 guidelines¹⁹ and defined as consuming more than 10 standard drinks per week. Our composite variable was calculated accordingly (Table 1).

Demographic variables of interest included area of residence (Accessibility/Remoteness Index of Australia [ARIA+] score), number of children living at home, ability to manage on available income (difficult some or all of the time and impossible responses were categorised as 'struggling to manage on available income') and highest qualification achieved. Health-related variables of interest included self-rated health status, diagnosis of depression or anxiety, current illicit drug use and smoking status. Additional factors included general practice and hospital attendance in the past 12 months, whether they usually see the same doctor and access to a GP who bulk bills.

Statistical Package for the Social Sciences (SPSS) Version 29 (IBM Corp., Armonk, NY, USA) was used for data analysis with an alpha of <0.05. Descriptive statistics were used to describe the groups, and Pearson's chi-square was used to compare categorical variables between groups. Binary logistic regression was used to obtain odds ratios (ORs) and 95% confidence intervals (95% CI). Participants with missing data for variables of interest were removed from the analysis.

Ethics approval was obtained by The University of Notre Dame Australia Human Research Ethics Committee (2021-030S).

Results

After removing women with incomplete data, 720 (n=720/6352, 11.3%) women who responded to Survey 8 were identified as 'risky alcohol drinkers' (consuming more than 10 standard drinks per week). The proportion of 'risky alcohol drinkers' with diagnosed depression (20.3%, P<0.001) and anxiety (16.7%, P=0.010) was higher than in 'low-risk drinkers' (15.1% and 13.2%, respectively). Whereas almost two-thirds of 'risky alcohol drinkers' reported smoking at least 100 cigarettes in their lifetime, only around one-third of low-risk drinkers reported having

		When you drink, how many standard drinks do you usually have?					
		l don't drink alcohol	1 or 2 drinks	3 or 4 drinks	5 to 8 drinks	9 or more drinks	
How often do you usually drink alcohol?	Never	Ν	N	N	N	Ν	
	Less than once a month	Ν	L	L	Н	Н	
	Less than once a week	Ν	L	L	Н	Н	
	1 or 2 days	Ν	L	L	Н	Н	
	3 or 4 days	Ν	L	L	Н	Н	
	5 or 6 days	Ν	L	Н	Н	Н	
	Every day	Ν	L	Н	Н	Н	

Table 1. Risk of harm in the longer term associated with alcohol consumption based on the National Health and Medical Research Council guidelines¹⁹

H, high risk (>10 drinks/week); L, low risk (≤10 drinks/week); N, non-drinker.

done so (*P*<0.001, Table 2). Less than 30% of 'risky alcohol drinkers' were of normal weight versus 42% of 'low-risk drinkers' (*P*<0.001).

Women who were 'risky alcohol drinkers' had increased odds of having no children living at home, living outside a major city, struggling to manage on their current income and not having obtained higher education (Table 3). In addition, 'risky alcohol drinkers' had increased odds of being a current smoker, a current illicit drug user, having self-reported 'fair or poor' health and having diagnosed depression and anxiety. 'Risky alcohol drinkers' were 1.71-fold more likely to be

Table 2. Characteristics, self-reported health status and general practice attendance of Australian women aged 40-45 years by drinking risk status

Characteristic	High risk n (%)	Low risk n (%)	<i>P</i> -value	
Relationship status				
Single	178 (24.7)	1208 (21.4)	0.045	
Coupled	542 (75.3)	4424 (78.6)		
Children living with them	513 (71.3)	4455 (79.1)	<0.001	
Lives outside major city	332 (46.1)	2335 (41.5)	0.017	
Weight status				
Normal weight	208 (29.4)	2306 (41.7)	<0.001	
Overweight	232 (32.8)	1588 (28.7)		
Obese	267 (37.8)	1640 (29.6)		
General health				
Excellent	64 (8.9)	799 (14.2)	_	
Very good	264 (36.7)	2354 (41.8)		
Good	293 (40.7)	1858 (33.0)	<0.001	
Fair	88 (12.2)	508 (9.0)	_	
Poor	11 (1.5)	113 (2.0)		
Depression	146 (20.3)	853 (15.1)	<0.001	
Anxiety	120 (16.7)	742 (13.2)	0.010	
Smoked >100 cigarettes ever	468 (65.0)	1987 (35.3)	<0.001	
Ever used illicit drugs	570 (79.2)	3030 (53.8)	<0.001	
Has been pushed, grabbed, shoved, kicked or hit	155 (16.3)	565 (10.5)	<0.001	
Consultations with a GP in the past 12 months				
None	48 (6.7)	353 (6.3)	 NS	
1-2 times	238 (33.1)	2017 (35.8)		
3-4 times	215 (29.9)	1606 (28.5)		
5–6 times	120 (16.7)	832 (14.8)		
7-9 times	48 (6.7)	384 (6.8)	_	
10-12 times	21 (2.9)	198 (3.5)	_	
>12 times	30 (4.2)	242 (4.3)		

overweight or obese than 'low-risk drinkers' (95% CI 1.44-2.03).

Attendance at a GP was similar between 'risky alcohol drinkers' and 'low-risk drinkers' (0–9 standard drinks per week, n=5632) (Table 2). Approximately 60% of both risky and low-risk alcohol drinkers reported consulting a GP at least three times in the past 12 months; however, 'risky alcohol drinkers' were more likely than 'low-risk drinkers' to report that they 'rarely or never' see the same GP (OR 1.42, 95% CI 1.04–1.94) and have 'poor' access to a GP who bulk bills (OR 1.24, 95% CI 1.03–1.49; Table 3).

Discussion

Results from this study are consistent with the literature that suggests middle-aged women are a high-risk group for alcohol consumption. According to the Australian Institute of Health and Welfare, 11% of Australian women aged 35-44 years were drinking alcohol above the recommended amount,⁴ which is similar to the proportion found (11.3%) in Australian women aged 40–45 years who responded to Survey 8. This is in contrast to only 6.1% of women aged 18–24 years.⁵

This study also found that early middle-aged women who drink alcohol above the recommended level attend general practice at similar rates to women classified as low-risk drinkers. This presents an opportunity to target these women with brief interventions if effectively screened. Current recommendations suggest that all people presenting to general practice should be annually or opportunistically screened for alcohol consumption.^{20,21} However, in 2021, Mauro et al22 reported that 'over a quarter of older adults who used alcohol were not asked about their drinking, and older women were less likely than men to discuss alcohol use with providers'. Screening might be less effective at targeting middle-aged women who are 'risky alcohol drinkers' as this group 'rarely or never' sees the same GP and reported having poor access to a GP who bulk bills. This might partially explain why a higher proportion of women who were 'risky alcohol drinkers' self-reported their health status as 'fair' or 'poor', as research shows that continuity of care in general practice benefits patient satisfaction and reduces mortality rates.23

Several characteristics were associated

Table 3. Odds ratio for risky alcohol drinking (>10 standard drinks per week) in Australian women aged 40-45 years

	Risky alcohol drinking		
	Odds ratio	95% confidence interval	
Demographics/experience			
Lives outside a major city	1.21	1.03-1.41	
No higher education	1.63	1.39–1.90	
No children living at home	1.53	1.29–1.82	
Struggling to manage on current income	1.34	1.15-1.57	
Has been pushed, grabbed, shoved, kicked or hit	1.67	1.38-2.02	
Health status			
Self-reported 'fair or poor' health	1.29	1.02-1.62	
Overweight or obese	1.71	1.44-2.03	
Current smoker	4.08	3.37-4.94	
Illicit drug use in the past 12 months	3.26	2.71-3.94	
Depression	1.42	1.17-1.73	
Anxiety	1.32	1.07–1.63	
Health behaviours			
Rarely or never sees the same GP	1.42	1.04-1.94	
Poor access to bulk-billing GP	1.24	1.03-1.49	
GP, general practitioner.			

with risky alcohol drinking, which might be useful for identification of at-risk women in the primary care setting. In this study, a diagnosis of depression or anxiety was associated with risky alcohol drinking. These findings are in accordance with alcohol research that has previously described comorbid diagnosis of anxiety and mood disorders. It is known that one-third (36%) of people with alcohol use disorders also have a diagnosis of either anxiety or depression, and people who drink alcohol above the recommended amount are four-fold as likely to have a mental illness.3 In the current study, women aged 40-45 years living outside a major city were 1.2-fold more likely to drink alcohol above the recommended amount, which is similar to national data reporting that women living in outer regional and remote settings are 1.5-fold more likely to exceed lifetime risk compared to women living in major cities.24 This disparity reflects

deeply ingrained cultural attitudes in rural areas, which equate excessive alcohol consumption with mateship and perceive the harmful consequences of drinking to be a better alternative to social isolation.²⁵ Box 1 summarises some considerations for GPs when raising alcohol consumption during patient consultations.

The limitations of this study are those common to self-reported, longitudinal surveys, including selection bias and attrition risk. The ALSWH participant group has been benchmarked to Australian Bureau of Statistics Census data and the cohorts have been shown to over-sample Australian-born women and women with university degrees.^{26,27} Further, it is difficult to accurately establish the true level of alcohol consumption as middle-aged women are known to under-report alcohol consumption in survey responses.²⁸

Future research into alcohol consumption

Box 1. Considerations for general practitioners (GPs) when raising alcohol consumption in consultations

- Ensure that you screen annually for alcohol use disorder (in addition to exploring illicit drug use and smoking)
- Screening is particularly important in patients with a diagnosis of depression or anxiety
- Endeavour to ensure that complex patients see the same GP, if possible
- Address limiting alcohol to 2 standard drinks or less per day in opportunistic discussion

in middle-aged Australian women should examine the effects of the COVID-19 pandemic. A preliminary study demonstrated that alcohol consumption by Australians throughout the COVID-19 pandemic increased most in women aged 35-44 years.²⁹ The reported reasons for this included spending more time at home and increased stress. The study also found that this increase in alcohol consumption correlated to the increased carer responsibilities felt by women throughout the pandemic. Further, the social isolation that has been mandated in Australia might place vulnerable individuals at risk of excessive alcohol consumption, and the consequences of this need to be anticipated.30 It might also be useful to determine which combination of factors are the best at demographically profiling at-risk women to allow more targeted screening by healthcare providers.

In conclusion, this study demonstrated that the prevalence of risky alcohol drinking among a group of surveyed middle-aged Australian women is comparable to known drinking levels in national data. This is one of the first studies to examine the primary healthcare behaviours of middle-aged Australian women who exhibit risky drinking behaviours. As they do not consistently see the same GP, there might be challenges in identifying these at-risk patients in primary care.

Authors

Suzannah Bownes MD, School of Medicine Sydney (Rural Clinical School), The University of Notre Dame Australia, Wagga Wagga, NSW

Alexa Seal BSc, PhD, Research Fellow, School of Medicine Sydney (Rural Clinical School), The University of Notre Dame Australia, Wagga Wagga, NSW Catherine Harding MBBS, PhD, School of Medicine Sydney (Rural Clinical School), The University of Notre Dame Australia, Wagga Wagga, NSW

Competing interests: None.

Funding: None.

Provenance and peer review: Not commissioned, externally peer reviewed.

Correspondence to:

alexa.seal@nd.edu.au

Acknowledgements

We would like to thank Dr Amy Anderson (Data Custodian and Senior Research Officer, Faculty of Health and Medicine) from The University of Newcastle for supplying the data for Survey 8 from the 1973-78 cohort of the Australian Longitudinal Study on Women's Health.

References

- World Health Organization (WHO). Global status report on alcohol and health 2018. WHO, 2018. Available at https://iris.who.int/bitstream/ handle/10665/274603/9789241565639-eng. pdf?sequence=1 [Accessed 16 March 2024].
- Australian Institute of Health and Welfare (AIHW). Australian Burden of Disease Study 2018 - Key findings. AIHW, 2021. Available at www.aihw.gov. au/reports/burden-of-disease/burden-of-diseasestudy-2018-key-findings/contents/key-findings [Accessed 4 March 2024].
- Savic M, Room R, Mugavin J, Pennay A, Livingston M. Defining 'drinking culture': A critical review of its meaning and connotation in social research on alcohol problems. Drugs Educ Prev Policy 2016;23(4):270-82. doi: 10.3109/09687637.2016.1153602.
- Department of Health. National Alcohol Strategy 2019–2028. Commonwealth of Australia, 2019. Available at www.health.gov.au/sites/default/ files/documents/2020/11/national-alcoholstrategy-2019-2028.pdf [Accessed 18 March 2024].
- Australian Institute of Health and Welfare (AIHW). National Drug Strategy Household Survey 2019. AIHW, 2020. Available at www. aihw.gov.au/getmedia/77dbea6e-f071-495c-b71e-3a632237269d/aihw-phe-270. pdf?v=20230605184325&inline=true [Accessed 14 March 2024].
- Blow FC, Barry KL. Use and misuse of alcohol among older women. Alcohol Res Health 2002:26(4):308–15.
- Miller M, Mojica-Perez Y, Livingston M, Kuntsche E, Wright CJC, Kuntsche S. The who and what of women's drinking: Examining risky drinking and associated socio-demographic factors among women aged 40-65 years in Australia. Drug Alcohol Rev 2022;41(4):724–31. doi: 10.1111/ dar.13428.
- White AM. Gender differences in the epidemiology of alcohol use and related harms in the United States. Alcohol R 2020;40(2):01. doi: 10.35946/arcr. v40.2.01.
- Keyes KM, Grant BF, Hasin DS. Evidence for a closing gender gap in alcohol use, abuse, and dependence in the United States population. Drug Alcohol Depend 2008;93(1-2):21-29. doi: 10.1016/j. drugalcdep.2007.08.017.
- McKetta SC, Keyes KM. Trends in U.S. women's binge drinking in middle adulthood by socioeconomic status, 2006-2018. Drug Alcohol Depend 2020;212:108026. doi: 10.1016/j. drugalcdep.2020.108026.

- Peltier MR, Verplaetse TL, Mineur YS, et al. Sex differences in stress-related alcohol use. Neurobiol Stress 2019;10:100149. doi: 10.1016/j. ynstr.2019.100149.
- Erol A, Karpyak VM. Sex and gender-related differences in alcohol use and its consequences: Contemporary knowledge and future research considerations. Drug Alcohol Depend 2015;156:1-13. doi: 10.1016/j.drugalcdep.2015.08.023.
- Liu B, Balkwill A, Reeves G, Beral V; Million Women Study Collaborators. Body mass index and risk of liver cirrhosis in middle aged UK women: Prospective study. BMJ 2010;340:c912. doi: 10.1136/bmj.c912.
- 14. Gudrais E. Women and alcohol. Harvard Magazine 2011;July-August:9–11.
- Withnall J, Hill SB, Bourgeois S. Alcohol, women and midlife. Of Substance: The National Magazine on Alcohol, Tobacco and Other Drugs 2009;7(2):14–15.
- Dare J, Wilkinson C, Donovan R, et al. Guidance for research on social isolation, loneliness, and participation among older people: Lessons from a mixed methods study. Int J Qual Methods 2019;18:1609406919872914. doi: 10.1177/1609406919872914.
- Greenfield SF. Women and alcohol use disorders. Harv Rev Psychiatry 2002;10(2):76–85. doi: 10.1080/10673220216212.
- Britt H, Miller GC, Henderson J, et al. General practice activity in Australia 2014–15. General practice series no. 38. Sydney University Press, 2015.
- National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alcohol. Commonwealth of Australia, 2020. Available at www.nhmrc.gov.au/about-us/ publications/australian-guidelines-reduce-healthrisks-drinking-alcohol#block-views-block-fileattachments-content-block-1 [Accessed 16 March 2024].
- Tam CW, Knight A, Liaw ST. Alcohol screening and brief interventions in primary care – Evidence and a pragmatic practice-based approach. Aust Fam Physician 2016;45(10):767–70.
- 21. Rodgers C. Brief interventions for alcohol and other drug use. Aust Prescr 2018;41(4):117–21. doi: 10.18773/austprescr.2018.031.
- Mauro PM, Askari MS, Han BH. Gender differences in any alcohol screening and discussions with providers among older adults in the United States, 2015 to 2019. Alcohol Clin Exp Res 2021;45(9):1812–20. doi: 10.1111/acer.14668.
- Pereira Gray DJ, Sidaway-Lee K, White E, Thorne A, Evans PH. Continuity of care with doctors-a matter of life and death? A systematic review of continuity of care and mortality. BMJ Open 2018;8(6):e021161. doi: 10.1136/bmjopen-2017-021161.
- 24. Australian Institute of Health and Welfare (AIHW). The health of Australia's females. AIHW, 2019. Available at https:// pp.aihw.gov.au/getmedia/Odeeddcc-6a43-47b5-9813-4bd17553b39e/ the-health-of-australia-s-females-2019-editionarchived_1.pdf.aspx [Accessed 15 June 2021].
- 25. Allan J, Clifford A, Ball P, Alston M, Meister P. 'You're less complete if you haven't got a can in your hand': Alcohol consumption and related harmful effects in rural Australia: The role and influence of cultural capital. Alcohol Alcohol 2012;47(5):624–29. doi: 10.1093/alcalc/ags074.
- Lee C, Dobson AJ, Brown WJ, et al. Cohort profile: The Australian longitudinal study on women's health. Int J Epidemiol 2005;34(5):987–91. doi: 10.1093/ije/dyi098.

- Dobson AJ, Hockey R, Brow WJ, et al. Cohort profile update: Australian longitudinal study on women's health. Int J Epidemiol 2015;44(5):1547a-f.
- Gilligan C, Anderson KG, Ladd BO, Yong YM, David M. Inaccuracies in survey reporting of alcohol consumption. BMC Public Health 2019;19(1):1639. doi: 10.1186/s12889-019-7987-3.
- Biddle N, Edwards B, Gray M, Sollis K. Alcohol consumption during the COVID-19 period: May 2020. The ANU Centre for Social Research and Methods, 2020. Available at https://csrm.cass. anu.edu.au/sites/default/files/docs/2020/6/ Alcohol_consumption_during_the_COVID-19_period. pdf [Accessed 15 June 2021].
- Clay JM, Parker MO. Alcohol use and misuse during the COVID-19 pandemic: A potential public health crisis? Lancet Public Health 2020;5(5):e259. doi: 10.1016/S2468-2667(20)30088-8.

correspondence ajgp@racgp.org.au