Drug and Alcohol REVIEW

APSAD

Drug and Alcohol Review (May 2019), 38, 349–358
DOI: 10.1111/dar.12925

Alcohol use in family, domestic and other violence: Findings from a cross-sectional survey of the Australian population

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Abstract

Introduction and Aims. *The link between alcohol and experience of violence is well-documented, but there is a paucity of empirical research on the role of alcohol specifically in family and domestic violence (FDV) in Australia. The aim of the current study was to describe the relationship between alcohol use and FDV in the Australian population, and to examine key differences between three different types of violence: family violence, intimate partner violence (IPV) and other violence.* ***Design and Methods.*** *An online panel survey was conducted using a stratified random sampling design.* ***Results.*** *In total, 5118 respondents were included, of whom 44.5% reported experiencing violence in their lifetime, and 6.0% reported recent (past year) experience of violence. Recent violent incidents were comprised of IPV (41.8%), family violence (13.1%) and other violence (45.1%). Approximately one-third of all violent incidents experienced (either as a victim or perpetrator) were alcohol-related, and 37.8% of respondents who experienced IPV and 27.8% of those who experienced family violence reported past year heavy-episodic drinking. Alcohol use was associated with higher rates of physical violence and injury at IPV incidents. Alcohol consumed at IPV incidents was most often purchased from a supermarket liquor store (37.0%) and consumed at the respondent's home, regardless of the distance between the purchase location and incident location.* ***Discussions and Conclusions.*** *This study found that alcohol is frequently involved in FDV incidents, particularly IPV. Alcohol use was associated with a higher chance of physical violence and of injury at IPV incidents.* [Curtis A, Vandenberg B, Mayshak R, Coomber K, Hyder S, Walker A, Liknaitzky P, Miller PG. Alcohol use in family, domestic and other violence: Findings from a cross-sectional survey of the Australian population. *Drug Alcohol Rev* 2019;38:349–358]

Key words: alcohol, intimate partner violence, family violence.

Introduction

Family and domestic violence (FDV) are major public health and social problems. Globally, 30% of ever-partnered women have experienced intimate partner violence (IPV) perpetrated by men [1]. While IPV is also perpetrated by females against their male partners, this occurs at a substantially lower frequency, and is typically less severe [1]. In Australia, 17% of women and 6% of men had experienced IPV since the age of 15, and 2.7% of women and 0.8% of men had experienced IPV in the past 12 months [2]. These trends have remained stable from 2005 to 2016, despite efforts to reduce FDV. Prevalence and incidence rates of family violence more generally, however, are more difficult to come by, and more research focussing on FDV is needed.

This study distinguishes between two types of FDV: IPV and family violence (FV). IPV includes violence where an intimate or partnered relationship is formal (e.g. a cohabiting married couple) as well as informal (e.g. a non-cohabiting, dating or sexual relationship) [3]. FV refers to violence involving other family members (e.g. parent sibling). FDV takes many forms, including: physical; emotional; verbal; social; economic; psychological; spiritual; and sexual [4]. In this study, we also report the prevalence of other violence (OV), involving individuals other than intimate partners or family members (e.g. friends, acquaintances or strangers).

FDV and OV result in substantial physical and psychological harm [5–7], including physical and emotional trauma, mental illness, substance use, reproductive problems, increased risk of heart disease

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Received 15 August 2018; accepted for publication 20 February 2019.

and HIV/AIDS [6]. Moreover, direct experience of FDV at a young age is often associated with intergenerational cycles of violence [8]. A recent meta-analysis [9] found that child maltreatment (including direct and indirect exposure to IPV) predicted later IPV perpetration in men.

While the risk factors for violence, and specifically FDV, are multiple and complex, this study focuses on the nature and extent of alcohol use in individuals' self-reported experiences of FDV and OV. This is important, given the high prevalence of alcohol use in the community (81% of Australian adults [10]), the role of alcohol in violence, and the opportunity to modify alcohol consumption through interventions at both the individual and societal level [11]. While an association between alcohol and violence is well-documented, there remains debate regarding the mechanistic nature of this link. The likely bi-directional relationship between violence and alcohol use has made it difficult to establish the causal role of alcohol in violence, including in FDV [12]. One view is that alcohol use may indirectly contribute to violence by affecting other variables, such as a family conflict, and in turn lead to FDV [13]. Another view is that alcohol's causal effect on violence may be spurious, and better explained by individual level factors that covary with alcohol use and aggression (e.g. age, gender, socio-economic status, illicit drug use [14]). However, meta-analyses that control for such variables find the association between alcohol use and violence remains significant [13,15]. A third view is that alcohol use increases aggression through pharmacological effects on executive functioning, such as disinhibition of aggressive impulses [16]. Research highlighting a direct role of alcohol in violence also emphasises the likely moderating effects of individual differences such as age, gender and personality traits, along with the circumstances under which drinking occurs (e.g. divergent drinking patterns between partners increases the risk of IPV) [17].

Considerable research identifies alcohol use as a significant individual risk factor for a range of aggressive and violent behaviours in both clinical and community settings [18]. There have been almost 30 meta-analyses that have investigated the link between alcohol use and violence perpetration, encompassing over 800 effect sizes across six decades of research, and all show a positive association between alcohol use and violence [19]. For example, in the case of male-to-female IPV, alcohol use increases both the incidence and severity of violent incidents [20], a finding that has been replicated in different countries, despite considerable variation in the national prevalence of IPV [21]. In Australia, alcohol is involved in 34% of IPV and 29% of FV incidents [22]. At the population level, a positive association has been found between alcohol outlet density and domestic violence rates [23]. In spite of these findings, a dominant view in FDV research has been that individual traits (e.g. impulse control) and cultural norms (e.g., power and control) are the major factors that explain this kind of violence, and therefore the role of alcohol in FDV has received relatively little consideration at a policy level [24].

Meta-analytic reviews of alcohol use in male-to-female and female-to-male IPV show evidence of small to moderate effects from alcohol use [13,15], similar in magnitude to that of childhood exposure to, or experience of, family violence [8]. Cafferky *et al.* [15] conducted a meta-analysis on the relationship between substance use and IPV perpetration and victimisation, and found small mean effect sizes for illicit drug use and perpetration ($r = 0.23$), illicit drug use and victimisation ($r = 0.23$), alcohol use and perpetration ($r = 0.20$), and alcohol use and victimisation ($r = 0.17$).

With regards to alcohol and FDV policy development in Australia, an overall limitation is the paucity of research using Australian samples, and the difficulty in comparing the heterogeneous measures of alcohol use and violent behaviour [25]. The aim of the current study was to describe the relationship between alcohol use and violence in the Australian population, and to examine key differences between three different types of violence: FV, IPV and OV.

Method

Procedure

This study used a self-report online survey to investigate the role of alcohol and other drugs in violence in Australia, with an emphasis on the characteristics and predictors of FDV. Following ethics approval from the Deakin University Human Research Ethics Committee (#2014-020) in accord with the Australian National Statement of Ethical Conduct (2007), the survey was conducted online during January and February in 2015 using the Australian social research company, Online Research Unit's (ORU) survey panel. ORU is accredited by the international standard for social, market and opinion research, which indicates the use of quality-assured data management, recruitment and confidentiality processes. To capture a range of demographics ORU use multiple, mostly offline (e.g. print and radio advertising), recruitment sources, and has primarily an invitation-only policy. These strategies maximise representation across demographics and minimise self-selection bias. ORU regularly profiles its panel to ensure it represents Australian Bureau of Statistics (ABS) population estimates. The panel is comparable to ABS estimates on age and geographic location.

A stratified random sampling design was used to obtain a proportionally representative sample of the adult population in each Australian state and territory according to ABS census data [26]. Individuals living in remote, and very remote areas with populations of less than 10 000 were also oversampled to represent at least 20% of the final sample and thus ensure adequate representation of these groups in the final dataset. Email invitations to participate were sent to 48 200 members of the online panel, all of whom were over 18 years of age, with 5155 completing the online survey. The final sample comprised 5118 respondents (51.8% female), representing a response rate of 10.7%. Table 1 shows the demographic characteristics of the sample. Each survey respondent received a total of AU$2.50 in loyalty points from the social research company following their completion of the survey.

Table 1. *Demographic characteristics of the sample (n = 5118)*[a]

	n	% of total
Male	2450	47.9
Female	2652	51.8
Age group, years		
18–25	1141	22.3
16–35	544	10.6
36–50	874	17.1
51–65	1446	28.3
66+	1113	21.7
Born overseas	1294	25.3
Aboriginal or Torres Strait Islander	84	1.6
Highest education level		
Year 11 or below	939	18.3
Year 12	1053	20.6
Vocational training	1269	24.8
Tertiary education	1857	36.3
Employment status		
Casual	467	9.1
Part-time	750	14.7
Full-time	1320	25.8
Home duties	496	9.7
Unemployed	471	9.2
Not in labour force (e.g. retired)	1516	29.6
Gross annual household income		
$25 000 or less	741	16.2
$25 001–$50 000	1395	30.4
$50 001–$100 000	1543	33.7
$101 000 or more	903	19.7
Geographic location		
Metropolitan		
Major city	3000	58.6
Inner regional	893	17.4
Regional		
Outer regional	851	16.6
Remote	146	2.9
Very remote	50	1.0
SEIFA disadvantage quintile		
First (most disadvantage)	1072	20.9
Second	1044	20.4
Third	1000	19.5
Fourth	1043	20.4
Fifth (least disadvantage)	940	18.4

[a]Totals for some items may differ due to missing data. SIEFA, socio-economic index for areas.

Survey instrument

The questionnaire comprised 98 questions. Only those questions relevant to the current paper are included here:

1. Demographic information (e.g. age, sex, education, relationship status).
2. Experiences of violence. Respondents were asked to indicate whether they had experienced violence in their lifetime, more than 12 months ago, and within the past 12 months with their current or most recent partner (see Supplementary Material 5 for the questions). Violence categories (IPV, FV and OV) were coded using a question relating to the most recent experience of violence, where participants were asked to identify their relationship to the other person involved in the incident (e.g. stranger, partner, ex-partner and family member). For example, when the other person involved was a partner or ex-partner the incident was coded as IPV, where the other person involved was a family member, the incident was coded as FV, and where the other person involved was a stranger, the incident was coded as OV. This survey did not distinguish whether the respondent was a perpetrator or victim of violence given that it is not always clear who initiated the violence, and who was the victim, and this runs the risk of each person identifying as the victim. The current study captures experience of violence, and in doing so takes a more phenomenological, non-causal interpretation of violence, consistent with criminal spin theory [27]. Therefore, interpretation of results should be made with this in mind.
3. Alcohol involvement at most recent violent incident [e.g. nature of alcohol consumption by the respondent and other person/s (as reported by the respondent), place of alcohol purchase and consumption].
4. Hazardous alcohol use, as measured by the Alcohol Use Disorders Identification Test-C [28]. The Alcohol Use Disorders Identification Test-C is scored on a scale of 0–12, where a score of ≥4 for men and ≥3 for women is considered hazardous.

Analysis

Bivariate (chi-square and t-tests) and multivariate (logistic regression) statistical analyses were conducted using SPSS Version 25 [29]. Where participants did not

provide answers to a question (e.g. selected 'don't know/can't remember' or left the item blank) these cases have been coded as missing data and were excluded from our analysis of that item.

Results

Respondent characteristics and violence type experienced

Almost half (44.5%) of the 5118 respondents reported they had experienced violence in their lifetime, and 307 (6.0%) reported violence in the past 12 months. At the most recent incident, OV (n = 1027; 45.1%) and IPV (n = 952; 41.8%) were the most commonly reported. A smaller proportion (n = 299; 13.1%) were FV incidents. Within IPV incidents, 405 (42.5%) involved a current partner and 547 (57.5%) involved an ex-partner.

Three-quarters of respondents who reported IPV as the most recent incident were female (76%), and females were significantly more likely to report IPV than FV (65.6%) or OV (28%; χ^2 = 478.01, $P < 0.001$). Those reporting IPV were also more likely to be in an older age group (aged 36+ years; 73.4%) compared to those reporting FV (60.9%) or OV (60.4%), while those reporting FV were more likely to be in the youngest age group surveyed (aged 18–25 years; 29.4%; χ^2 = 137.14, $P < 0.001$). Those reporting IPV were more likely to have lower education levels (below year 11; 22.7%) compared to those reporting FV (14.4%) or OV (14.9%; χ^2 = 77.75, $P < 0.001$), more likely to have a lower annual household income (<AU$25 000; 24.3%) than those reporting FV (17.1%) or OV (12.7%; χ^2 = 31.38, $P < 0.001$), and more likely to reside in a regional location compared to those reporting FV or OV (25.6%, 18.9%, and 23%, respectively; χ^2 = 22.16, $P < 0.001$).

Respondents' alcohol use and experience of lifetime and recent violence

Across all respondents, 79.4% reported past-year alcohol use, 43.0% were classified as hazardous drinkers (according to Alcohol Use Disorders Identification Test-C criteria), and 37.7% reported heavy episodic drinking (HED; six or more standard drinks on one occasion) over the past year, figures that closely resemble 2016 National Drug Strategy Household Survey rates [10]. No significant differences in past year hazardous drinking rates were found between respondents who had never experienced violence and those who had. Males were more likely than females to be hazardous drinkers (46.3% vs. 40.1%, $P < 0.001$) and engage in past-year HED (44.5% vs. 31.5%, $P < 0.001$), rates that are also comparable to those found in the 2016 National Drug Strategy Household Survey.

As shown in Table 2, lifetime experience of violence was more likely for males who reported past year hazardous drinking and HED, though this was not the case for females. However, past year hazardous drinking and HED for both males and females was associated with higher rates of experiencing *past year* violence.

A hierarchical logistic regression found that after controlling for all other factors, those who had a partner who was a heavy drinker were less likely to report a lifetime experience of violence than those who had a partner who did not drink heavily [odds ratio (OR) = 0.80, 95% confidence interval (CI) 1.11–1.55; see Table 3].

A second hierarchical logistic regression found that after controlling for all other factors, those who were hazardous drinkers were significantly more likely to report an experience of violence in the past 12 months than those who were not hazardous drinkers (OR = 1.49, 95% CI 1.03–2.15; Table 4).

Partners' alcohol use and the type of violence experienced

Most (77.9%) partners of respondents were current drinkers, 43.8% of whom were reported to be hazardous drinkers and 40.8% reported to have engaged in past-year HED. Respondents' own drinking patterns were a significant predictor of their partners' drinking patterns, with 69.5% of respondents reporting past-year HED also reporting their partners drank to this degree ($P < 0.001$), and 67.4% of respondents who reported hazardous drinking also reported their partners drank hazardously ($P < 0.001$).

Respondents who reported having never experienced violence in their lifetime had partners with significantly lower rates of hazardous drinking than those who had experienced violence (χ^2 = 4.793, $P < 0.05$). Respondents reporting IPV were more likely than those reporting FV or OV to have a current (or most recent) partner who consumed alcohol (IPV: 83.7%, FV: 74.6%, OV: 76.6%; χ^2 = 23.79, $P < 0.001$), was a hazardous drinker (IPV: 50.2%, FV: 40.2%, OV: 43%; χ^2 = 16.38, $P < 0.001$), and engaged in past-year HED (IPV: 54.2%, FV: 35.1%, OV: 36.6%; χ^2 = 82.57, $P < 0.001$). Respondents reporting IPV were also more likely than those reporting FV to drink together (IPV: 67.9%, FV: 59.8%, OV: 67.1%; χ^2 = 12.79, $P < 0.05$).

Alcohol use by respondent and other person(s) at the incident

One-third (32.7%) of the most recent violent incidents were alcohol-related. That is, either the respondent or the other person(s), or both, had been drinking at the

Table 2. *Respondent patterns of alcohol use according to experience of lifetime violence and the previous 12 months of violence (n = 5118)*[a]

	Lifetime violence experience			Past 12 months violence experience		
	Yes % (*n*)	No % (*n*)	χ^2	Yes % (*n*)	No % (*n*)	χ^2
Full sample						
Hazardous alcohol use						
Yes	45.7 (1006)	54.3 (1194)	2.32	6.9 (151)	93.1 (2049)	5.12*
No	43.6 (1272)	56.4 (1646)		5.3 (156)	94.7 (2762)	
Heavy episodic drinking						
Yes	46.8 (905)	53.2 (1027)	6.84**	7.5 (145)	92.5 (1787)	12.40***
No	43.1 (1373)	56.9 (1813)		5.1 (162)	94.9 (3024)	
Males						
Hazardous alcohol use						
Yes	46.4 (526)	53.6 (608)	7.10**	5.4 (61)	94.6 (1073)	0.87
No	41.0 (540)	59.0 (774)		4.6 (60)	95.4 (1256)	
Heavy episodic drinking						
Yes	48.2 (525)	51.8 (565)	17.10***	6.1 (66)	93.9 (1024)	5.21*
No	39.8 (541)	60.2 (819)		4.0 (55)	96.0 (1305)	
Females						
Hazardous alcohol use						
Yes	44.9 (477)	55.1 (586)	0.15	8.4 (89)	91.6 (974)	5.65*
No	45.6 (725)	54.4 (864)		6.0 (95)	94.0 (1494)	
Heavy episodic drinking						
Yes	44.9 (375)	55.1 (461)	0.11	7.5 (144)	92.5 (1782)	10.82***
No	45.5 (827)	54.5 (989)		5.1 (161)	94.9 (3015)	

*$P < 0.05$;**$P < 0.01$;***$P < 0.001$. [a]Totals in each panel may differ due to missing data.

Table 3. *Correlates of the experience of lifetime violence*

	Step 1			Step 2			Step 3		
	B	OR	95% CI	B	OR	95% CI	B	OR	95% CI
Age									
18–25 years	0.39	1.48***	1.21–1.81	0.33	1.38**	1.12–1.71	0.31	1.36**	1.20–1.69
26–35 years	0.51	1.66***	1.32–2.08	0.44	1.56***	1.23–1.97	0.43	1.53***	1.21–1.94
36–50 years	0.62	1.86***	1.53–2.26	0.58	1.79***	1.47–2.19	0.57	1.76***	1.45–2.15
51–65 years	0.63	1.88***	1.58–2.23	0.61	1.84***	1.55–2.18	0.60	1.82***	1.53–2.16
66+ years[a]									
Female	0.05	1.05	0.93–1.20	0.08	1.09	0.95–1.24	0.04	1.04	0.91–1.19
Year 11 or below	0.01	1.01	0.84–1.20	−0.01	0.99	0.83–1.19	−0.01	0.98	0.83–1.18
Year 12 equivalent	−0.19	0.83*	0.69–0.99	−0.20	0.82*	0.68–0.98	−0.22	0.81*	0.67–0.96
Vocational qualification	0.26	1.30**	1.11–1.52	0.25	1.29**	1.10–1.51	0.25	1.28**	1.09–1.50
Tertiary qualification[a]									
Resides in regional location	0.24	1.27**	1.09–1.48	0.23	1.26**	1.08–1.46	0.22	1.20	1.07–1.45
HED				0.19	1.21*	1.01–1.45	0.19	0.91	0.99–1.47
Hazardous drinker				−0.10	0.90	0.76–1.07	−0.10	1.31**	0.77–1.08
Partner HED							0.27	0.80*	1.11–1.55
Drinking together HED							−0.22		0.70–0.98

*$P < 0.05$; **$P < 0.01$;***$P < 0.001$ [a]Reference category. Note: Cox & Snell $R^2 = 0.28$; Nagelkerke $R^2 = 0.37$. CI, confidence interval; HED, heavy episodic drinking; OR, odds ratio.

time of the incident. As shown in Table 5, alcohol was more likely to have been consumed by the other person(s) at IPV incidents, compared to OV incidents. In IPV incidents, it was also more likely that both the respondent and the other person(s) had consumed alcohol, compared to FV incidents.

Alcohol was more likely to have been consumed at IPV incidents by male respondents (16.0%) and male other

Table 4. *Correlates of the experience of violence in the past 12 months*

	Step 1			Step 2			Step 3		
	B	OR	95% CI	B	OR	95% CI	B	OR	95% CI
Age									
18–25 years	2.11	8.23***	4.86–13.85	2.18	8.81***	5.12–15.14	2.16	8.69***	5.04–14.96
26–35 years	1.71	5.55***	3.15–9.77	1.80	6.04***	3.38–10.82	1.79	5.96***	3.33–10.68
36–50 years	1.33	3.77***	2.18–6.52	1.39	4.00***	2.30–6.99	1.38	3.96***	2.27–6.90
51–65 years	0.68	1.96*	1.13–3.41	0.71	2.03*	1.17–3.5	0.70	2.02*	1.16–0.3.52
66+ years[a]									
Female	0.09	1.10	0.84–1.43	0.07	1.08	0.82–1.41	0.05	1.05	0.79–1.38
Year 11 or below	−0.18	0.84	0.55–1.27	−0.16	0.86	0.57–1.30	−0.16	0.85	0.56–1.29
Year 12 equivalent	−0.02	0.98	0.69–1.40	0.00	1.00	0.70–1.42	−0.01	0.99	0.69–1.41
Vocational qualification	0.12	1.13	0.82–1.56	0.14	1.15	0.83–1.58	0.13	1.14	0.83–1.57
Tertiary qualification[a]									
Resides in regional location	0.09	1.09	0.79–1.50	0.08	1.09	0.79–1.49	0.07	1.08	0.78–1.48
HED				−0.20	0.82	0.56–1.20	−0.21	0.81	0.53–1.25
Hazardous drinker				0.40	1.49*	1.03–2.14	0.40	1.49*	1.03–2.15
Partner HED							0.17	1.19	0.84–1.69
Drinking together HED							−0.12	0.89	0.59–1.33

*$P < 0.05$; ***$P < 0.001$ [a]Reference category. Note: Cox & Snell $R^2 = 0.31$; Nagelkerke $R^2 = 0.83$. CI, confidence Interval; HED, heavy episodic drinking; OR, odds ratio.

person(s) (30.0%) than by female respondents (8.2%) and female other person(s) (20.5%), respectively ($P < 0.001$ for both). No significant gender differences in alcohol consumption were found for FV or OV incidents.

Place of purchase and consumption of alcohol involved in violent incidents

Where the associated alcohol was purchased varied between the different types of violence. In IPV, alcohol was more likely to have been purchased at a supermarket liquor store (37.2%), compared with FV (20.9%; $P < 0.05$) and OV (8.6%; $P < 0.001$). In FV and OV, alcohol was most frequently purchased from a pub/bar (30.0% and 34.2%, respectively). This pattern persisted regardless of the geographic distance between the purchase location and where a violent incident took place (see Table 6 for distance breakdowns). Also, where alcohol was *consumed* varied between types of violence. Alcohol involved in IPV and FV was more likely to be consumed at the respondent's home (55.9% and 40.9%, respectively) compared with OV (10.4%, $P < 0.001$). Alcohol

Table 5. *Alcohol involvement at most recent incident according to violent incident type (n = 2278)*[a]

	Type of violent incident			Significance level		
Alcohol involvement	IPV, % (*n*)	FV, % (*n*)	OV, % (*n*)	IPV vs. FV	IPV vs. other	FV vs. OV
Respondent drinking (any)	10.2 (97)	3.3 (10)	16.1 (165)	***	***	***
I was drinking but not drunk	6.7 (64)	2 (6)	11.4 (117)	**	***	***
I was drunk	3.2 (30)	0.3 (1)	4.3 (44)	**	NS	***
I believe alcohol was added to my drink without my consent	0.5 (5)	1.0 (3)	0.5 (5)	NS	NS	NS
Other person(s) (any)	30.5 (290)	27.1 (81)	25.9 (266)	NS	*	NS
The other person(s) had been drinking but wasn't drunk	10.8 (103)	9.4 (28)	8.1 (83)	NS	*	NS
The other person(s) was drunk	19.6 (187)	17.7 (53)	18.0 (185)	NS	NS	NS
Both consumed alcohol	7.0 (67)	1.0 (3)	9.2 (94)	***	NS	***
Either consumed alcohol	33.6 (320)	29.4 (88)	32.8 (337)	NS	NS	NS

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$. [a]Analyses includes cells with an expected count of <5, Fisher's Exact test is reported. Column totals may not sum because respondents could select more than one item. FV, family violence; IPV, intimate partner violence; NS, non-significant ($P > 0.05$); OV, other violence.

Table 6. *Distance from place of purchase to incident location by violent incident type, where alcohol was involved in most recent incident (n = 745)*

	IPV % (*n*)	FV % (*n*)	OV % (*n*)
Less than 500 m	9.4 (30)	8.0 (7)	32.9 (111)
500 m–1 km	13.1 (42)	12.5 (11)	8.0 (27)
1–2 km	13.4 (43)	14.8 (13)	10.1 (34)
2–5 km	16.3 (52)	15.9 (14)	9.8 (33)
5-10 km	10.6 (34)	6.8 (6)	4.7 (16)
More than 10 km	9.7 (31)	10.7 (6)	6.8 (23)
Do not know	27.5 (88)	31.3 (31)	27.6 (93)

FV, family violence; IPV, intimate partner violence; OV, other violence.

involved in OV was most frequently consumed at licensed premises (37.4%), followed by outdoors (11.0%).

Nature and severity of violence when alcohol is involved

The nature of violence describes the violent behaviour respondents experienced at the most recent incident, while injury type describes the adverse physical and psychological impacts of the violent incident. As shown in Table 7, IPV and OV incidents included higher rates of a physical nature when alcohol use was involved, compared with FV. Alcohol involvement was also associated with higher rates of verbal aggression and intimidation in OV incidents. Moreover, alcohol use was positively associated with both physical and psychological/emotional injury occurring in IPV and OV incidents, but not in FV incidents. In IPV incidents involving alcohol, females were significantly more likely than males to experience intimidation, and psychological/emotional injuries (see Table S1). In FV incidents involving alcohol, females were more likely to experience unwanted sexual attention. In OV incidents involving alcohol, females were also more likely to experience sexual violence, verbal aggression, intimidation and unwanted sexual attention.

Correlates associated with experience of violence

Three hierarchical logistic regression models examined the variables associated with respondents' experience of IPV compared with OV, FV compared with OV, and IPV versus FV, respectively (see Tables S2–S4). Significant bivariate demographic variables (age group, sex, education and geographic region) were entered in the first step, respondent alcohol use variables in the second step, and partner alcohol use variables in the third step. Due to high levels of missing data, household income was not included.

Females were significantly more likely to report IPV, compared with OV (OR = 8.21, 95% CI 7.12–11.65), FV than OV (OR = 4.17, 95% CI 2.27–6.47) and IPV than FV (OR = 1.99, 95% CI 1.42–2.81). Those with partners who engaged in HED were significantly more likely to report IPV, compared with OV (OR = 2.15, 95% CI 1.46–2.70), FV than OV (OR = 1.82, 95% CI 1.06–3.11), and IPV than FV (OR = 1.91, 95% CI 1.30–2.82). Those who reported residing in a regional location were less likely to experience IPV compared to OV, than their metropolitan counterparts (OR = −0.38, 95% CI 0.63–1.07), and FV than OV (OR = 0.54, 95% CI 0.32–0.89).

Table 7. *Type of violence experienced and injuries received according to alcohol use at the most recent incident (n = 2278)*

	IPV		FV		OV	
	Alcohol use		Alcohol use		Alcohol use	
Nature of violence	No, % (*n*)	Yes, % (*n*)	No, % (*n*)	Yes, % (*n*)	No, % (*n*)	Yes, % (*n*)
Physical	44.6 (282)	57.2 (183)**	43.6 (92)	52.3 (46)	41.4 (286)	67.7 (228)**
Sexual	10.0 (63)	10.0 (32)	8.5 (18)	12.5 (11)	8.1 (21)	6.2 (21)
Verbal aggression	73.1 (462)	70.3 (225)	61.1 (129)	64.8 (57)	47.8 (330)	34.4 (116)**
Intimidation	41.3 (261)	44.1 (141)	30.3 (64)	26.1 (23)	30.4 (210)	22.6 (76)*
Unwanted sexual attention	7.3 (46)	6.9 (22)	3.8 (8)	5.7 (5)[a]	6.4 (44)	5.3 (18)
Psychological/emotional	4.3 (27)	0.9 (3)*	2.8 (6)	0.0 (0)[a]	0.4 (3)	0.0 (0)[a]
Injury type						
Any type of injury	20.9 (132)	35.0 (112)**	19.9 (42)	15.9 (14)	19.3 (133)	30.0 (101)**
Physical	19.6 (124)	34.4 (110)**	19.4 (41)	12.5 (11)	16.7 (115)	29.4 (99)**
Psychological/emotional	13.0 (82)	20.6 (66)*	10.9 (23)	11.4 (10)	8.3 (57)	7.7 (26)

*$P < 0.01$; **$P < 0.001$. [a]Analysis contains cells with expected count <5, Fisher's Exact test is reported. FV, family violence; IPV, intimate partner violence; OV, other violence.

Discussion

This study aimed to describe the relationship between alcohol use and violence in a representative sample of the Australian population. The findings confirm that alcohol use is commonly involved in FV, IPV and OV. Around a third of all violent incidents involved alcohol use, consistent with the findings of previous Australian studies [22].

In line with previous Australian and international research [1,2], almost half of respondents reported some experience of violence in their lifetime, and 6.0% had experienced violence in the past 12 months. While the proportion of OV was similar to IPV for the most recent violent incident, higher rates of male respondents reported OV and higher rates of females reported IPV. Other surveys of the Australian population have similarly found women to be several times more likely than men to experience IPV [2].

Lifetime experience of violence was more likely for males who reported past year hazardous drinking and HED than males who did not drink to this level. Past year hazardous drinking and HED for both males and females was associated with higher rates of experiencing *past year* violence. Those who experienced IPV were more likely to have a current/recent partner who consumed alcohol, was a hazardous drinker, and engaged in past-year HED. They were also more likely to drink with their partner and to engage in HED with their partner. Alcohol was more likely to have been consumed at IPV incidents by males. In addition, HED was a significant risk factor for experiencing violence. Other studies have also highlighted the role of heavy drinking behaviours in the experience of family and domestic violence [30,31].

From a policy perspective, the salience of these findings is that alcohol use behaviours are able to be modified through programmatic and policy interventions at multiple levels. Graham *et al*. [11] have proposed a four-level model for the prevention of alcohol-related IPV which addresses: individual level factors (e.g. identifying proneness to the disinhibitory pharmacological effects of alcohol that increases risk of engaging in IPV); relationship level factors (e.g., addressing the way alcohol is perceived and used); community level factors (e.g. challenging community norms; and societal level factors (e.g. fostering environments that discourage harmful alcohol use). The current study highlights the importance of addressing hazardous and heavy episodic alcohol consumption, particularly where both persons in a violent relationship drink in this way.

In IPV incidents, alcohol was most often purchased at a supermarket liquor store. In FV and OV incidents, alcohol was most frequently purchased from a pub/bar, and alcohol involved in IPV and FV incidents was more often consumed at the respondent's home. Alcohol involved in OV incidents was most frequently consumed at licensed premises. Alcohol availability and violence has been repeatedly documented. For example, an Australian study found a positive association between the density of liquor stores and domestic violence rates [23]. These are important findings from a policy perspective, given that the physical availability of alcohol in the population can be directly controlled by government (e.g. reducing trading hours and number of alcohol outlets), and such policies have consistently been shown to impact on FDV and OV [32].

Physical violence was present more often in IPV and OV incidents when alcohol use was involved. Alcohol involvement was also associated with higher rates of verbal aggression and intimidation in OV incidents. Alcohol use was associated with both physical and psychological/emotional injury occurring in IPV and OV incidents. The findings highlight the need for interventions that directly address the role of alcohol consumption in FDV. There are only a small number of evidence-based programs shown to be effective in mitigating the role of substance use in FDV, and this study adds to the call for further research into effective interventions [33,34].

Limitations

There are some limitations of this study that should be considered. Online and self-report surveys can suffer from various biases. Selection bias may be present as the online survey required respondents to have access to a computer and the internet, to be literate in English, and to self-select to participate. While the response rate to the survey was low, the final sample had similar proportions of alcohol consumption and experiences of violence as other large representative Australian studies. For example, the proportion of violence experienced is comparable to findings from the 2016 Personal Safety Survey, in which 39% of respondents reported experiencing violence since the age of 15, and 5.4% reported experiencing violence in the past year [2]. Further, consistent with the National Drug Strategy Household Survey, males in this study were far more likely than females to drink alcohol in quantities that placed them at risk from a single occasion of drinking at least once in the past year (45% compared with 27% for females) and males consumed alcohol in quantities that exceeded the guidelines more often than did females.

Given the sensitive nature of the survey questions, there is also a possibility of non-response bias, recall bias, and response error, which may lead to

under-reporting of violent experiences, under-reporting of respondent's alcohol use, and inaccurate reporting of alcohol use by others. To minimise this possibility, the survey was conducted wholly online using an anonymous self-report design. Further, as we did not ask people to identify as a perpetrator or victim in their experience of violence, we are unable to identify the role alcohol consumption played in the experience of violence, and instead all results have been reported in terms of alcohol's involvement in the experience of violence.

The violence questions utilised in the survey were developed for the current study, and while these were based on the ABS Personal Safety Survey, they had not previously been validated as standalone questions. However, the relationships shown in the current findings between violence and known correlates are in expected direction, suggesting good construct validity. Further, cross-sectional studies, such as this one, are unable to inform causal inference. While previous studies of IPV provide some evidence of a causal effect of alcohol use on the occurrence of violence [35], others find evidence of a causal link between violence and increased alcohol consumption [36]. For future empirical research in this area, prospective longitudinal study designs are recommended, as these provide an appropriate means of determining temporal directions in the relationship between alcohol use and violence. In reality, the relationship between alcohol and FDV may be bidirectional, and the likely reciprocal link between alcohol and FDV only adds greater weight to the need for effective policy and treatment to mitigate these issues.

Conclusion

The current study found that one third of all reported violent incidents involved alcohol and this was most commonly reported in IPV. As such, interventions, which directly target the relationship between alcohol and violence, and specifically FDV, may reduce the number of FDV incidents involving alcohol. In addition, given that most alcohol involved in IPV was purchased at liquor stores, policy interventions such as reductions in outlet density or a minimum unit price for alcohol may reduce IPV incidents.

Acknowledgements

The current study was funded by the National Drug and Law Enforcement Research Fund. PM receives funding from Australian Research Council and Australian National Health and Medical Research Council, grants from NSW Government, National Drug Law Enforcement Research Fund, Foundation for Alcohol Research and Education, Cancer Council Victoria, Queensland Government and Australian Drug Foundation, and travel and related costs from Australasian Drug Strategy Conference. He has acted as a paid expert witness on behalf of a licensed venue and a security firm. KC receives funding from Australian Research Council, Foundation for Alcohol Research and Education, Lives Lived Well, Australian Rechabites Foundation and the Queensland government.

Conflict of Interest

The authors have no conflicts of interest.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Table S1. Type of violence experienced and injuries received where alcohol use[#] was involved at the most recent incident according to gender
Table S2. Correlates of the experience of intimate partner violence compared with other violence at most recent incident.
Table S3. Correlates of the experience of family violence compared with other violence at most recent incident.
Table S4. Correlates of the experience of intimate partner violence compared with family violence at most recent incident.
S5: Violence questions