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The Role of Illicit Drug Use in Family and Domestic Violence in Australia

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Abstract

Drug use has been shown to interact in complex ways with the occurrence and prevalence of family and domestic violence (FDV), with illicit drug use being associated with an increased risk for FDV. The current study aims to extend upon the literature by investigating the role of illicit drugs in intimate partner violence (IPV), family violence (FV), and other violence (violence between people other than partners or family) within a representative Australian sample (n = 5,118). Participants were recruited through an online survey panel and completed an online self-report survey assessing the role of alcohol and other drugs on violence, with a specific focus on FDV. Binary logistic regression showed that respondents who reported having used any illicit drug in the past 12 months (with or without alcohol use) had over three times the odds of experiencing any violence in the past 12 months (OR = 3.18, 95% confidence interval (CI) = [2.25, 4.48]) compared with those not using illicit drugs. Furthermore, drug involvement in FDV (IPV or FV) was significantly more likely than other violent incident types (OR = 1.65, 95% CI = [1.25, 2.19]). For the most recent FDV incident, age group was the

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only significant demographic predictor of drug involvement at this incident; younger age groups were over twice as likely to report drug involvement than those over 65 years of age. Drug involvement at the most recent FDV incident was also associated with over twice the odds of injury (OR = 2.38, 95% CI = [1.67, 3.38]) and significantly greater negative life impact. The findings that drug use increases both the risk for and impact of FDV indicate the need for policy that advocates for interventions addressing both drug use and violence in combination.

Keywords

intimate partner violence, family violence, other violence, drug use, demographics, injury

Family and domestic violence (FDV) is a major public health and social problem, affecting approximately one in three women globally (World Health Organization, 2013). In Australia, one in six women and one in 16 men have experienced intimate partner violence (IPV; a subset of FDV) since the age of 15 years (Australian Bureau of Statistics, 2017). FDV has been shown to cause substantial physical and psychological harm, including physical injury, posttraumatic stress disorder, suicide, anxiety and depression, substance misuse, and homelessness (Australian Institute of Health and Welfare, 2018; Ayre, Gourley, On, Webster, & Moon, 2016; Evans, Davies, & DiLillo, 2008; World Health Organization, 2013).

The current study distinguishes between two forms of FDV: IPV, which includes intimate partner relationships that are formal and informal, cohabiting, and noncohabiting, and family violence (FV), which includes all other family relationships. FDV can include physical, sexual, psychological, emotional, verbal, social, economic, and spiritual abuse; can range from mild threats to severe abusive acts; and can occur as an isolated individual incident or over an extended period of time (Mitchell, 2011). We also report on other forms of violence ("Other Violence"; OV), that is, violence between individuals other than intimate partners or family members (e.g., friends, acquaintances, coworkers).

The risk factors for FDV are multiple and complex and can include exposure to FV, childhood sexual abuse, or neglect (Phillips & Vandenbroek, 2014). In addition, rates of FDV are higher for women, indigenous people, young adults, disabled people, and individuals associated directly or indirectly with problematic alcohol and other substance use (Phillips & Vandenbroek, 2014). Alcohol and other drug use is associated with higher rates of FDV,

increased severity of FDV, and increased likelihood of FDV associated with sexual assault (Boles & Miotto, 2003; Mouzos & Makkai, 2004; Wall & Quadara, 2014). About half of all police-reported FDV incidents in Australia were associated with alcohol (Laslett et al., 2015), and physical assault has been found to increase tenfold when any alcohol has been consumed (Stuart et al., 2013). Furthermore, approximately half of IPV homicides in Australia are alcohol related (Chan & Payne, 2013; Dearden & Payne, 2009). However, international research is mixed with some indications of no relationship between participant report of illicit drug use in the past 30 days and experiences of IPV (Gilchrist, Radcliffe, Noto, & d'Oliveira, 2017), but being in treatment for drug use does have an association with past perpetration of IPV among men (Gilchrist et al., 2015; Radcliffe & Gilchrist, 2016).

Although it has been established that alcohol use directly increases the likelihood for IPV (e.g., Leonard, 2005), less is known about the role of other drug use among perpetrators and victims of FDV (Choenni, Hammink, & van de Mheen, 2017). Both licit and illicit drug use appears to interact in a variety of ways with the occurrence of FDV, possibly acting as a risk factor (Stark & Flitcraft, 1996), a coping mechanism (Campbell, 2002), or a result of other factors that also increase the occurrence of FDV. Indeed, illicit drug use has been associated with both the perpetration and victimization of FDV and IPV (Bonomi et al., 2006; Cafferky, Mendez, Anderson, & Stith, 2018; Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008; Fischbach & Herbert, 1997; Jaspard et al., 2003; Romito, Turan, & De Marchi, 2005; Smith, Homish, Leonard, & Cornelius, 2012), with indications that illicit drug use is a stronger predictor of IPV than alcohol use (Stuart et al., 2008). There may be a bidirectional link between FDV and substance misuse, with drug use both preceding and following violence (e.g., El-Bassel, Gilbert, Wu, Go, & Hill, 2005; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Testa, Livingston, & Leonard, 2003). In their metaethnography, Gilchrist et al. (2019) noted that both survivors and perpetrators of IPV understood IPV perpetration as a change or disinhibition when under the influence of alcohol or stimulant drugs and that there was an increased risk of perpetration when the dependent perpetrator was experiencing withdrawal or craving. Perpetrators who used substances, however, were more likely to blame their behavior on the partner or on the intoxication.

The current study aims to extend upon the literature examining drug use and experiences of FDV by investigating the role of illicit drugs in IPV, FV, and OV within an Australian sample. Understanding of the role of drug use in FDV would aid in the development of policy and health interventions at both the individual and societal level (Graham, Wilson, & Taft, 2017). As part of the larger Alcohol/Drug-Involved Family Violence in Australia (ADIVA)

project (Miller et al., 2016), this study sought to investigate (a) the association between illicit drug use over a 12-month period and rates of violence over the same period, while controlling for demographic factors; (b) how drug involvement varies between IPV, FV, and OV; (c) the demographic factors associated with FDV incidents involving illicit drug use; and (d) whether drug involvement in FDV is associated with differential rates of injury and impact on life.

Method

Participants

Email invitations to participate were sent to a random sample of 48,200 members of the online panel, with 5,155 completing the survey. After removing a small number of invalid surveys (n = 37), the final sample comprised 5,118 respondents, representing a response rate of 10.7%. This response rate is typical of that achieved through the use of online panel recruitment methods (Hays, Liu, & Kapteyn, 2015).

Procedure

Following ethics approval, an online self-report survey was used to assess the role of alcohol and other drugs on violence, with a specific focus on FDV. An online survey panel was used to recruit participants in January and February 2015. This panel is sourced from an accredited social, market, and opinion research recruitment service, ensuring quality-assured data management, recruitment, and confidentiality processes. To capture a range of demographics, the online panel company use multiple, mostly offline (e.g., print and radio advertising), recruitment sources and has primarily an invitation-only policy. The use of multiple strategies maximizes demographic representativeness and minimizes self-selection bias. The online panel is regularly checked against Australian population estimates to ensure it is comparable on age and geographic location.

A stratified random sampling design of this panel was then used to obtain a proportionally representative sample of the Australian population in terms of age, rural and metropolitan residents, and Australian State and Territory residents (Australian Bureau of Statistics, 2014). However, given young adults experience higher rates of violence (Laslett et al., 2011), individuals aged 18-25 years were oversampled to represent at least 20% of the final sample. Furthermore, to obtain a minimally powered subsample, individuals living in regional, remote, and very remote areas (rural) were also oversampled to represent at least 20% of the total sample.

Each survey respondent received a total of AU$2.50 in loyalty points from the social research company following survey completion. Full details of the ADIVA project procedure can be found in Miller et al. (2016).

Measures

The questionnaire comprised 98 questions taken in part from previous surveys and validated instruments. Items relevant to the current paper are described below. Although information was collected primarily about the respondent, the survey did not distinguish whether the respondent was a perpetrator or victim of violence. However, some of the survey items were more relevant to victims. This approach was taken as it is not always clear who initiated a violent incident (i.e., "perpetrator") and who was the victim. As such, there is the risk of each person identifying as the victim. To this end, the current study captures experience of violence, thus taking a phenomenological, noncausal interpretation of violence, consistent with criminal spin theory (Bensimon & Ronel, 2012). Interpretation of results should be made with this definition in mind.

Demographic information. Data were collected for sex, age, Aboriginal or Torres Strait Islander (ATSI) heritage, respondent education, household income, and geographic region. See Table 1 for sample demographics details.

Aggression and violence. Experience of aggression or violence over the participants' lifetime and within the past 12 months was collected. Details regarding the most recent violent incident were also acquired (e.g., nature of violence, relationship to respondent, injuries, impact on work and life). This information was used to classify FV, IPV, and OV incidents. Where applicable, respondents were asked to provide information about their current or most recent partner.

Drug use and dependency. Respondents were asked if they have used an illicit substance in the past 12 months. Those who responded "yes" were then asked to list the drug(s) they had used. Respondents in both the "yes" and "no" categories may also consume alcohol, that is, we did not exclude alcohol use from the data. Level of respondent drug dependence was assessed using the five-item Severity of Dependence Scale (SDS; Gossop et al., 1995). The SDS has previously been found to have high internal consistency (r = .83) and test–retest reliability (intraclass correlation coefficient [ICC] = .88; Martin, Copeland, Gates, & Gilmour, 2006). SDS responses were coded for high dependency (score $\geq$ 11) or low dependency (score $\leq$ 10).

Table 1. Sample Demographics (n = 5,118).

Demographic	*n* (%)
Sex[a]	
Male	2,450 (47.9)
Female	2,652 (51.8)
Age group (years)	
18-25	1,141 (22.3)
26-35	544 (10.6)
36-50	874 (17.1)
51-65	1,446 (28.3)
66+	1,113 (21.7)
Aboriginal or Torres Strait Islander	
Yes	84 (1.6)
No	5,034 (98.4)
Highest level of education	
Year 11 or below	939 (18.3)
Year 12 or equivalent	1,053 (20.6)
Vocational qualification	1,269 (24.8)
Tertiary qualification	1,857 (36.3)
Gross annual household income	
AU$25,000 or less	741 (14.5)
AU$25,001-AU$50,000	1,395 (27.3)
AU$50,001-AU$100,000	1,543 (30.1)
AU$101,000 or above	903 (17.6)
Geographic region[b]	
Metro	3,893 (76.1)
Rural	1,047 (20.5)

[a]16 (0.4%) participants identified as transgender or other. Due to the low *n* in these categories, they were removed from analyses.
[b]178 (3.5%) participants were missing geographic region information.

Drug involvement at most recent violent incident. The survey included questions about the degree to which the respondent and the other person were affected by alcohol or other drugs (including prescription drugs), which drugs were used (open-ended), and whether the respondent believed they had unknowingly consumed drugs (e.g., spiked drink) at the most recent violent incident. Respondents were also asked whether they believed drugs were a cause of the violence they had experienced, and if so, how frequently.

Impact of most recent violent incident. Respondents were asked if they were injured as a result of their most recent incident of violence. They were also

asked to indicate the impact of the most recent incident of violence using a single survey item asking, "On a scale of 1 to 10, how much did the most recent incident affect your life?" (1 = *your life was not affected* to 10 = *your life was extremely affected*).

Analysis

A series of bivariate chi-square tests explored the relationship between sample demographics, violence, and illicit drug use. Next, multivariate logistic regression and negative binomial regression models were used to examine predictors of violence. Power calculations indicated a sample size of 308 was sufficient to achieve minimum power (0.80) and detect modest effect sizes (OR = 1.50). Due to multicollinearity with overall drug use, drug dependence (the binary SDS category) was not entered into multivariate logistic regression models (variance inflation factor [VIF] = 11.20). We opted to include the drug use variable in the modeling to capture a greater proportion of drug users. All analyses were undertaken in SPSS Version 25 (IBM Corporation, 2017).

Results

Descriptive Statistics

Almost half (44.5%) of respondents reported they had experienced violence in their lifetime, with 6.0% ($n = 307$) reporting violence in the past 12 months. Having experienced any violence over the past 12 months was significantly higher among women and younger people, with no differences across income, education, and ATSI groups (see Table 2). For the most recent incident, IPV accounted for 41.8%, FV accounted for 13.1%, and OV accounted for 45.1% of cases. Respondents reported that 92.8% of violent incidents were instigated by another person, and rates of mutual instigation were higher in IPV (4.1%) than in FV (0.7%) and OV (1.7%).

Regarding illicit drug use, 4.9% ($n = 253$) of respondents reported use over the past 12 months. Of those, depressants (e.g., cannabis, opioids) were the most commonly reported drugs of choice (79.1%), with stimulants (e.g., methamphetamines, MDMA) being less common (20.9%). Among respondents with drug use over the past 12 months, 86% were classified as having low dependency and 14% as having high dependency using the SDS. Respondents with no lifetime experience of violence were less likely to have used drugs over the past 12 months (3.2%) than respondents who had experienced violence (8.5%).

At the most recent violent event, 3.4% of respondents reported that they were possibly or definitely under the influence of drugs (light: 1.8%, heavy: 0.5%, unsure: 1.1%), and that 31% of the other people involved in the violence

Table 2. Sample Demographics by Experience of Violence in Past 12 Months (n = 5,118).

	Violence—Past 12 Months		
	Yes *n* (%)	No *n* (%)	Statistic
M age (*SD*)	36.35 (16.72)	48.41 (18.86)	U = 469,812.00***
Age group (years)			
18-25	129 (11.3)	1,012 (88.7)	$\chi^2(1, 5118) = 73.35$***
26-35	50 (9.2)	494 (90.8)	$\chi^2(1, 5118) = 11.00$***
36-50	56 (6.4)	818 (93.6)	$\chi^2(1, 5118) = 0.31$
51-65	50 (3.5)	1,396 (96.5)	$\chi^2(1, 5118) = 23.07$***
66+	22 (2.0)	1,091 (98)	$\chi^2(1, 5118) = 40.80$***
Sex			$\chi^2(1, 5102) = 9.06$**
Male	121 (4.9)	2,329 (95.1)	
Female	184 (6.9)	2,468 (93.1)	
Aboriginal/Torres Strait Islander			$\chi^2(1, 5118) = 0.00$
Yes	5 (6.0)	79 (94)	
No	302 (6.0)	4,732 (94)	
Highest level of education			
Year 11 or below	39 (4.2)	900 (95.8)	$\chi^2(1, 5118) = 6.94$**
Year 12 or equivalent	75 (7.1)	978 (92.9)	$\chi^2(1, 5118) = 0.07$
Vocational qualification	79 (6.1)	1,191 (93.9)	$\chi^2(1, 5118) = 0.07$
Tertiary qualification	117 (6.2)	1,742 (93.8)	$\chi^2(1, 5118) = 0.20$
Gross household income			$\chi^2(3, 4582) = 5.80$
AU$25,000 or less	37 (5.0)	704 (95)	
AU$25,001-AU$50,000	75 (5.4)	1,320 (94.6)	
AU$50,001-AU$100,000	98 (6.4)	1,445 (93.6)	
AU$101,000 or above	67 (7.4)	836 (92.6)	

Note. U = Mann–Whitney U.
*p < .05. **p < .01. ***p < .001.

were possibly or definitely under the influence of drugs (light: 4.5%, heavy: 4.4%, unsure: 22.1%). Regarding their experience of violence, 21.6% of respondents attributed at least some causal responsibility to drugs and 17.2% attributed some causal responsibility to both drugs and alcohol.

Illicit Drug Use And Rates of Violence

Using binary logistic regression, respondents who reported having used any illicit drugs over the previous 12 months were over three times more likely

Table 3. Binary Logistic Regression Model Predicting Experience of Any Violence Over Past 12 Months.

Variable	OR	95% CI
Illicit drug use past 12 months	3.18***	[2.25, 4.48]
Age group (years)		
18-25	5.36***	[3.24, 8.86]
26-35	4.08***	[2.36, 7.08]
36-50	2.89***	[1.70, 4.91]
51-65	1.65	[0.97, 2.79]
65+[a]	1.00	
Sex		
Male	1.00	
Female	1.09	[0.84, 1.41]
Aboriginal/Torres Strait Islander		
No	1.00	
Yes	0.79	[0.31, 2.02]
Highest level education		
Year 11 or below	0.75	[0.49, 1.15]
Year 12 or equivalent	0.98	[0.70, 1.37]
Vocational	1.08	[0.78, 1.49]
Tertiary[a]	1.00	
Gross household income		
AU$25,000 or less	0.85	[0.55, 1.31]
AU$25,001-AU$50,000	1.00	[0.70, 1.44]
AU$50,001-AU$100,000	0.92	[0.66, 1.28]
AU$101,000 or above[a]	1.00	

Note. CI is the confidence interval for odds ratio. OR = odds ratio.
[a]Denotes reference category.
*$p < .05$. **$p < .01$. ***$p < .001$.

to report having experienced any violence over the same period compared with nondrug users, while controlling for demographic variables (Table 3). Similarly, respondents who reported any experience of violence across the lifetime were nearly three times as likely to have used illicit drugs in the past 12 months than those with no lifetime violence, $OR = 2.78$, 95% confidence interval (CI) = [2.16, 3.59], $p < .001$. No significant association was found between participants' predominantly used drug type (depressants or stimulants) and the prevalence of violence.

A negative binomial regression, controlling for specified demographic factors, indicated frequency of violent incidents was substantially higher for those reporting use of illicit drugs over past 12 months ($M = 11.01$, $SD = 71.23$) than

those with no illicit drug use (M = 2.03, SD = 34.59) over the same period, incidence rate ratio (IRR) = 6.33, 95% CI = [2.96, 13.50], $p < .001$.

Drug Involvement Across Violence Types

A 3 × 2 chi-square analysis comparing whether any drugs were involved at the most recent incident between IPV, FV, and OV was significant, $\chi^2(2, 2278) = 12.63$, $p = .002$. After correcting for multiple comparisons using False Discovery Rate (Benjamini & Hochberg, 1995), three post hoc 2 × 2 chi-square analyses showed no significant difference between IPV and FV. However, both IPV and FV were more likely to have drug involvement than OV, IPV compared with OV: $\chi^2(1, 1979) = 11.99$, $p = .001$; FV compared with OV: $\chi^2(1, 1979) = 4.70$, $p = .030$. Drug involvement in FDV (IPV or FV) was 1.65 times greater than in OV, 95% CI = [1.25, 2.19].

Demographic Correlates of Drug Involvement at Most Recent FDV Incident

A logistic regression examining demographic correlates of any drug involvement at the most recent FDV incident (i.e., drug use by respondent, other person, or both parties at IPV and FV incidents) indicated age group was a significant predictor of drug involvement; younger age groups had significantly higher odds of drug involvement at the most recent FDV incident than those over 65 years of age (Table 4).

Relationship Between Drug Use at FDV Incident and Severity of Consequences

Within FDV incidents, drug involvement at the most recent incident was associated with over twice the odds of injury for the respondent (OR = 2.38, 95% CI = [1.67, 3.38], $p < .001$). Similarly, self-reported life impact of the most recent FDV incident was significantly associated with drug involvement (U = 73,023.00, $p = .002$, $r = .86$); the mean life impact rating was higher in the drugs-involved (M = 6.71, SD = 2.84) than the no drugs-involved (M = 5.93, SD = 3.02) FDV group.

Discussion

This study examined whether demographic factors were associated with drug involvement in FDV incidents and whether drug use predicts rates of violence, different types of violence (IPV, FV, and OV), and differences in

Table 4. Binary Logistic Regression Model of Demographic Correlates of Drug Involvement (Respondent, Other Person, or Both) at Most Recent FDV Incident.

Variable	OR	95% CI
Age group (years)		
18-25	2.87**	[1.44, 5.70]
26-35	2.79**	[1.30, 6.00]
36-50	2.26**	[1.14, 4.47]
51-65	1.28	[0.66, 2.50]
66+[a]	1.00	
Sex		
Male	1.00	
Female	1.37	[0.88, 2.13]
Aboriginal/Torres Strait Islander		
No	1.00	
Yes	0.84	[0.28, 2.48]
Highest level education		
Year 11 or below	0.90	[0.53, 1.54]
Year 12 or equivalent	1.01	[0.60, 1.71]
Vocational qualification	1.10	[0.70, 1.73]
Tertiary qualification[a]	1.00	
Gross household income		
AU$25,000 or less	1.53	[0.85, 2.76]
AU$25,001-AU$50,000	0.94	[0.53, 1.64]
AU$50,001-AU$100,000	1.03	[0.61, 1.75]
AU$101,000 or above[a]	1.00	

Note. CI is the confidence interval for odds ratio. OR = odds ratio; FDV = family and domestic violence.
[a]Denotes reference category.
*$p < .05$. **$p < .01$. ***$p < .001$.

violence severity. We found that past 12 month illicit drug use, regardless of drug type used (stimulant or depressant), was associated with three times the odds of reporting past 12 month violence and six times the frequency of violent incidents. The lack of difference in impact by drug type indicates that it may be simply drug use per se, rather than whether an illicit substance is activating or sedating, which is the important contributing factor to FDV. We also found a stronger association between illicit drug use and experiences of FDV incidents than OV. Illicit drug involvement at the most recent incident of violence was also associated with an increased risk of related consequences.

Demographics, Illicit Drug Use, and FDV

In line with previous research (e.g., Australian Bureau of Statistics, 2017; Grande, Hickling, Taylor, & Woollacott, 2003), demographic factors found to increase the risk of FDV incidents in the last 12 months included being female and within younger age groups (i.e., 18-35 years). However, when examining drug involvement at the most recent incident, only age was a significant factor; drug involvement at the most recent FDV incident was more likely among younger respondents, with no impact of gender. This may be due to the nature of the sample, or it may simply be that situational illicit drug use increases the risk for experiencing violence in both men and women (Australian Institute of Health and Welfare, 2017b; Loxley & Adams, 2009). No other demographic differences (i.e., ATSI heritage, education level, or income) were found in regard to both illicit drug use and the involvement of drugs at the most recent incident of FDV. This is contrary to research indicating higher levels of alcohol and other drug consumption, and related harms, among Indigenous populations (e.g., Gray & Wilkes, 2010), however, recent data suggests the gap in illicit drug use may be closing (Australian Institute of Health and Welfare, 2017a).

Illicit Drug Use at Most Recent Violent Incident

The current findings indicating an association between illicit drug use and an increased likelihood of violence are consistent with previous literature (e.g., Choenni et al., 2017). Also in line with a recent meta-analysis (Cafferky et al., 2018), drug type did not appear to affect the occurrence of violence. It may be speculated that personality variables (e.g., impulsivity [Kreek, Nielsen, Butelman, & LaForge, 2005] or narcissism [Cohen, Chen, Crawford, Brook, & Gordon, 2007]), or social variables (e.g., socioeconomic status or ease of access to illicit drugs) associated with drug use could moderate the experiences of violent incidents when drug use is involved. However, further research is required.

A novel finding from our study is the stronger association found between drug use and FV and IPV compared with that found for OV incidents. This finding indicates that drug use may be particularly problematic in FDV contexts. Further research is needed to determine whether drug use precedes FDV incidents or influences risk of violence through other modifiable factors. For instance, one study found that substance misuse mediated a link between high impulsivity and both psychological and physical IPV (Stuart & Holtzworth-Munroe, 2005). Furthermore, our research supports previous

findings that the relationship between FDV incidents and drug use is likely to be reciprocal (e.g., El-Bassel et al., 2005; Kilpatrick et al., 1997; Testa et al., 2003). We found that having a lifetime experience of violence more than doubled the odds of using illicit drugs.

Drug involvement at the most recent incident more than doubled the odds of being injured during that incident and was associated with increased ratings of general negative impact on life. These findings are consistent with prior research on injury due to FDV (Cunradi, Caetano, & Schafer, 2002; Kyriacou et al., 1999; Weaver, Gilbert, El-Bassel, Resnick Heidi, & Noursi, 2015) and could be associated with the relative behavioral disinhibition and impulsivity experienced under the influence of certain drugs, or when experiencing withdrawal and cravings (De Wit, 2009; Gilchrist et al., 2019; Pedersen, 1991).

Policy and Practice Implications

Although numerous factors have been shown to influence the prevalence and severity of FDV, drug use is one factor that can be modified at both an individual and a social level, for all persons involved in FDV incidents. However, there is a scarcity of empirical work at the intersection of drug use and FDV that can inform both the acute response (e.g., police) and longer term intervention policies to reduce violence. This study addressed a number of research gaps important to policy and intervention development. It is an important contribution to the literature, investigating the relationship between drug use and FDV in the Australian general population. It highlights some of the key demographic factors that predict drug involvement in FDV, and the important differences in rates and consequences of violence as a function of drug use.

Given the substantial exacerbation of FDV in the context of drug use as found in this study, one general recommendation is for policy that advocates for interventions that address both drug use and violence in combination, where indicated in case history (Crane & Easton, 2017; Gilchrist & Hegarty, 2017). In light of the association between drug use and high recidivism rates (Miller et al., 2016), another possible approach that could be effective is attaching mandatory sobriety to sentencing and community orders, enforced through regular monitoring and testing (Hawken & Kleiman, 2009; Kilmer, Nicosia, Heaton, & Midgette, 2013). Treatment and policy development would benefit from a clearer picture of the temporal associations between substance use and FDV that address current debates about "causality," along with identifying crucial early intervention signals.

Limitations and Future Directions

The study sample, while being representative of the Australian population on a number of key criteria, was still biased toward people who had access to a computer or mobile device with Internet, were English literate, and were members of the online panel company. Therefore, this study may have fewer individuals who were homeless, incarcerated, or new migrants or those with low socioeconomic status or educational levels. However, steps were taken to gain a representative sample. The data from this study are also limited by the usual recall and self-report biases, which can be further exacerbated by substance use/abuse, and experiencing violence. Also, while the survey did not distinguish between victim and perpetrator, many of the questions were biased toward the victim, and for some questions, toward known others (e.g., if the other person was a stranger, it may be difficult to report their drug consumption). Previous research has also found a stronger link between IPV perpetration and problematic drug use than drug consumption per se (Cafferky et al., 2018). Given the very small sample of dependent substance users in this study ($n = 38$), we could only assess the link between violence and illicit drug consumption. Furthermore, it may be that the sample did not capture more severe cases (e.g., comorbid drug use and mental illness), either for the respondent or the other person involved in the incident. Further research is required which specifically targets this more at risk group.

Prospective longitudinal studies are well suited to establishing the developmental, situational, and personal factors—including substance use—that contribute to both perpetration and victimization within FDV. Detailed studies are also warranted into specific populations such as homeless people, children seeking support, and drug treatment participants. Such an approach would be aided through systematic data collection and data linking, for example, linkage of police (Menéndez, Tusell, & Weatherburn, 2015; Wiggers et al., 2004), ambulance, and emergency department data (Shepherd, Ali, Hughes, & Levers, 1993; Shepherd, Shapland, & Scully, 1989; Shepherd, Sivarajasingam, & Rivara, 2000).

Conclusion

The current study highlights the substantial role of drug use in FDV in the Australian general population, both in the longer term and during violent incidents. The findings here suggest that this link may be most pronounced in younger adults, also further investigation is required. Future research, intervention development, and broader policy changes that specifically target the association between drug use and FDV should be pursued.

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References

Australian Bureau of Statistics. (2014). *3235.0—Population by age and sex, regions of Australia, 2014*. Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3235.02014?OpenDocument

Australian Bureau of Statistics. (2017). *Personal Safety Survey 2016* (ABS Cat. No. 4906.0). Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/mf/4906.0

Australian Institute of Health and Welfare. (2017a). *National Drug Strategy Household Survey 2016: Detailed findings*. Canberra: Author.

Australian Institute of Health and Welfare. (2017b). *National Drug Strategy Household Survey 2016: Overview chapter*. Canberra: Author.

Australian Institute of Health and Welfare. (2018). *Family, domestic and sexual violence in Australia*. Retrieved from www.aihw.gov.au/reports/domestic-violence/family-domestic-sexual-violence-in-australia-2018/contents/table-of-contents

Ayre, J., Gourley, M., On, M. L., Webster, K., & Moon, L. (2016). *Examination of the burden of disease of disease of intimate partner violence against women in 2011*. Sydney, New South Wales: Australia's National Research Organisation for Women's Safety.

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society. Series B (Methodological)*, *57*, 289-300. doi:10.1111/j.2517-6161.1995.tb02031.x

Bensimon, M., & Ronel, N. (2012). The flywheel effect of intimate partner violence: A victim–perpetrator interactive spin. *Aggression and Violent Behavior*, *17*, 423-429. doi:10.1016/j.avb.2012.05.004

Boles, S. M., & Miotto, K. (2003). Substance abuse and violence: A review of the literature. *Aggression and Violent Behavior*, *8*, 155-174. doi:10.1016/S1359-1789(01)00057-X

Bonomi, A. E., Thompson, R. S., Anderson, M., Reid, R. J., Carrell, D., Dimer, J. A., & Rivara, F. P. (2006). Intimate partner violence and women's physical, mental, and social functioning. *American Journal of Preventive Medicine*, *30*, 458-466. doi:10.1016/j.amepre.2006.01.015

Cafferky, B. M., Mendez, M., Anderson, J. R., & Stith, S. M. (2018). Substance use and intimate partner violence: A meta-analytic review. *Psychology of Violence*, *8*, 110-131. doi:10.1037/vio0000074

Campbell, J. C. (2002). Health consequences of intimate partner violence. *The Lancet*, *359*, 1331-1336. doi:10.1016/S0140-6736(02)08336-8

Chan, A., & Payne, J. (2013). *Homicide in Australia: 2008-09 to 2009-10 national homicide monitoring program annual report*. Canberra: Australian Institute of Criminology. Retrieved from www.aic.gov.au/publications/mr/mr21

Choenni, V., Hammink, A., & van de Mheen, D. (2017). Association between substance use and the perpetration of family violence in industrialized countries: A systematic review. *Trauma, Violence, & Abuse*, *18*, 37-50. doi:10.1177/1524838015589253

Cohen, P., Chen, H., Crawford, T. N., Brook, J. S., & Gordon, K. (2007). Personality disorders in early adolescence and the development of later substance use disorders in the general population. *Drug and Alcohol Dependence*, *88*, S71-S84. doi:10.1016/j.drugalcdep.2006.12.012

Crane, C. A., & Easton, C. J. (2017). Integrated treatment options for male perpetrators of intimate partner violence. *Drug and Alcohol Review*, *36*, 24-33. doi:10.1111/dar.12496

Cunradi, C. B., Caetano, R., & Schafer, J. (2002). Alcohol-related problems, drug use, and male intimate partner violence severity among US couples. *Alcoholism: Clinical and Experimental Research*, *26*, 493-500. doi:10.1111/j.1530-0277.2002.tb02566.x

Dearden, J., & Payne, J. (2009). Alcohol and homicide in Australia. *Trends & Issues in Crime and Criminal Justice*, 1. Retrieved from https://aic.gov.au/publications/tandi/tandi372

De Wit, H. (2009). Impulsivity as a determinant and consequence of drug use: A review of underlying processes. *Addiction Biology*, *14*, 22-31. doi:10.1111/j.1369-1600.2008.00129.x

El-Bassel, N., Gilbert, L., Wu, E., Go, H., & Hill, J. (2005). Relationship between drug abuse and intimate partner violence: A longitudinal study among women receiving methadone. *American Journal of Public Health*, *95*, 465-470. doi:10.2105/AJPH.2003.023200

Ellsberg, M., Jansen, H. A., Heise, L., Watts, C. H., & Garcia-Moreno, C. (2008). Intimate partner violence and women's physical and mental health in the WHO

multi-country study on women's health and domestic violence: An observational study. *The Lancet*, *371*, 1165-1172. doi:10.1016/S0140-6736(08)60522-X

Evans, S. E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior*, *13*, 131-140. doi:10.1016/j.avb.2008.02.005

Fischbach, R. L., & Herbert, B. (1997). Domestic violence and mental health: Correlates and conundrums within and across cultures. *Social Science & Medicine*, *45*, 1161-1176. doi:10.1016/S0277-9536(97)00022-1

Gilchrist, G., Blazquez, A., Segura, L., Geldschläger, H., Valls, E., Colom, J., & Torrens, M. (2015). Factors associated with physical or sexual intimate partner violence perpetration by men attending substance misuse treatment in Catalunya: A mixed methods study. *Criminal Behaviour and Mental Health*, *25*, 239-257. doi:10.1002/cbm.1958

Gilchrist, G., Dennis, F., Radcliffe, P., Henderson, J., Howard, L. M., & Gadd, D. (2019). The interplay between substance use and intimate partner violence perpetration: A meta-ethnography. *International Journal of Drug Policy*, *65*, 8-23. doi:10.1016/j.drugpo.2018.12.009

Gilchrist, G., & Hegarty, K. (2017). Tailored integrated interventions for intimate partner violence and substance use are urgently needed. *Drug and Alcohol Review*, *36*, 3-6. doi:10.1111/dar.12526

Gilchrist, G., Radcliffe, P., Noto, A. R., & d'Oliveira, A. F. P. L. (2017). The prevalence and factors associated with ever perpetrating intimate partner violence by men receiving substance use treatment in Brazil and England: A cross-cultural comparison. *Drug and Alcohol Review*, *36*, 34-51.

Gossop, M., Darke, S., Griffiths, P., Hando, J., Powis, B., Hall, W., & Strang, J. (1995). The severity of dependence scale (SDS): Psychometric properties of the SDS in English and Australian samples of heroin, cocaine and amphetamine users. *Addiction*, *90*, 607-614. doi:10.1046/j.1360-0443.1995.9056072.x

Graham, K., Wilson, I., & Taft, A. (2017). The broader context of preventing alcohol-related intimate partner violence. *Drug and Alcohol Review*, *36*, 10-12. doi:0.1111/dar.12422

Grande, E. D., Hickling, J., Taylor, A., & Woollacott, T. (2003). Domestic violence in South Australia: A population survey of males and females. *Australian and New Zealand Journal of Public Health*, *27*, 543-550. doi:10.1111/j.1467-842X.2003.tb00831.x

Gray, D., & Wilkes, E. (2010). *Reducing alcohol and other drug related harm* (Resource Sheet No. 3). Retrieved from https://espace.curtin.edu.au/bitstream/handle/20.500.11937/15822/159786_26511_GrayWilkesReducing%20alcohol%20and%20other%20drug%20related%20harmCTGCH.pdf?sequence=2

Hawken, A., & Kleiman, M. (2009). *Managing drug involved probationers with swift and certain sanctions: Evaluating Hawaii's HOPE: Executive summary*. Washington, DC: National Criminal Justice Reference Services.

Hays, R. D., Liu, H., & Kapteyn, A. (2015). Use of internet panels to conduct surveys. *Behavior Research Methods*, *47*, 685-690.

IBM Corporation. (2017). IBM SPSS Statistics for Windows (Version 25.0). Armonk, NY: Author.

Jaspard, M., Brown, E., Condon, S., Fougeyrollas-Schwebel, D., Houel, A., Lhomond, B., & Schiltz, M. (2003). *Les violences envers les femmes. Une enquête nationale*. Paris, France: La documentation française.

Kilmer, B., Nicosia, N., Heaton, P., & Midgette, G. (2013). Efficacy of frequent monitoring with swift, certain, and modest sanctions for violations: Insights from South Dakota's 24/7 Sobriety Project. *American Journal of Public Health*, *103*, e37-e43. doi:10.2105/AJPH.2012.300989

Kilpatrick, D. G., Acierno, R., Resnick, H. S., Saunders, B. E., & Best, C. L. (1997). A 2-year longitudinal analysis of the relationships between violent assault and substance use in women. *Journal of Consulting and Clinical Psychology*, *65*, 834-847.

Kreek, M. J., Nielsen, D. A., Butelman, E. R., & LaForge, K. S. (2005). Genetic influences on impulsivity, risk taking, stress responsivity and vulnerability to drug abuse and addiction. *Nature Neuroscience*, *8*, 1450-1457. doi:10.1038/nn1583

Kyriacou, D. N., Anglin, D., Taliaferro, E., Stone, S., Tubb, T., Linden, J. A., & Kraus, J. F. (1999). Risk factors for injury to women from domestic violence. *New England Journal of Medicine*, *341*, 1892-1898. doi:10.1056/NEJM199912163412505

Laslett, A. M., Mugavin, J., Jiang, H., Manton, E., Callinan, S., MacLean, S., & Room, R. (2015). *The hidden harm: Alcohol's impact on children and families*. Canberra, Australian Capital Territory, Australia: Foundation for Alcohol Research and Education. Retrieved from www.fare.org.au/the-hidden-harm-alcohols-impact-on-children-and-families

Laslett, A. M., Room, R., Ferris, J., Wilkinson, C., Livingston, M., & Mugavin, J. (2011). Surveying the range and magnitude of alcohol's harm to others in Australia. *Addiction*, *106*, 1603-1611. doi:10.1111/j.1360-0443.2011.03445.x

Leonard, K. E. (2005). Alcohol and intimate partner violence: When can we say that heavy drinking is a contributing cause of violence? *Addiction*, *100*, 422-425. doi:10.1111/j.1360-0443.2005.00994.x

Loxley, W., & Adams, K. (2009). *Women, drug use and crime: Findings from the drug use monitoring in Australia program*. Canberra: Australian Institute of Criminology.

Martin, G., Copeland, J., Gates, P., & Gilmour, S. (2006). The severity of dependence scale (SDS) in an adolescent population of cannabis users: Reliability, validity and diagnostic cut-off. *Drug and Alcohol Dependence*, 83, 90-93. doi:10.1016/j.drugalcdep.2005.10.014

Menéndez, P., Tusell, F., & Weatherburn, D. (2015). The effects of liquor licensing restriction on alcohol-related violence in NSW, 2008–13. *Addiction*, *110*, 1574-1582. doi:10.1111/add.12951

Miller, P., Bruno, R., Morgan, A., Mayshak, R., Cox, E., Coomber, K., & Voce, I. (2016). *Drug and alcohol intoxication and subsequent harm in night-time entertainment districts (DASHED)*. Canberra, Australian Capital Territory, Australia: National Drug Law Enforcement Research Fund.

Mitchell, L. (2011). *Domestic violence in Australia: An overview of the issues*. Canberra: Parliament of Australia. Retrieved from www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/2011-2012/DVAustralia

Mouzos, J., & Makkai, T. (2004). *Women's experiences of male violence: Findings from the Australian component of the international violence against women survey (IVAWS)*. Canberra: Australian Institute of Criminology. Retrieved from www.aic.gov.au/publications/rpp/rpp56

Pedersen, W. (1991). Mental health, sensation seeking and drug use patterns: A longitudinal study. *British Journal of Addiction*, *86*, 195-204. doi:10.1111/j.1360-0443.1991.tb01769.x

Phillips, J., & Vandenbroek, P. (2014). *Domestic, family and sexual violence in Australia: An overview of the issues*. Retrieved from www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1415/ViolenceAust

Radcliffe, P., & Gilchrist, G. (2016). "You can never work with addictions in isolation": Addressing intimate partner violence perpetration by men in substance misuse treatment. *International Journal of Drug Policy*, *36*, 130-140. doi:10.1016/j.drugpo.2016.03.010

Romito, P., Turan, J. M., & De Marchi, M. (2005). The impact of current and past interpersonal violence on women's mental health. *Social Science & Medicine*, *60*, 1717-1727. doi:10.1016/j.socscimed.2004.08.026

Shepherd, J., Ali, M., Hughes, A., & Levers, B. (1993). Trends in urban violence: A comparison of accident department and police records. *Journal of the Royal Society of Medicine*, *86*, 87-88.

Shepherd, J., Shapland, M., & Scully, C. (1989). Recording by the police of violent offences; an accident and emergency department perspective. *Medicine, Science and the Law*, *29*, 251-257. doi:10.1177/002580248902900311

Shepherd, J., Sivarajasingam, V., & Rivara, F. P. (2000). Using injury data for violence prevention: Government proposal is an important step towards safer communities. *BMJ: British Medical Journal*, *321*, 1481-1482. doi:10.1136/bmj.321.7275.1481

Smith, P. H., Homish, G. G., Leonard, K. E., & Cornelius, J. R. (2012). Intimate partner violence and specific substance use disorders: Findings from the national epidemiologic survey on alcohol and related conditions. *Psychology of Addictive Behaviors*, *26*, 236-245. doi:10.1037/a0024855

Stark, E., & Flitcraft, A. (1996). *Women at risk*. Thousand Oaks, CA: SAGE.

Stuart, G. L., & Holtzworth-Munroe, A. (2005). Testing a theoretical model of the relationship between impulsivity, mediating variables, and husband violence. *Journal of Family Violence*, *20*, 291-303. doi:10.1007/s10896-005-6605-6

Stuart, G. L., Moore, T. M., Elkins, S. R., O'Farrell, T. J., Temple, J. R., Ramsey, S. E., & Shorey, R. C. (2013). The temporal association between substance use and intimate partner violence among women arrested for domestic violence. *Journal of Consulting and Clinical Psychology*, *81*, 681-690.

Stuart, G. L., Temple, J. R., Follansbee, K. W., Bucossi, M. M., Hellmuth, J. C., & Moore, T. M. (2008). The role of drug use in a conceptual model of intimate partner violence in men and women arrested for domestic violence. *Psychology of Addictive Behaviors*, *22*, 12-24. doi:10.1037/0893-164X.22.1.12

Testa, M., Livingston, J. A., & Leonard, K. E. (2003). Women's substance use and experiences of intimate partner violence: A longitudinal investigation among a community sample. *Addictive Behaviors*, *28*, 1649-1664.

Wall, L., & Quadara, A. (2014). *Under the influence? Considering the role of alcohol and sexual assault in social contexts*. Retrieved from www.aifs.gov.au/publications/under-influence

Weaver, T. L., Gilbert, L., El-Bassel, N., Resnick Heidi, S., & Noursi, S. (2015). Identifying and intervening with substance-using women exposed to intimate partner violence: Phenomenology, comorbidities, and integrated approaches within primary care and other agency settings. *Journal of Women's Health*, *24*, 51-56. doi:10.1089/jwh.2014.4866

Wiggers, J., Jauncey, M., Considine, R., Daly, J., Kingsland, M., Purss, K., & Waites, R. J. (2004). Strategies and outcomes in translating alcohol harm reduction research into practice: the Alcohol Linking Program. *Drug and Alcohol Review*, *23*, 355-364.

World Health Organization. (2013). *Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence*. Retrieved from www.who.int/reproductivehealth/publications/violence/9789241564625/en/

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