

Family violence, alcohol consumption and the likelihood of criminal offences

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Alcohol is involved in a substantial number of family violence incidents recorded by police. However, there is a paucity of Australian research on the relative contribution of alcohol use by perpetrators and/or victims to whether or not the incident results in the perpetrator being arrested for or charged with a criminal offence. This study involved statistical analysis of a sample of 121,251 family violence incidents recorded by Victoria Police over a two-year period from 2014 to 2015. Twelve percent of incidents were noted by police as involving only perpetrator alcohol use, two percent were noted as involving only victim alcohol use and eight percent were noted as involving alcohol use by both parties. A regression model was constructed to examine the contribution of alcohol involvement to predicting whether a criminal offence will be recorded, controlling for other factors known to be related to whether a perpetrator is arrested. Perpetrator alcohol use was not found to contribute to predicting whether an offence would be recorded, while incidents where victims used alcohol and where both parties used alcohol were less likely to have an offence recorded.

Keywords: family violence, domestic violence, alcohol consumption, criminal offending, arrests, charges.

Introduction

Family violence continues to be an issue of major concern for the Victorian community. The number of family violence incidents recorded by Victoria Police continues to increase, reaching 78,012 in the year ending July 2016 (Crime Statistics Agency, 2016). The recent Royal Commission into Family Violence acknowledged alcohol as a notable risk factor in the context of family violence offending (State of Victoria, 2016). The Commission heard testimony from experts in the field, who reported that "...a combination of drug and alcohol issues and violence-supportive attitudes can exacerbate the severity of physical violence and the psychological harm that occurs" but that "alcohol is not the only or even the primary determinant of whether violence will occur, and alcohol's influence on individuals is not uniform" (p. 249).

Prior research indicates that alcohol is involved in a substantial proportion of family, intimate partner and/or domestic violence incidents. Analysis of data from the Australian Bureau of Statistics (ABS) Personal Safety Survey estimates that alcohol is involved in 50% of all partner violence and 73% of partner physical assaults (Laslett et al., 2010) and the Australian component of the International Violence Against Women Survey found that one in three violent incidents reported by survey participants were alcohol-related (Mouzos and Makkai, 2004).

Given the prevalence of alcohol use in incidents of family violence that come to the attention of the criminal justice system, a number of researchers have considered the extent to which alcohol involvement may impact on criminal justice outcomes for perpetrators and victims. The role that alcohol may play in incidents and their resolution has also been considered. Hirschel and Hutchison (2011) astutely summarised that "unravelling the many factors that contribute to the commission of intimate partner violence and the likelihood of arrest for an act of violence is a complex process" (p. 3051). The research evidence about the extent to which alcohol involvement is associated with

criminal justice outcomes for incidents of family violence is sparse and mixed. Where they have been conducted, studies in this area have focused on intimate partner violence only, have not differentiated alcohol use from the use of other substances and are almost exclusively conducted using American samples. As noted in Hirschel and Hutchison's (2011) review, many studies have failed to differentiate between the alcohol use of perpetrators and/or victims, and have not considered the contribution of alcohol relative to other contributing factors that affect criminal justice outcomes, such as investigation, assessment of whether a criminal offence has occurred within the context of a family conflict event and whether charges will be laid.

Conflicting results have arisen in relation to whether perpetrator alcohol use increases the likelihood of arrest. The majority of the small number of studies conducted indicate that where police believe male perpetrators have been drinking, they are more likely to make an arrest (Baird and Clayton 2002; Durfee, 2012; Eitle, 2005; Hamilton and Worther, 2011; Hoyle, 1998; Logan, Walker and Leukefeld 2001). On the other hand, one study of 1,123 cases across 19 jurisdictions in three US states identified that offender substance use did not impact on the extent to which an arrest was made (Hirschel, Hutchison and Shaw, 2010). No studies were identified that examined the impact of alcohol on the arrest of female perpetrators but this may be due to low numbers of females identified as primary aggressors (Henning, Renauer, and Holdford, 2006).

Even fewer studies have been conducted in relation to the impact of victim substance use on police decisions to make an arrest in family violence cases. In their analysis of 229 intimate partner violence cases that occurred in 1997-1998 in the United States, Robinson and Chandek (2000a) found that where they thought victims had substance abuse issues, police perceived victims as less cooperative. However this was not statistically related to their decision to make an arrest. In a further study, these authors found that perception of victim substance use issues did affect the likelihood of arrest but that this relationship was moderated by the victim's ethnicity (Robinson and Chandek, 2000b). Similarly, Hirschel and Hutchison (2011) studied 2,295 cases across four US states and found that where only the victim had been drinking, police were more than two times less likely to arrest an offender.

Some researchers have found that incidents where both the victim and the offender have used alcohol constitute a larger proportion compared to those where only one party has been drinking (Feder and Henning, 2005). However, only one study was identified that examined family violence incidents where both parties have used alcohol, and how this influenced whether an arrest was made (Hirschel and Hutchison, 2011). This research controlled for a number of other factors that have been shown to influence arrest decisions including: offender sex, race, age, history of violence and presence at the scene; presence of a minor or weapon; whether the victim was injured; who called the police; and, whether the incident took place in a state that has primary aggressor or mandatory arrest laws or policies. It found that the use of alcohol by both parties had no impact on the likelihood of an arrest being made.

Definition and recognition of family violence and policing practices vary greatly across countries and jurisdictions, and most studies identified have come from the United States. Only one Australian study appears to have been undertaken in this area by Stewart and Maddren in 1997. Their research involved eliciting the judgements of 97 Queensland Police officers in response to one of eight vignettes of family violence scenarios. They found that the level of blame attributed to victims was higher for 'drunk' victims than 'sober' victims, and that more blame was attributed to drunk perpetrators when victims were sober than to a sober perpetrator when victims were drunk. However, this research also identified that police officers' assessments of whether they would charge a perpetrator were not affected by the blame attributions they made, though the authors acknowledge that "expressed behavioural intentions are weak and unreliable guides to behaviour" (p.931).

Given the relative lack of studies that differentiate between the alcohol use of perpetrators and/or victims, and the dearth of recent Australian studies based on actual recorded incidents of family violence, the present study seeks to

examine whether alcohol involvement in family violence incidents is associated with criminal offence outcomes, controlling for other relevant factors. This study will also consider a broad range of family relationships in addition to those between intimate partners and will attempt to differentiate the use of alcohol from other substances. Such research can have implications for understanding the complexity of family violence incidents responded to by police, which in turn can inform police training and education, resulting in improved outcomes for victims.

Method

Data

This study used data about alleged family violence incidents as recorded by Victoria Police over a two-year period from 1 January 2014 to 31 December 2015, an alleged family violence incident was counted wherever police completed an L17 Risk Assessment and Risk Management report form (referred to as the L17 form). The Victoria Police Code of Practice for the Investigation of Family Violence states that police complete the form for all family incidents, interfamilial-related sexual offences and instances of child abuse reported to them, and that prior to leaving the scene of a family incident, police officers must collect 'all the information needed to complete the Family Violence Risk Assessment and Risk Management Report' (Victoria Police, 2014: p.10). The data was extracted by Victoria Police and provided to the Crime Statistics Agency on 18 July 2016. The two-year period ending December 2015 was selected to ensure that incidents and offences recorded by police had sufficient time to be investigated and have final outcomes and charges recorded where deemed appropriate. Over the two-year period from 1 January 2014 to 31 December 2015, 187,616 family violence incidents were recorded. Of these, 9,456 incidents were removed because data items about perpetrators were missing and so it was not possible to determine whether police identified a perpetrator, what the relevant characteristics of that perpetrator were, or whether the perpetrator went on to be recorded for a criminal offence.

The recording of a family violence incident does not necessarily mean that police proceed to charge the alleged perpetrator with an offence, and so, for the purposes of this research, information about offences recorded were linked to family violence incidents using the sub-incident ID numbers generated by LEAP. Further, while all offences recorded by police have an outcome recorded based on the action taken by police in response to the offence (for example arrest, caution, or summons), regardless of this outcome the perpetrator may not go on to be formally charged. There are various reasons as to why an arrest might be recorded as the outcome but no charges formally laid, but one reason is the view that there is insufficient evidence available to secure a conviction.

The L17 form provides for police to record whether they believe either the perpetrator or the victim was under the influence of alcohol at the time of the family violence incident, along with whether a range of other perpetrator, victim and relationship level risk factors were present. There are options for flagging either party as 'Alcohol use definite', or 'Alcohol use possible'. Cases where alcohol use was flagged as 'definite', are used throughout this report to define either perpetrator or victim alcohol use. Given that the purpose of this analysis was to examine the impact of alcohol on family violence incidents, it was deemed necessary to remove any cases where the officer completing the form was uncertain about the involvement of alcohol. Overall, 39,012 incidents were flagged as having possible alcohol involvement: officers indicated possible alcohol use by the perpetrator in 19,323 incidents, by victims in 9,196 incidents, and by both parties in 10,493 incidents.

A police officer may also note that they believe either the perpetrator or victim is possibly or definitely under the influence of illicit drugs. Given that this research aims to explore the relationship between alcohol and family violence, and it can be difficult to differentiate the effects of alcohol on behaviour from the effects of other drugs on behaviour, incidents involving definite or possible drug use were also removed from the analysis. This resulted in the

removal of a further 17,897 incidents. Nevertheless, the final number of family violence incidents used for the analysis was 121,251.

For the purpose of this report, perpetrators are defined as those recorded by police as 'Other Parties' on the L17 form, and victims are defined as those recorded by police as 'Affected Family Members'. It should also be noted that references to perpetrators and incidents refer to alleged rather than proven perpetrators and incidents. References to recorded outcomes arising from family violence incidents also refer to alleged rather than proven offences as the CSA does not hold court outcome data regarding whether offences recorded by police go on to be proven in court.

Statistical analyses

Chi-square analyses (indicated by the symbol: χ^2) were used to statistically compare the characteristics of incidents involving noted perpetrator alcohol use only, victim alcohol use only, alcohol use by both parties and alcohol use by neither party. They were also used to examine whether there were bivariate relationships between potential predictors of a criminal offence being recorded as a result of a family violence incident (including perpetrator and victim characteristics, perpetrators' recorded family violence histories and a range risk factors recorded by police) and whether or not an offence was actually recorded. Where the significance level (indicated by the symbol p) is less than .05, this indicates that there was a statistically significant relationship between the predictor variable being tested and recidivism. The closer the significance level is to zero, the less likely it is that the results of the statistical test presented could have occurred by chance, or conversely, the more likely it is that the results represent true relationships between factors tested and recidivism in the population, as opposed to random variation in the data.

Following these initial chi-square analyses, potential predictors that had a statistically significant bivariate relationship with recidivism (at the $p < .05$ level) were included in a binomial logistic regression model. This overall model was used to determine which combination of explanatory factors is most useful in determining whether or not an offence will be recorded for the perpetrator, how likely it is that this combination of factors will correctly identify incidents where an offence was and was not recorded, and the contribution of alcohol involvement to this prediction.

Results

Of the 121,251 family violence incidents recorded by police over the two-year analysis period, 25,736 incidents (21.2%) were flagged for some form of definite alcohol use. Overall, 11.6% involved noted alcohol use by the perpetrator but not the victim ($n=14,017$), 1.7% ($n=2,055$) involved noted alcohol use by the victim but not the perpetrator, 8.0% ($n=9,664$) involved both perpetrator and victim alcohol use. The remaining 78.8% ($n=95,515$) of incidents did not involve any recorded alcohol use.

Characteristics of family violence incidents involving recorded alcohol use

The characteristics of incidents that did and did not involve definite alcohol use noted by police are detailed in Table 1, including victim and perpetrator age and sex and a range of risk factors recorded by police.

In summary:

- Alcohol use by either or both parties tended to be associated with older perpetrator age: where incidents involved alcohol use by the perpetrator, perpetrators were more likely to be aged 30 or older and less likely to be aged under 30; victim alcohol use was most common where perpetrators were aged 50 or older; where alcohol use was recorded for both parties, perpetrators were more likely to be aged over 40 and less likely to be aged under 30. On the other hand, where alcohol was not involved in the incident, perpetrators were more likely to be aged under 30 and less likely to be aged 30 or older.

- Where perpetrator alcohol use was recorded, perpetrators were statistically more likely to be males (82.9% male). They were least likely to be male where victim alcohol use was recorded: 72.9% were males in these situations. There were no statistical differences in perpetrator gender where both had used alcohol (78.8% were male, compared to 78.9% for the overall sample).
- Where either perpetrators or both perpetrators and victims were recorded for alcohol use, the perpetrator was more likely to have been recorded for a previous family violence incident. Where the victim or neither were recorded for alcohol use, the perpetrator was less likely to be recorded for a previous family violence incident.
- Across all of the categories that involved alcohol use, victims were less likely to be aged under 30. Perpetrator alcohol use was associated with an increased likelihood of the victim being aged 50 or older, victim alcohol use was associated with an increased likelihood of the victim being aged 40 or older and both parties' alcohol use was associated with an increased likelihood of the victim being aged 30 or older. Conversely, where no alcohol involvement was recorded, victims were more likely to be under 30 and less likely to be 40 or older.
- Males were more likely to be recorded as the victim in incidents where either the victim or both parties had recorded alcohol use (31.6% males and 26.7% males respectively), while females were more likely to be recorded as the victim where either the perpetrator or neither party had recorded alcohol use (79.8% and 77.8% females respectively).
- Where both parties had used alcohol, the relationship between the perpetrator and the victim was more likely to be current partner (66.5%), and where neither party had used alcohol this relationship type was less likely. Former partner relationships were more common in incidents where neither party had recorded alcohol use (27.9%), while 'other family member' was most commonly recorded for incidents involving victim alcohol use (36.8%).
- In terms of the risk factors recorded by police on the L17 form, incidents involving perpetrator alcohol use were statistically more likely to have the following recorded: firearm licence/access to firearms, perpetrator choked victim, perpetrator controlling behaviours, perpetrator harm or threaten to harm/kill children, perpetrator harm or threaten to harm/kill other family member, perpetrator harm or threaten to harm/kill pets, perpetrator history of mental illness/depression, perpetrator threatened to harm victim, perpetrator threatened to kill victim, perpetrator unemployed, perpetrator suicidal ideas/attempted suicide, victim social isolation, relationship pregnancy or new birth, children present, and/or recent escalation in severity/frequency of violence.
- Where victim alcohol use was recorded by police, prior experience of victimisation, victim history of mental illness/depression and relationship financial difficulties were more likely to be recorded.
- Where both parties had recorded alcohol use, the risk factors that were statistically more likely to be recorded were: perpetrator choked victim, perpetrator unemployment, victim prior victimisation, victim history of mental illness/depression, victim suicidal ideas /attempted suicide, relationship financial difficulties, and presence of disability at the index incident.

- The following risk factors were statistically more likely to be associated with incidents where no alcohol use was recorded: perpetrator controlling behaviours, perpetrator threatening to harm the victim, sexual assault of the victim, perpetrator stalking the victim, relationship pregnancy or new birth, children present, recent separation, and presence of disability at the index incident.
- Police recorded that they believed future violence was likely most frequently where the perpetrator had used alcohol (69.5% of cases). This was followed by cases involving alcohol use by both parties (62.8%), neither party (53.4%) and victims only (52.8%).

Table 1: Characteristics of incidents involving alcohol use

	Perpetrator alcohol use only		Victim alcohol use only		Both perpetrator & victim alcohol use		Neither perpetrator or victim alcohol use		Significance level
	n	%	n	%	n	%	n	%	p
<i>Perpetrator characteristics</i>									
Age groups									
Under 20	540	3.9	237	11.7	334	3.5	12,478	13.2	<.0001
20-29	2,997	21.5	502	24.8	2,205	23.1	26,118	27.7	
30-39	4,135	29.7	489	24.2	2,714	28.4	25,893	27.5	
40-49	4,142	29.8	468	23.1	2,957	30.9	19,384	20.6	
50 or older	2,098	15.1	327	16.2	1,353	14.2	10,390	11.0	
Sex									
Male	11,580	82.9	1,489	73.4	7,578	78.8	74,630	78.5	<.0001
Female	2,392	17.1	555	26.6	2,040	21.2	20,482	21.5	
Previous FV incidents recorded									
None	4,287	30.6	856	41.7	3,243	33.6	35,620	37.3	<.0001
1 to 2	4,011	28.6	556	27.1	2,667	27.6	24,977	26.2	
3 or more	5,719	40.8	643	31.3	3,749	38.8	34,885	36.5	
<i>Victim characteristics</i>									
Age groups									
Under 20	1,265	9.2	67	3.3	416	4.4	12,483	13.3	<.0001
20-29	3,121	22.7	351	17.4	2,097	22.0	24,618	26.2	
30-39	3,390	24.6	515	25.5	2,541	26.7	23,439	24.9	
40-49	3,109	22.6	626	31.0	2,766	29.0	19,772	21.0	
50 or older	2,886	21.0	462	22.9	1,709	17.9	13,736	14.6	
Sex									
Male	2,825	20.2	646	31.6	2,569	26.7	21,165	22.2	<.0001
Female	11,140	79.8	1,401	68.4	7,060	73.3	73,983	77.8	
<i>Relationship status</i>									
Current partner	6,776	48.3	1,010	49.2	6,422	66.5	34,383	36.0	<.0001
Former partner	2,840	20.3	289	14.1	1,119	11.6	26,680	27.9	
Parent/child	2,992	21.4	535	26.0	1,064	11.0	21,742	22.8	

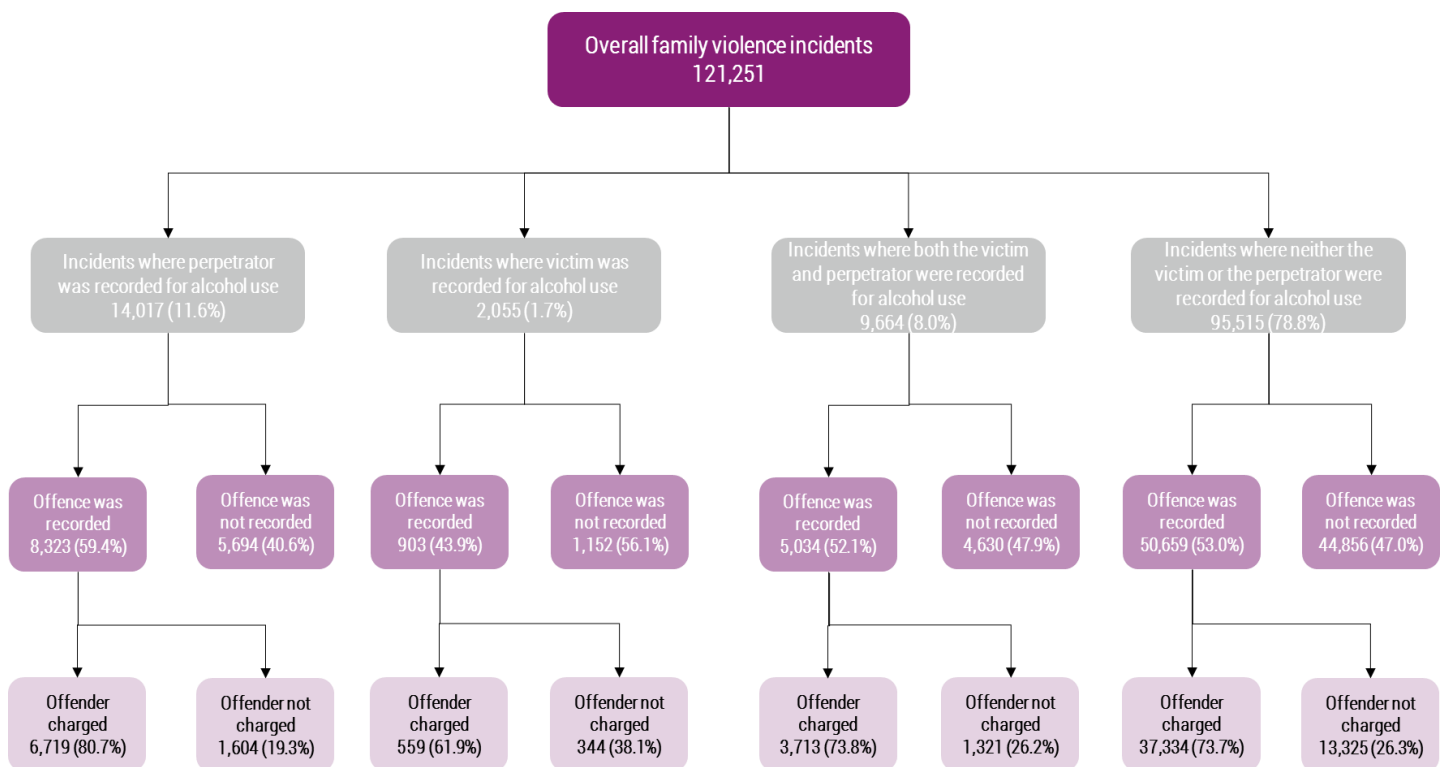
	Perpetrator alcohol use only		Victim alcohol use only		Both perpetrator & victim alcohol use		Neither perpetrator or victim alcohol use		Significance level
	n	%	n	%	n	%	n	%	p
Other family member	1,409	10.1	221	10.8	1,055	10.9	12,722	13.3	
<i>Perpetrator risk factors</i>									
Firearm licence/ access to firearms	349	2.5	33	1.6	190	2.0	1,854	1.9	.0001
Harmed or threatened harm/kill children	366	2.6	16	0.8	117	1.2	1,714	1.8	<.0001
Harmed or threatened harm/kill family	599	4.3	35	1.7	193	2.0	3,015	3.2	<.0001
Harmed or threatened harm/kill pets	124	0.9	8	0.4	67	0.7	469	0.5	<.0001
Threatened to kill AFM	1,100	7.9	74	3.6	443	4.6	5,393	5.7	<.0001
Threatened to harm AFM	3,267	23.3	363	17.7	2,117	21.9	16,887	17.7	<.0001
Sexual assault of AFM	155	1.1	18	0.9	78	0.8	2,399	2.5	<.0001
Stalking of AFM	424	3.0	21	1.0	52	0.5	3,816	4.0	<.0001
Choked AFM	675	4.8	57	2.8	484	5.0	2,688	2.8	<.0001
Controlling behaviours	3,290	23.5	276	13.4	1,520	15.7	19,587	20.5	<.0001
Depression/mental health issues	3,999	28.5	281	13.7	1,662	17.2	17,769	18.6	<.0001
Unemployment	2,477	17.7	135	6.6	1,379	14.3	9,790	10.3	<.0001
Suicidal ideas/ attempted suicide	886	6.3	36	1.8	284	2.9	3,385	3.5	<.0001
<i>Victim risk factors</i>									
Social isolation	1,413	10.1	72	3.5	332	3.4	6,496	6.8	<.0001
Depression/mental health issues	1,411	10.1	460	22.4	1,637	17.0	12,183	12.8	<.0001
Suicidal ideas/ attempted suicide	99	0.7	54	2.6	176	1.8	1,045	1.1	<.0001
Previously a victim	8,372	59.7	1,339	65.2	6,413	66.4	55,641	58.3	<.0001
<i>Relationship risk factors</i>									
Escalation in severity/ frequency of violence	3,224	23.0	270	13.1	1,630	16.9	15,005	15.7	<.0001
Children present	5,647	40.3	531	25.8	2,545	26.4	34,244	35.9	<.0001
Financial difficulties	1,343	9.6	229	11.1	1,130	11.7	8,694	9.1	<.0001
Pregnancy/recent new birth	977	7.0	53	2.6	301	3.1	5,753	6.0	<.0001
Recent separation	1,945	13.9	212	10.3	957	9.9	16,924	17.7	<.0001
<i>Likelihood of future violence</i>									
Likely	9,732	69.5	1,083	52.8	6,060	62.8	50,952	53.4	<.0001
Unlikely	4,281	30.6	970	47.3	3,594	37.2	44,453	46.6	

Offences and charges recorded for family violence incidents involving alcohol use

Figure 1 summarises the outcomes of recorded family violence incidents through to offences being recorded by police and formal charges being laid, according to whether alcohol was involved in the incident. Overall, 53.5% (n=64,919) of family violence incidents resulted in an offence being recorded against the alleged perpetrator. An offence was more likely to be recorded for a family violence incident where perpetrator alcohol use was recorded; in these incidents, 59.4% had an offence recorded (n=8,323). However, offences were less likely to be recorded where both or neither party had alcohol recorded, and particularly where only the victim had alcohol recorded, with just 43.9% (n=903) of those incidents having an offence recorded.

Similarly, formal charges were also more likely to be laid in cases where the perpetrator was recorded for alcohol use. Overall, 74.4% (n=48,325) of incidents with a recorded offence resulted in formal charges being laid. However, where perpetrator alcohol use was recorded, this occurred for 80.7% (n=6,719) of offences. It was less likely that there would be a formal charge laid where the initial family violence incident had recorded victim alcohol use (61.9%, n=559) and where neither party had alcohol recorded (73.7%, n=37,334).

Figure 1: Progression of family violence incidents to offences recorded and charges laid, by alcohol involvement



Factors related to an offence being recorded as a result of a family violence incident

The bivariate relationships between each potential explanatory variable and whether an offence was recorded were examined individually. This analysis determined which variables, when considered independently from other potential predictor variables, were statistically associated with an offence being recorded. All variables that had significant relationships with an offence being recorded at the $p < .05$ level were then entered into a logistic regression model to determine which combination of explanatory factors was best able to predict whether an offence would be recorded.

Table 2 shows that the nature of these bivariate relationships, when other potential predictors are *not* controlled for, are as follows:

- Perpetrator alcohol use is associated with an increased probability that an offence will be recorded: 59.4% of these incidents had an offence recorded compared with 53.0% where neither party used alcohol. On the other hand, victim alcohol use is associated with a decreased likelihood that an offence will be recorded, with just 43.9% of incidents resulting in a recorded offence.
- Offences are far more likely to be recorded where the perpetrator is a male and/or where the victim is a female.
- The perpetrator's history of prior recorded family violence incidents is strongly related to an offence being recorded. Where they had no prior incidents, 25.4% had an offence recorded, where they had one to two prior incidents recorded, 56.1% had an offence recorded, and where they had three or more prior incidents recorded, 79.2% had an offence recorded.
- Where the relationship between the perpetrator and the victim is a former partner, an offence is more likely to be recorded, compared with other relationship types. On the other hand, parent/child and current partner relationships are associated with a decreased likelihood of an offence being recorded.
- Almost all of the perpetrator risk factors recorded were associated with an increased likelihood of having an offence recorded, with the exception of perpetrator depression/mental health issues which was not related to offences being recorded.
- For victims, social isolation and prior victimisations resulted in an increased likelihood of an offence being recorded against the perpetrator, but depression, mental health issues and suicidal ideas or attempts were not associated with an offence being recorded.
- Police are less likely to record an offence when they note the presence of financial difficulties or a disability, but are more likely to record an offence when they assess the likelihood of future violence as 'likely', when children are present, or where there has been a recent separation or a recent escalation in the severity or frequency of violence.

Table 2: Characteristics of incidents where offences were recorded by police

	Offence recorded		Offence not recorded		p
	n	%	n	%	
<i>Alcohol involvement</i>					
Perpetrator alcohol	8,323	59.4	5,694	40.6	<.0001
Victim alcohol	903	43.9	1,152	56.1	
Both alcohol	5,030	52.1	4,630	47.9	
Neither alcohol	50,671	53.0	44,856	47.0	
<i>Perpetrator characteristics</i>					
Age groups					
Under 20	5,982	44.0	7,607	56.0	<.0001
20-29	17,622	55.4	14,200	44.6	
30-39	18,790	56.5	14,441	43.5	
40 or older	21,896	53.3	19,223	46.8	
Sex					
Male	55,370	58.1	39,907	41.9	<.0001
Female	9,408	36.9	16,061	63.1	

	Offence recorded		Offence not recorded		p
	n	%	n	%	
Previous FV incidents recorded					
None	11,195	25.4	32,811	74.6	<.0001
1 to 2	18,057	56.1	14,154	43.9	
3 or more	35,664	79.2	9,352	20.8	
<i>Victim characteristics</i>					
Age groups					
Under 20	7,273	51.1	6,954	48.9	<.0001
20-29	16,907	56.0	13,280	44.0	
30-39	16,570	55.5	13,311	44.5	
40 or older	23,222	51.5	21,844	48.5	
Sex					
Male	11,545	42.4	15,662	57.6	<.0001
Female	53,132	56.8	40,442	43.2	
<i>Relationship status</i>					
Current partner	23,546	48.5	25,045	51.5	<.0001
Former partner	21,590	69.8	9,338	30.2	
Parent/Child	11,385	43.2	14,948	56.8	
Other family member	8,406	54.6	7,001	45.4	
<i>Perpetrator risk factors</i>					
Firearm licence/access to firearms	1,611	66.4	815	33.6	<.0001
Harmed or threatened harm/kill children	1,907	86.2	306	13.8	<.0001
Harmed or threatened harm/kill family	3,381	88.0	461	12.0	<.0001
Harmed or threatened harm/kill pets	569	85.2	99	14.8	<.0001
Threatened to harm AFM	20,119	88.9	2,515	11.1	<.0001
Threatened to kill AFM	6,582	93.9	428	6.1	<.0001
Sexual assault of AFM	2,447	92.3	203	7.7	<.0001
Choked AFM	3,731	95.6	173	4.4	<.0001
Stalking of the victim	3,860	89.5	453	10.5	<.0001
Controlling behaviours	16,745	67.9	7,928	32.1	<.0001
Depression/mental health issues	12,804	54.0	10,907	46.0	ns
Suicidal ideas/attempted suicide	2,948	64.2	1,643	35.8	<.0001
Unemployment	8,417	60.5	5,364	38.9	<.0001
<i>Victim risk factors</i>					
Social isolation	4,995	60.1	3,318	39.9	<.0001
Depression/mental health issues	8,347	53.2	7,344	46.8	ns
Suicidal ideas/ attempted suicide	743	54.1	631	45.9	ns
Previously a victim	43,439	59.2	28,326	39.5	<.0001

	Offence recorded		Offence not recorded		p
	n	%	n	%	
<i>Relationship risk factors</i>					
Escalation of severity/frequency of violence	15,359	76.3	4,770	23.7	<.0001
Children present	23,219	54.0	19,748	46.0	.010
Financial difficulties	5,363	47.1	6,033	52.9	<.0001
Pregnancy/recent new birth	3,828	54.0	3,256	46.0	ns
Recent separation	12,217	61.0	7,821	39.0	<.0001
Presence of disability	1,301	44.0	1,659	56.1	<.0001
<i>Likelihood of future violence</i>					
Likely	48,934	72.2	18,885	27.8	<.0001
Unlikely	15,860	29.8	37,438	70.2	

As noted, all of the factors outlined in Table 2 above that were identified as having significant bivariate relationships with the likelihood of an offence being recorded were entered into a logistic regression model to explore which combination of these variables had the most predictive validity in determining the incidents for which an offence was recorded. The final model, outlined in Table 3, excludes any variables that are no longer related to an offence being recorded when the effects of all other possible predictors are taken into account. This technique also excludes incidents where data was missing on one or more of the variables included in the model. Therefore, the final model was based on 116,744 incidents.

The overall adequacy of the model was assessed according to its ability to discriminate between those incidents where an offence was recorded and those where an offence was not recorded, using the ROC Area Under the Curve statistic (AUC). In other words, this statistic can be interpreted as the likelihood that the model will produce a higher predicted probability of an offence being recorded for incidents where an offence was actually recorded, compared to those where an offence was not recorded. An AUC of 0.5 indicates the model has no ability to discriminate, an AUC between 0.7 and 0.8 indicates acceptable ability to discriminate, an AUC between 0.8 and 0.9 is considered to have excellent ability to discriminate, and an AUC greater than 0.9 is considered to have outstanding discrimination (Hosmer and Lemeshow, 2000). The AUC for the final model presented here was 0.87 (95% Confidence Interval: 0.86, 0.87) indicating that there is an 87% chance that the final model will produce a higher probability of an offence being recorded for those incidents in the dataset where an offence was actually recorded, and that the model has excellent ability to discriminate between incidents that will and won't go on to have an offence recorded.

The predictor variables included in the final model are presented in Table 3. These are the factors that contribute significantly to predicting an offence being recorded in the study sample, taking into account the effects of all the other variables included in the model. The odds ratio column can be interpreted as the likelihood that an incident with that characteristic will go on to have an offence recorded. For example, incidents with a female perpetrator were 0.75 times less likely to have an offence recorded compared to incidents with a male perpetrator. When all other variables are controlled for:

- Perpetrator alcohol use is no longer a significant predictor of an offence being recorded, but where victims and both parties used alcohol, incidents were less likely to have an arrest recorded compared to where neither party used alcohol.
- Older perpetrators and male perpetrators were more likely to have an offence recorded.

- The number of prior family violence incidents recorded for the perpetrator was related to an offence being recorded. Those with one to two prior incidents were over three times more likely to have an offence recorded and those with three or more were eight times more likely to have an offence recorded.
- Younger aged and/or female victims were associated with an increased likelihood of the perpetrator being recorded for an offence.
- Compared to incidents involving current partners, those involving former partner relationships and other family member relationships are more likely to result in an offence, and parent/child relationships are less likely to result in an offence.
- The recorded risk factors associated with the most notable increases in the likelihood of an offence being recorded included: perpetrator threats to kill or harm the victim; perpetrator choking of the victim; and/or, perpetrator sexual assault of the victim.
- These risk factors were associated with a decreased likelihood of an offence being recorded: perpetrator suicidal ideas or attempts; victim social isolation and prior victimisation; presence of a disability; recent separation; financial difficulties; and/or, the presence of children.
- Where police assessed the risk of future violence as 'likely', they were 3.26 times more likely to record an offence.

Table 3: Logistic regression model predicting odds of an offence being recorded

Predictor	Odds Ratio	95% Confidence Interval of the Odds Ratio	Significance level (p)
Alcohol involvement			
<i>No alcohol use</i>			<.001
<i>Perpetrator alcohol use</i>	-	-	ns
<i>Victim alcohol use</i>	0.82	0.73, 0.92	.001
<i>Both perpetrator and victim alcohol use</i>	0.85	0.81, 0.90	<.001
Perpetrator age			
<i>Under 20</i>			<.001
<i>20-29</i>	1.37	1.29, 1.45	<.001
<i>30-39</i>	1.46	1.38, 1.55	<.001
<i>40 or older</i>	1.54	1.45, 1.62	<.001
Perpetrator sex (female compared to male)	0.75	0.72, 0.78	<.001
Perpetrator number of prior incidents			
<i>None</i>			<.001
<i>1-2</i>	3.26	3.13, 3.39	<.001
<i>3 or more</i>	8.17	7.85, 8.51	<.001
Victim age			
<i>Under 20</i>			<.001
<i>20-29</i>	0.79	0.75, 0.84	<.001
<i>30-39</i>	0.82	0.77, 0.86	<.001
<i>40 or older</i>	0.79	0.75, 0.83	<.001
Victim sex (female compared to male)	1.10	1.06, 1.15	<.001
Relationship status			
<i>Current partner</i>			<.001
<i>Former partner</i>	2.11	2.02, 2.19	<.001
<i>Parent/Child</i>	0.90	0.86, 0.95	<.001
<i>Other family member</i>	1.38	1.31, 1.46	<.001
Perpetrator threatened to kill	3.54	3.16, 3.97	<.001
Perpetrator choked victim	8.87	7.47, 10.54	<.001
Perpetrator controlling behaviours	1.10	1.05, 1.14	<.001

Predictor	Odds Ratio	95% Confidence Interval of the Odds Ratio	Significance level (p)
Perpetrator harmed/threatened to harm victim	5.71	5.43, 6.01	<.001
Perpetrator harmed or threatened harm/kill children	1.87	1.59, 2.20	<.001
Perpetrator harmed or threatened harm/kill family	1.29	1.14, 1.46	<.001
Perpetrator firearm licence/access	1.14	1.02, 1.28	.021
Sexual assault of victim	16.91	14.39, 19.87	<.001
Stalking of victim	2.31	2.06, 2.59	<.001
Perpetrator suicidal ideas/attempted suicide	0.87	0.80, 0.94	.001
Victim social isolation	0.90	0.85, 0.96	.001
Prior victimisation	0.73	0.71, 0.76	<.001
Escalation of severity/frequency of violence	1.32	1.27, 1.38	<.001
Disability present	0.66	0.60, 0.73	<.001
Recent separation	0.95	0.91, 0.99	.025
Financial difficulties	0.69	0.65, 0.73	<.001
Children present	0.90	0.87, 0.93	<.001
Police assessment of likelihood of further violence (likely compared to unlikely)	3.26	3.16, 3.37	<.001

* Note: Nagelkerke $R^2 = 0.50$, Model $\chi^2 (34) = 54,044.23$, $p < .001$

Discussion

Of the 121,251 alleged family violence incidents analysed for this research, just over 20 per cent were identified as involving alcohol use by the perpetrator, the victim or both. Of those, the highest proportion had alcohol use by the perpetrator and no use by the victim with only less than two percent involving alcohol use by the victim and not the offender.

Alcohol involvement of any kind was more likely to involve perpetrators and victims aged 30 or older, while no alcohol use recorded by either party was associated with victims or perpetrators being aged under 30. Consistent with previous research (Graham et al, 2010), perpetrator alcohol use in particular was associated with indications of increased severity and frequency. For example, where perpetrator alcohol use was recorded, police were more likely to record that the perpetrator had choked the victim, made threats to kill the victim, or that there had been a recent escalation in the severity and/or frequency of violence.

A number of concerning victim risk factors were found to be associated with victim only and both parties' alcohol consumption, including prior victimisation, history of mental illness and/or depression and having suicidal ideas or having attempted suicide. This suggests that victims who use alcohol may be particularly vulnerable, which is a potentially important consideration for police who encounter family violence victims.

Overall, offences were most commonly recorded for incidents where only perpetrator alcohol use was recorded, with just under two-thirds of these incidents resulting in an offence. Conversely, where only victim alcohol use was recorded, incidents were least likely to have an offence recorded, with under half of these incidents leading to a recorded offence.

The final model predicting whether an offence would be recorded indicated that, when other factors are taken into account, perpetrator alcohol use is not significantly related to an offence being recorded. Factors related to the seriousness of the incident, such as the perpetrator choking the victim or a recent escalation in the frequency or severity of violence, were associated with large increases in the likelihood that an offence would be recorded.

This is in line with the only other study located that disaggregates perpetrator and victim alcohol use and controls for other factors that impact on the decision to arrest (Hirschel and Hutchison, 2011). It found that when other relevant factors are

controlled for perpetrator alcohol use was not found to be significantly related to an offence being recorded by police, while victim alcohol use was associated with a decreased likelihood of an offence being recorded. A number of researchers (e.g., Hirschel and Hutchison, 2011; Kingsnorth and Macintosh, 2004; Robinson and Chandeck, 2000a) have identified or suggested that potential reasons for the decreased likelihood of an arrest in situations where the victim has been drinking include perceptions of the victim as less cooperative or a less reliable witness, and a decreased victim desire for arrest or prosecution of the perpetrator.

The Victoria Police Code of Practice for the Investigation into Family Violence (2014) states that it "is the responsibility of Victoria Police to decide whether an accused person should be charged and a brief of evidence must be prepared, even if the victim is reluctant for charges to be pursued. A supervisor will then decide if there is enough evidence, with or without the victim's agreement, and will weigh up the likelihood of a successful prosecution "(p.26). It is not possible for this study to draw firm conclusions about the process of police decision-making. Further qualitative research interviewing police officers or examining case narratives would be useful in unpacking the reasons why offences are less likely to be recorded in certain situations involving alcohol use.

A very large number of other factors were found to contribute to the statistical model predicting the likelihood of an offence being recorded, which is reflective of the complexities involved in family violence situations encountered by police and their decision-making process in relation to pursuing criminal offences in these situations. By far, the factor that was found to have the largest effect was how many prior family violence incidents the perpetrator had been recorded for: perpetrators who had three or more family violence incidents recorded were more than eight times more likely to have an offence recorded compared with perpetrators who had no prior incidents. Evidence can be accumulated over multiple attendances and it therefore follows that an increased number of police recorded incidents can result in an increased likelihood that an offence will be recorded. Further analysis should consider the types of offences recorded for these offenders and whether there were intervention orders in place, as these offences may reflect breaches of intervention orders as opposed to assaults or other offences.

A potential limitation of this study is that a number of incidents were removed from the data prior to analysis, including those involving definite or possible illicit drug use by offenders and victims. This was intentional given that very few previous studies were able to dissociate the impacts of alcohol from other substances on the arrest decision. However, further research in this area might consider whether and how the findings presented here apply to the use of other drugs, or to situations where both alcohol and drugs are used.

A further potential limitation is that the quality of police assessment and recording of risk factors on the L17 form is unknown. As noted by Millstead and Coghlan (2016), these risk factors are selected via checkboxes and the absence of a check for a particular risk factor may indicate that the data was not assessed and/or recorded, or that it was indeed not present. It may also be the case that police are more likely to invest time in the risk assessment process, identify relevant risk factors and record criminal offences where they perceive the situation to be serious or are particularly concerned about the safety of the victim.

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