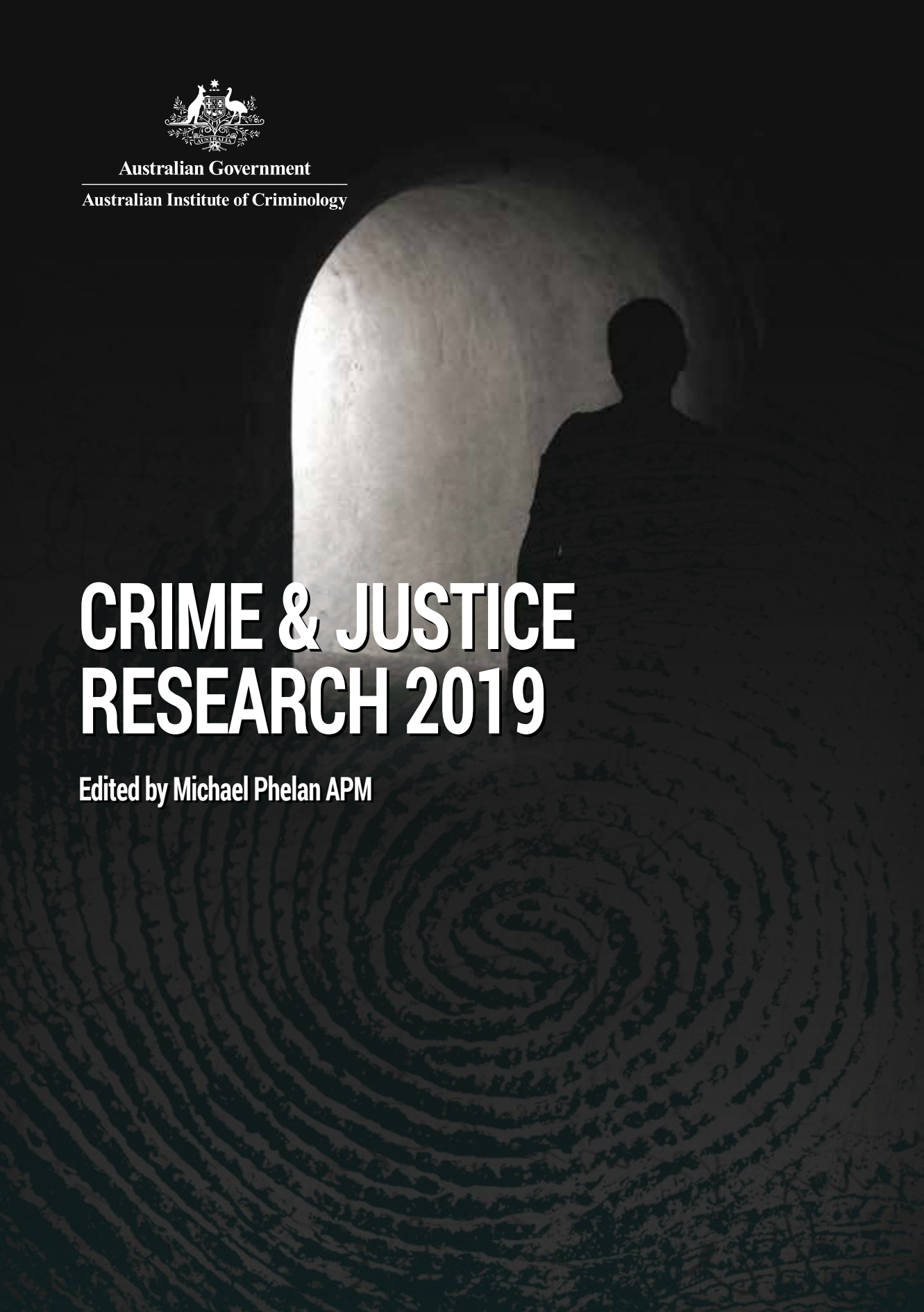

Australian Government

Australian Institute of Criminology

CRIME & JUSTICE RESEARCH 2019

Edited by Michael Phelan APM

Australian Institute of Criminology

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About the editor

Michael Phelan APM was appointed Chief Executive Officer of the Australian Criminal Intelligence Commission (ACIC) and Director of the Australian Institute of Criminology (AIC) on 13 November 2017.

As CEO of the ACIC, Mr Phelan is responsible for ensuring delivery of national policing information systems and services to Australian police and law enforcement partners. He is also responsible for management and administration of the ACIC's intelligence operations and specialist capabilities.

As Director of the AIC, Mr Phelan is responsible for leading Australia's national research and knowledge centre on crime and justice.

Mr Phelan was appointed to the Australian Federal Police (AFP) in 1985 and during his career has worked in a variety of fields, including community policing, narcotics and serious fraud.

In September 2007, Mr Phelan was appointed as the Chief Police Officer for the Australian Capital Territory and in 2010 was promoted to Deputy Commissioner, taking up the role of Deputy Commissioner Close Operations Support, overseeing the portfolios of High Tech Crime, Forensics and Intelligence.

In July 2013, Mr Phelan commenced as Deputy Commissioner Operations, where he was responsible for the Crime Operations and Serious and Organised Crime portfolios including the AFP's overseas network of agents.

In November 2014, Mr Phelan commenced the role of Deputy Commissioner National Security, where he was responsible for Counter-Terrorism Operations and Protection Operations.

Mr Phelan has previously held positions on the Boards of the Australian Crime Commission, CrimTrac and the Australia New Zealand Policing Advisory Agency. Mr Phelan also served as a member of the ACT Law Reform Advisory Council and the Australian National Advisory Council on Alcohol and Drugs.

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Introduction

Crime in Australia is constantly changing. Over the past 20 years there have been unprecedented declines in some types of property crime, while new forms of online crime have proliferated in a largely unregulated virtual world that causes immense harm in the real world. We may be less likely to experience victimisation from those living in our community, yet more at risk of crime perpetrated by those living elsewhere on the globe. At the same time, we are faced with seemingly intractable crime issues. Problems such as antisocial behaviour, violence against women, offending and victimisation in Indigenous communities, substance misuse, fraud and identity crime continue to blight the everyday lives of Australians while also soaking up considerable resources in both the public and private sector. There has never been a more pressing need to develop robust crime and justice policy responses built upon a sound understanding of the problems they aim to address.

Formed in 1973 under the *Criminology Research Act*, the Australian Institute of Criminology (AIC) has been serving the Commonwealth of Australia for over 45 years by undertaking, funding and disseminating policy-relevant crime and justice research. The remit of the Institute spans both Commonwealth and state and territory concerns and the breadth of its research is as wide now as it was four decades ago.

Each year, in consultation with the Criminology Research Advisory Committee, I establish a set of priorities that guide the Institute's research. Six priorities were established in 2018, covering a range of contemporary crime and justice concerns, including family and domestic violence, child exploitation material, Indigenous over-representation in the criminal justice system, youth crime, serious and organised crime, and illicit drugs. This book is structured broadly around these six themes. I have selected three studies on each theme to provide an insight into the AIC's work on that topic. All of these papers have recently been published in the AIC's *Trends & issues in crime and criminal justice* series or in the Statistical Bulletin series. While representing only a small portion of the Institute's output in 2018 and 2019, these 18 studies provide a useful overview of the AIC's work, while also highlighting important research that is shaping Australian crime and justice policy.

Family and domestic violence

Family and domestic violence continues to be an intractable problem in Australia. Despite a concerted effort by successive governments and the not-for-profit sector, the level of family and domestic violence (FDV) has remained largely unchanged, according to the latest *Personal safety survey* published by the Australian Bureau of Statistics (ABS). This highlights the need for long-term, intergenerational change in attitudes and behaviours towards women in particular in order to bring about a reduction in violence. The AIC's approach to researching criminal justice responses to FDV has largely focused on understanding the nature of the problem and the police response. This is deliberately focused on addressing current levels of victimisation.

In chapter 1, Voce and Boxall review what is known about who is and, importantly, who is not willing to report FDV to the police. They show that certain experiences of victimisation—specifically, frequent abuse or having had a violent partner in the past—increase the likelihood of reporting to the police. Other factors that increase reporting include incidents involving an intoxicated offender, serious violence or child witnesses.

Perhaps of greater concern is the fact that those experiencing violence for the first time, or who experience less serious violence, are less willing to report their victimisation to the police, thereby missing an opportunity to avoid an escalation in violence.

The work of Morgan and his colleagues in chapter 2 shows how quickly FDV victimisation can recur. In a sample of FDV offenders who were tracked over a six-month period, almost a quarter were found to have committed a further FDV offence and over half of those were perpetrated in the first 60 days. Further, the likelihood of committing a subsequent offence increased with each additional offence. Indeed, there was a 50:50 chance that an offender who had committed two offences in quick succession would commit another in the very near future.

Chapter 3, by Dowling and Morgan, demonstrates that methamphetamine use represents another risk factor for FDV, with meth users at least three times more likely than non-meth users to perpetrate such offences. This risk is much higher among offenders with a methamphetamine induced psychotic disorder. Taken together, these findings demonstrate that the risk profiles of those who experience and report FDV vary tremendously, calling for tailored responses.

Child exploitation

Child exploitation is abhorrent, wrecking the lives of those who are sexually abused. While the AIC's new program of work is focused on finding practical ways to reduce child exploitation material, its recent research has examined various issues associated with contact child sexual offending. In chapter 4, McKillop and her colleagues compare a sample of men who started offending in their adolescent years with a sample of adult-onset child sexual offenders. They find that three-quarters of adolescent-onset child sexual offenders have a prior history of contact with the youth justice system, compared with less than half of adult-onset child sexual offenders. They also demonstrate that the circumstances in which the first offences occur vary markedly between adolescents and adults, including in the nature of the interactions at the time of the offence, the use of force, victim resistance and the presence of capable guardians, among other factors.

In chapter 5, Brown and Shelling review the available literature on child sex dolls, which have been imported into Australia in recent years. Although the evidence is limited, such dolls could provide a gateway to contact child sexual offending by acting as a bridge between child exploitation material and contact offending. They may also desensitise the user to the act of abuse, objectify children as sexual beings, and treat child sex as a commodity to be traded. Importantly, the authors find no evidence that child sex dolls have a therapeutic benefit in reducing the sexual urges of child sexual offenders.

Looking internationally, Lyneham and Facchini explore in chapter 6 the risks of child sexual exploitation that result from voluntourism in South-East Asia. In particular, they highlight the problem of sham orphanages, which exploit poor families by encouraging parents to give up their children, who may subsequently be abused by visiting sexual offenders. Importantly, the authors set out a number of reforms to address the problem, including improving education and awareness, regulating the orphanage sector and conducting background checks of voluntourists.

Indigenous over-representation in the criminal justice system

Aboriginal and Torres Strait Islander people continue to be over-represented at every stage of the criminal justice system. According to the latest ABS census of *Prisoners in Australia*, Aboriginal and Torres Strait Islander people are more than 12 times more likely to be imprisoned than other Australians. The AIC has a strong history of conducting research on Indigenous over-representation and in recent times this has included examination of the Indigenous experience of drug use, family and domestic violence, homicide, cognitive impairment, imprisonment, death in custody and justice reinvestment, to name just a few.

This volume includes three of the most recent papers. In chapter 7, Blagg and Tulich sensitively explore the experiences of Aboriginal young people with fetal alcohol spectrum disorder who come into contact with the criminal justice system (CJS). They note not only that young people with fetal alcohol spectrum disorder are coming into contact with the CJS at an increasing rate, but that this can lead to them developing secondary impairments, such as substance misuse and mental health disorders, which can exacerbate subsequent CJS contact. Their radical solution to this problem involves a re-thinking of the justice system in remote areas, and they advocate for a mobile Aboriginal court based on problem-solving principles which places a concern for country at the centre of policy and practice.

Exploring opportunities for both prevention and diversion, Wise and her colleagues report some early, positive support for an adult literacy program that has previously been shown to work in other contexts and is now being applied to regional communities. They show how improving literacy can help individuals to navigate the CJS more effectively. This was most clearly demonstrated in the ability of Indigenous community members to obtain drivers licences, which prevented them accruing the driving offences that so often lead to custodial sentences.

In relation to custodial sentences, the AIC has been monitoring Indigenous deaths in custody for over 25 years, in response to the Royal Commission into Aboriginal Deaths in Custody. In chapter 9, Gannoni and Bricknell show that the rate of Indigenous deaths in custody has consistently been lower than the rate for non-Indigenous prisoners, although the difference between the two has diminished in recent years. They also show that the age of those who die in custody has increased over time, with the majority dying from natural causes, although a third of Indigenous deaths over the entire period were due to hanging. These statistics highlight the importance of continuing to pursue correctional policies that reduce the likelihood of preventable deaths.

Youth crime

Youth crime prevention has been one of Australia's criminal justice policy successes in recent years, but has received relatively little fanfare. In chapter 10, Payne and his colleagues demonstrate how, in just 10 years, the proportion of young people born in New South Wales who engaged in crime for the first time halved. They also show that the remaining young offender population commit more crimes and are more likely to breach supervision orders. While these trends go some way to unpacking the crime drop observed in Australia, it remains unclear *why* fewer young people are committing crime.

Further exploration of offending during adolescence by Modecki and her colleagues in chapter 11 shows that perceptions of risk and reward shape willingness to engage in antisocial behaviour. Where the rewards are perceived to be high, adolescents are more willing to engage in delinquency. However, their offending is often limited to adolescence, as it declines with age. This chapter also explores whether young people who engage in antisocial behaviour are more likely to experience feelings of anger. The results reveal that those who engage in high levels of antisocial behaviour are more likely to feel anger as a response to some form of stress in their daily life. These results point towards the potential benefit of developing life-skills to help these young people deal with stressful events.

In chapter 12, Tzoumakis and her colleagues provide evidence of the intergenerational transmission of crime. Among a sample of 21,000 children who were surveyed for the New South Wales Child Development Study, those who showed higher levels of childhood conduct problems were more likely to have parents with offending histories. This relationship was strongest for those whose mothers had a history of violent offending.

Serious and organised crime

With the AIC's close ties to the Australian Criminal Intelligence Commission, serious and organised crime is becoming an increasingly important part of the Institute's research. The newly-established Serious and Organised Crime Research Laboratory is already producing new insights that will assist law enforcement agencies. In chapter 13, Brown and Smith outline eight ways in which organised crime is related to volume crimes such as burglary, theft, criminal damage and assault. Most importantly, they explain the ways in which organised crime groups commercialise volume crime to generate revenue. This foundational work has shed further light on the criminal careers of organised crime offenders. In chapter 14, Fuller and her colleagues show how organised crime offenders often start their criminal careers by committing property crimes, violent crimes, drug offences and even serious traffic offences. They show that the prevalence of offending peaks during an offender's early 20s and then stays high through their 20s and 30s. They also show that both the frequency of offending and its seriousness increase as organised crime offenders age.

In chapter 15, Lyneham and her colleagues reveal for the first time the true extent of human trafficking and slavery in Australia. Using statistical techniques typically used to measure wildlife populations, the research team estimated that, over a two-year period, between 1,300 and 1,900 victims were subjected to human trafficking and slavery in Australia, of whom only about a quarter were known to the authorities.

Illicit drugs

Research on illicit drugs has long been a concern of the AIC, which has been tracking drug use by police detainees through the Drug Use Monitoring in Australia program for 20 years. In chapter 16, Sullivan and his colleagues examine the use of prescription opioids by police detainees, demonstrating that almost a fifth of those surveyed had used such drugs for non-medical use in the last 12 months. Buprenorphine was most likely to be used on a weekly basis, followed by morphine, and users were most likely to receive their prescription opioids from a family member or friend without paying.

In chapter 17, also drawing on findings from the Drug Use Monitoring in Australia program, Patterson, Sullivan and Bricknell find that a third of detainees had used multiple drugs in the previous 48 hours. Further, the proportion of detainees using multiple drugs increased steadily between 2010 and 2016. The most common combination of drugs was cannabis and methamphetamine, which were also the two most popular drugs generally.

Given its potency compared with most other opioids, close attention has been paid to the availability of illicit fentanyl. In chapter 18, Ball and colleagues report on innovative research that involved 'scraping' popular marketplaces on the darknet to examine fentanyl availability. They found that at least 16 kilograms of fentanyl and its analogues were available on any given day, with patches and powder being the most popular forms. Perhaps of greatest concern was the finding that almost six kilograms of carfentanil (which is much more potent than fentanyl) was available each day.

Conclusion

This book demonstrates the complex nature of crime in Australia. It can take many forms, even within the narrow set of priorities that make up the AIC's work. The Institute's ability to publish on such a diverse range of topics over the last year demonstrates the versatility of the workforce and its focus on achieving its core mission of informing crime and justice policy in Australia. As is so often the case, though, much of this research leaves many unanswered questions that would benefit from further examination. As such, there remains a clear need for the AIC to continue to fill knowledge gaps to support future policymaking.

Michael Phelan APM
Director
Australian Institute of Criminology

Family and domestic violence

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1. Who reports domestic violence to police? A review of the evidence

Isabella Voce and Hayley Boxall

The police have an important role to play in the prevention and de-escalation of domestic violence. Although the efficacy of specific police responses to domestic violence appears mixed, there is little doubt that police presence provides at least short-term protection to victims of domestic violence, particularly when the response involves the removal of the perpetrator (Felson, Ackerman & Gallagher 2005; Dowling et al. 2018; Maxwell, Garner & Fagan 2002).

Police may also have a role in preventing domestic violence in the longer term. In many jurisdictions, police have the power to implement emergency and interim protection orders and have a role in supporting victims' applications for protection orders through the court (eg through provision of statements). Police may also act as a gateway for victims to access other services that can provide them with longer-term support and access to resources to prevent future violence. Although there is an ongoing debate as to the appropriateness of the police fulfilling this role (State of Victoria 2016), it is consistent with an overall shift towards integrated responses to domestic violence. The importance of integrated responses was identified by the recent Royal Commission into Family Violence, as well as the National Plan to Reduce Violence against Women and their Children 2010–2022 developed by the Council of Australian Governments.

Because domestic violence typically occurs on private premises and behind closed doors (Mouzos & Makkai 2004), police are unlikely to detect domestic violence through their routine patrolling activities. Instead, their awareness of domestic violence is dependent on a report being made by the victim or a third party (eg neighbours, family members). Unfortunately, the majority of domestic violence incidents are never reported to the police (ABS 2016a; Boxall, Rosevear & Payne 2015; McPhedran & Baker 2012). The 2016 Personal Safety Survey administered by the Australian Bureau of Statistics (ABS) found that only one in five women (21%) who said they had experienced violence at the hands of their current partner had ever made a report to the police (ABS 2016a; figures for male victims not available). The numerous barriers to (predominantly female) victims reporting domestic violence to police are well documented in research, and include:

- fear of not being believed by the police;
- desire to protect the offender;
- fear of negatively impacting the family (eg removal of children, dissolution of the relationship);
- economic dependence on the perpetrator;
- privacy concerns;
- fear of exposing their own illegal activities; and
- fear of retribution and the escalation of violence (ABS 2016a; Barnett 2001; Birdsey & Snowball 2013; Felson et al. 2002).

However, recent Australian statistics suggest that reporting of domestic violence to police may have increased over the past five years. Recorded crime data indicate that the number of acts intended to cause injury reported to police (which includes domestic violence) has increased since the 2011–12 financial year from 68,334 nationally to 75,847 in 2015–16 (ABS 2016b). This represents a 10 percent increase.

There are three potential explanations for this increase. First, increased reporting may indicate that domestic violence is becoming more prevalent because there are simply more offenders or offenders are becoming more violent. Interestingly, results from the Personal Safety Survey indicate that rates of domestic violence reported by female respondents increased between 2012 and 2016 (1.5% vs 1.7%), although changes in the definition of 'partner' limit comparisons (ABS 2012, 2016a).

Second, reporting may be increasing as community attitudes towards and awareness of domestic violence improve. Increasing community awareness and condemnation of domestic violence could affect reporting rates by making victims feel less shame about reporting the violence to the police, and/or improving the ability of victims and third parties to identify domestic violence when it occurs (Gracia & Herrero 2007; VicHealth 2007). Finally, the increase in reporting could be caused by changes in police responses to domestic violence when it occurs, which in turn increase victim satisfaction with police and the likelihood that they will contact them again in relation to future violence, although this may in part depend on victims achieving their preferred outcome (Hickman & Simpson 2003).

Regardless of the reason, the increase in reporting raises the question of who typically contacts police about domestic violence, and who does not. The identification of groups in the community who are less likely to report is particularly important as police and other agencies can then focus additional efforts on identifying strategies to improve reporting among these cohorts.

Despite the numerous studies that have explored trends in domestic violence reporting to police, the factors that are positively and negatively associated with reporting are unclear. This is largely due to inconsistencies within the literature regarding research questions, variables, sampling strategies and analytical methods. As such, the findings are difficult to compare and there is no clear consensus on what predicts reporting behaviour among victims, and which groups (if any) are being 'left behind'.

To address this gap in knowledge, the current study aims to identify the sociodemographic, relationship, situation and community-level predictors of victim reporting of domestic violence to police. More specifically, the study aims to answer the following research questions:

- What factors have been studied in relation to victim reporting of domestic violence to police?
- What is the nature of the relationship between identified factors and victim reporting of domestic violence to police?
- Which victims are most and least likely to report to police and in what situations do they do so?

The current study uses the definition of domestic violence provided in the National Plan to Reduce Violence against Women and their Children (COAG 2011: 2):

> …acts of violence that occur between people who have, or have had, an intimate relationship…Domestic violence includes physical, sexual, emotional and psychological abuse.

Methodology

The current study involved the secondary analysis of studies collated as part of a systematic review of police responses to domestic violence recently undertaken by Dowling and colleagues (2018). As such, the literature analysed as part of the current study was selected from the initial pool of studies included in the larger review. The search protocols, processes and inclusion criteria developed for the systematic review are described in detail in the final report (Dowling et al. 2018). However, it is important to note studies were limited to those published in Australia, New Zealand, the United States, the United Kingdom or Canada since 1980. Over 33,000 articles were identified through the systematic review search process, of which 346 articles were ultimately deemed eligible for inclusion. Eighty-three of these related to the reporting of domestic violence to police.

The 83 reporting articles identified in Dowling and colleagues' (2018) systematic review were subject to further analysis to determine whether they met the inclusion criteria for the current study. Studies were included if they:

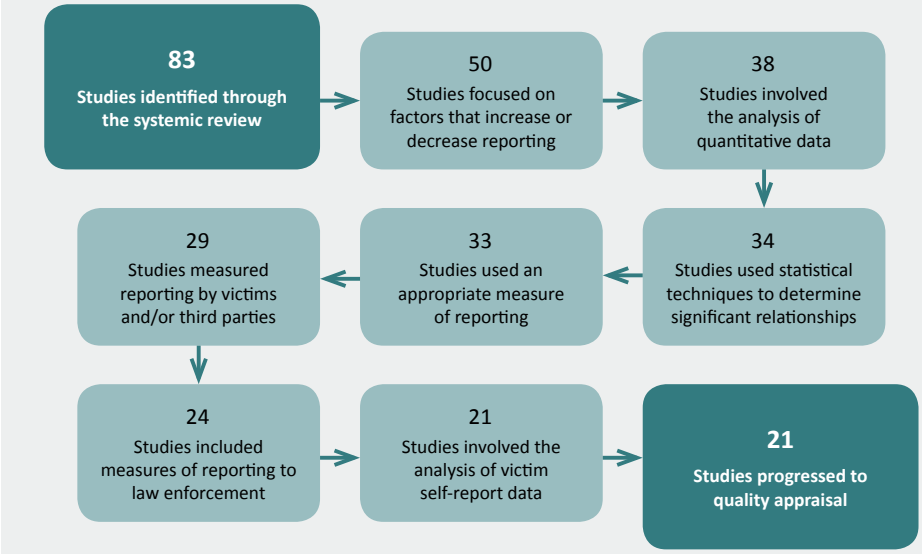
- focused on sociodemographic, situation and/or community-level factors (independent variables) that increase or decrease the likelihood of domestic violence reporting;
- involved the analysis of quantitative data (eg closed response surveys, questionnaires);
- involved the analysis of relationships between factors and reporting using statistical techniques (significance testing—bivariate and multivariate);
- included an appropriate measure of domestic violence reporting (incidence and/or frequency) by victims and/or victims and third parties;
- included measures of reporting to the police; and
- used victim self-reporting as the primary source of data (eg questionnaires, surveys or interviews).

The decision was made to focus on research involving quantitative data collection and analysis because of the relative ease with which the findings of multiple studies could be compared. Rather than examining which individuals experience higher rates of domestic violence, the current analysis focuses on which victims are more likely to report their victimisation when it does occur. As such, victim report data was prioritised over official government records because police reports can be an unreliable and ambiguous indication of victim reporting rates relative to actual victimisation rates (Boxall, Rosevear & Payne 2015; Davis, Weisburd & Taylor 2008; Holder 2007).

Finally, although the aim of the current study is to understand factors that increase the likelihood that victims will report domestic violence to police, occasionally it was not possible to differentiate between victim reporting and third-party reporting. Some victim surveys asked respondents whether they 'or *someone else'* had reported domestic violence to the police, rather than focusing exclusively on victim reporting. Studies that focused solely on third-party reporting were excluded from the analysis.

The final sample comprised 21 articles which were progressed to quality appraisal (see Figure 1). A description of these studies is included in Table 1.

Figure 1: Study selection process, by inclusion criteria



Note: This figure illustrates the process by which studies were excluded from the final sample. If a study did not meet an inclusion criterion, it was excluded and was not judged against subsequent inclusion criteria
Source: AIC Predictors of reporting, 2016–17 [computer file]

Quality appraisal tool

The final sample of 21 studies was analysed using the Appraisal tool for Cross-Sectional Studies (AXIS) developed by Downes, Brennan, Williams and Dean (2016). The AXIS was developed to critically appraise cross-sectional studies across a range of disciplines and is one of the only appraisal tools that have been the subject of some form of validation study (Downes et al. 2016).

The AXIS comprises 20 questions which users are required to answer about the article's introduction, methods, results, discussion and other issues related to researcher independence and ethical conduct. The research team also included a question about whether the research involved statistical analyses beyond simple bivariate correlations (ie multivariate). This was deemed necessary due to research which has found that reporting of domestic violence to police is influenced by a variety of factors (Dowling et al. 2018). The final quality appraisal tool therefore comprised 21 items. Each study was allocated a score based on the proportion of relevant items for which the study met the necessary criteria. The scores ranged from 50 to 100, and the median was 82. This indicates that the overall quality of the studies was high.

Confidence in results

Cumulative evidence is needed to ensure confidence in the results of any systematic review. Therefore, factors associated with reporting (independent variables) were included in the current review only if they were investigated in three or more studies. Factors which are of interest but were not the focus of sufficient research attention to be included in the review include victims' English-speaking ability, disability, arrest record, past experiences with police, confidence in police and the criminal justice system, and support for mandatory arrest; offenders' gender, age and income; and the presence of protection orders at the time of the incident.

Limitations

The lack of Australian research on domestic violence reporting is an important limitation of the current review. Of the 21 studies identified through the systematic review and inclusion process, only three were Australian, with the vast majority coming from the United States. This lack of Australian research is consistent across the broader literature on policing domestic violence (Dowling et al. 2018).

Consistent with the findings from Dowling and colleagues' (2018) systematic review, the majority of studies included in the current analysis focus on the characteristics of victims that are related to reporting. This is in part explained by the decision to focus on victim report data rather than official records, and means that several offender- and incident-specific variables potentially related to the reporting of domestic violence were unable to be examined in the current review due to lack of available research.

Dowling and colleagues' (2018) systematic review focused on male-perpetrated domestic violence against female victims. This reflects the historical and current experience of females as comprising the majority of domestic violence victims, which has resulted in research predominantly using female victim samples only. While the systematic review did not exclude studies also examining female perpetrators and male victims, few studies compared the reporting behaviour of females and males. This limitation should be acknowledged when interpreting the findings regarding gender.

Findings

The analysis found that a small number of sociodemographic factors relating to the victim and offender, the relationship between the victim and offender and the characteristics of violent incidents had some impact on reporting of domestic violence to police. These findings are discussed in detail below, and summarised in Table 1. For the sake of brevity, only factors that were identified as being positively or negatively related to reporting (and those that produced mixed findings) are discussed in detail.

Victim characteristics

Demographic characteristics

Studies looked at a variety of victim demographic factors, including gender, age, race/ethnicity, whether they were pregnant at the time of the incident, geographic location (rural or urban) and access to social support networks. The majority of reviewed studies focused on female-only samples, meaning that the examination of any association between victim gender and reporting was limited. Two of the three studies that did include victim gender in their analysis found that female victims were significantly more likely than male victims to report violence to the police (Felson & Paré 2005; MacQueen & Norris 2016) with estimates provided by MacQueen and Norris (2016) indicating that female victims are more than three times more likely to report than male victims. The third study found that gender had no impact on reporting (Birdsey & Snowball 2013).

Twelve studies examined the relationship between reporting and victim race or ethnicity (Ackerman & Love 2014; Akers & Kaukinen 2009; Ammar et al. 2005; Bachman & Coker 1995; Birdsey & Snowball 2013; Bonomi et al. 2006; Hickman & Simpson 2003; Hutchison 2003; Johnson 1990; Lee, Park & Lightfoot 2010; Novisky & Peralta 2015; Pitts 2014). While there is significant variation among these studies in terms of the racial groups they include and compare, there is consistent evidence that when compared to ethnic minorities (eg black persons) white victims are less likely to report domestic violence to the police. Four of the seven studies that compared white victims with non-white ethnic groups found that white victims are less likely to report than victims who are black (Bachman & Coker 1995; Hutchison 2003), Latina (Ackerman & Love 2014),

aboriginal (Canadian; Akers & Kaukinen 2009) and other non-white ethnic minorities (Ackerman & Love 2014). However, the majority of studies that found a relationship between reporting and victim ethnicity were conducted overseas, which may have limited applicability in Australian contexts. Notably, the only Australian study that explored ethnicity and reporting found no difference between Indigenous and non-Indigenous victims (Birdsey & Snowball 2013).

A small number of other victim sociodemographic factors were explored in the included studies, particularly:

- victim age (Ackerman & Love 2014; Akers & Kaukinen 2009; Bachman & Coker 1995; Birdsey & Snowball 2013; Bonomi et al. 2006; Hickman & Simpson 2003; Hutchison 2003; Johnson 1990; Lee, Park & Lightfoot 2010; MacQueen & Norris 2016; Mirrlees-Black 1999; Novisky & Peralta 2015; Pitts 2014; Wiist & McFarlane 1998);
- pregnancy (Birdsey & Snowball 2013; Johnson 1990; Meyer 2010; Pitts 2014);
- geographic location (Bachman & Coker 1995; Akers & Kaukinen 2009; Stavrou, Poynton & Weatherburn 2016); and
- access to social support (Ammar et al. 2005; Johnson 1990; Stavrou, Poynton & Weatherburn 2016).

The analysis of these studies found largely non-significant results (see Table 1).

In summary, the current analysis identified very few victim demographic factors that consistently predict reporting to police. The only factors that appear to hold constant across multiple studies are victim ethnicity and gender—females and white victims are less likely than other victims to report to the police.

Socio-economic characteristics

Victim employment and education level appear to have no impact on reporting. Eight of the nine studies that looked at employment (Abel & Suh 1987; Akers & Kaukinen 2009; Berk et al. 1984; Birdsey & Snowball 2013; Johnson 1990; MacQueen & Norris 2016; Mirrlees-Black 1999; Pitts 2014), found no relationship between employment status and reporting. Similarly, nine of the 10 studies that included education measures (Abel & Suh 1987; Akers & Kaukinen 2009; Bonomi et al. 2006; Hutchison 2003; Johnson 1990; Lee, Park & Lightfoot 2010; Meyer 2010; Novisky & Peralta 2015; Pitts 2014; Wiist & McFarlane 1998) identified no relationship with reporting.

Twelve studies examined the association between victim socio-economic status (SES) and reporting, with the majority finding no relationship. However, findings appeared to be influenced by the measure of SES used. Studies that measured victims' personal or family/household income, or their perceived level of financial independence, identified no relationship with police notification (Akers & Kaukinen 2009; Bachman & Coker 1995; Hutchison 2003; Johnson 1990; Meyer 2010; Wiist & McFarlane 1998). In comparison, three studies found that lower SES was associated with reporting when the following measures were used:

- family-level SES (calculated using family member income, education and occupation; Ackerman & Love 2014);
- victim views of whether they were managing well financially (Mirrlees-Black 1999); or
- whether a victim could raise $2,000 in an emergency (Stavrou, Poynton & Weatherburn 2016).

The relationship between victim SES and reporting may be confounded by victim ethnicity. One study specifically examined the intersections between victim SES, race and reporting and found that white victims were 92 percent less likely to report than black victims, 83 percent less likely to report than Latina victims and 36 percent less likely to report than other non-white ethnic minority victims (Ackerman & Love 2014). When controlling for SES differences between these racial groups, the difference estimates decreased by up to 40 percent, such that reporting rates were comparable with those of white victims. What this means is that the differences in reporting observed previously for non-white and white victims may be driven by differences in SES level.

Overall, the majority of research shows that indicators of victim socio-economic advantage such as employment and education are not significantly related to reporting domestic violence to law enforcement. However, the role of SES and ethnicity and their relative impact on one another in domestic violence reporting requires further examination.

History of abuse and police contact

Relative to studies that included information on the sociodemographic and economic characteristics of victims, there are very few studies exploring the reporting of prior victimisation experiences outside the current abusive relationship and contact with police. Of the three studies that included victim abuse history in their modelling, two found that prior victims were more likely to contact police than those with no history of abuse (MacQueen & Norris 2016; Stavrou, Poynton & Weatherburn 2016). The third study found no significant relationship (Johnson 1990).

The relationship between prior reporting and notifying police of the most recent domestic violence incident was investigated by three studies, two of which found that victims who had contacted police about historical domestic violence were more likely to report the most recent incident as well (Berk et al. 1984; Birdsey and Snowball 2013). Berk and colleagues (1984) estimated that victims who had made a report to police previously were approximately 41 percent more likely to have reported the most recent incident than those who had not contacted police previously. The third study again found no significant relationship (Hickman & Simpson 2003).

Although only a small number of studies included an examination of historical variables in models predicting future reporting, the balance of the evidence suggests that both prior experiences of abuse outside the current abusive relationship and prior reporting of violence to the police predict future reporting. This means that many victims who report to police have been the subject of ongoing abuse.

Offender characteristics

The offender characteristics that were most consistently explored in the included studies were ethnicity/race, employment and prior arrest histories. The association between offender race and reporting is unclear, largely because of inconsistencies between the three studies regarding how ethnicity was measured. One study which compared reporting of domestic violence in relationships where the offender and victim were the same race (black or white) found that violence perpetrated by black offenders was statistically more likely to be reported than offences by white offenders (Bachman & Coker 1995). Pitts (2014) compared reporting of domestic violence by Latina women when the offender was the same race or a different race to the victim and found that victims were three times more likely to report if they were the same race as the offender, when compared with victims who were of a different race, regardless of the ethnicity of the offender. In comparison, Bonomi and colleagues (2006) analysed offender race by differentiating between black and non-black offenders, and found no difference between the two groups. What this suggests is that there could be a relationship between offender race and victim reporting, although it could be mediated by the race of the victim.

The analysis also found that offender employment (Abel & Suh 1987; Berk et al. 1984; Johnson 1990), and arrest history (Abel & Suh 1987; Bonomi et al. 2006; Hickman & Simpson 2003) had no impact on victim reporting of domestic violence.

Victim–offender relationship

Abuse within the relationship

The presence of abuse within the relationship between the victim and offender was measured across two dimensions. Three studies looked at the length of time that the abuse had been occurring at the time of the most recent incident (Abel & Suh 1987; Birdsey and Snowball 2013;

Johnson 1990), only one of which identified a significant relationship. Abel and Suh (1987) found that victims who had experienced abuse for longer than one year were significantly more likely to report to police than those who had experienced abuse for less time.

The frequency of prior abuse within the relationship was examined by five studies, four of which identified a positive and linear relationship between frequency of abuse and reporting (Berk et al. 1984; Hutchison 2003; Johnson 1990; MacQueen & Norris 2016). The fifth study produced contradictory findings, with less frequent abuse being more likely to be reported (Ammar et al. 2005). However, the balance of the evidence suggests that as frequency of abusive behaviour increases, so too does the likelihood of reporting to police.

Relationship status

Ten studies looked at the role of victim–offender marital status in offending, nine of which found no relationship (Bachman & Coker 1995; Berk et al. 1984; Birdsey & Snowball 2013; Bonomi et al. 2006; Hutchison 2003; Johnson 1990; Meyer 2010; Mirrlees-Black 1999; Pitts 2014). This suggests that married victims are no more or less likely than unmarried ones to report domestic violence. Four similar studies that examined whether police notification is influenced by whether the victim and offender were in a relationship or separated at the time of the incident produced more mixed results. One study found that victims were more likely to report violence perpetrated by current partners than former partners (Coulter et al. 1999) while another conducted in Australia found the opposite—reporting was more common when the violence was perpetrated by a previous partner (Stavrou, Poynton & Weatherburn 2016). The other two studies found no statistical relationship (Ammar et al. 2005; Birdsey & Snowball 2013). As such, it is not possible to determine whether current relationship status (other than marital) has a role in reporting.

Victim and offender cohabitation at the time of a domestic violence incident was investigated in five studies, two of which found that victims who were living with the offender at the time of the incident were less likely to call the police (Ackerman & Love 2014; MacQueen & Norris 2016). However, three studies found no difference in police notification between cohabiting partners and those living separately (Berk et al. 1984; Mirrlees-Black 1999; Wiist & McFarlane 1998). The studies examining the length of the relationship between the victim and offender also produced mixed results. Two studies found that victims are less likely to report when they have been in the relationship for a long period of time (Johnson 1990; Lee, Park & Lightfoot 2010) while the other two did not produce any significant findings (Bonomi et al. 2006; Hickman & Simpson 2003).

Children

The presence of children in the relationship appeared to have no impact on reporting. Four studies found that the victim having children—regardless of whether they were living with them at the time of the incident—had no impact on reporting (Abel & Suh 1987; Johnson 1990; Akers & Kaukinen 2009; Wiist & McFarlane 1998). Further, of the three studies that asked victims whether there were children living in the family home at the time of the incident (MacQueen & Norris 2016; Novisky & Peralta 2015; Bonomi et al. 2006), only one found a significant relationship with reporting (Bonomi et al. 2006).

Characteristics of the reported incident

Type of violence

The types of violence used against victims/survivors in reporting studies were measured in a number of different ways. Three studies differentiated between severe and minor domestic violence, all of which found victims/survivors were more likely to report severe abuse compared with more minor forms (Bonomi et al. 2006; Johnson 1990; Wiist & McFarlane 1998). Bonomi and colleagues (2006) found that severe physical and psychological abuse (as measured using the Conflict Tactics Scale) was associated not only with police reporting but also with the frequency of calls.

Four studies identified a relationship between the type of violence and reporting, with victims experiencing physical forms of violence statistically more likely to contact police (Birdsey & Snowball 2013; Coulter et al. 1999; Hickman & Simpson 2003; Stavrou, Poynton & Weatherburn 2016). Taken together, the study findings point towards a 'hierarchy' of abuse types. Physical violence appears to have the strongest association with reporting, followed by sexual assault and then other forms of domestic violence that may not involve physical contact between the victim and offender (eg emotional and verbal abuse, stalking and harassment).

Thirteen studies examined the role of physical injury in reporting (Ackerman & Love 2014; Akers & Kaukinen 2009; Ammar et al. 2005; Bachman & Coker 1995; Berk et al. 1984; Birdsey & Snowball 2013; Bonomi et al. 2006; Hickman & Simpson 2003; Lee, Park & Lightfoot 2010; MacQueen & Norris 2016; Mirrlees-Black 1999; Pitts 2014; Stavrou, Poynton & Weatherburn 2016), with 10 showing that victim injury increases reporting. Study estimates of the impact of injury on reporting rates vary significantly, from 2.28 times higher (Stavrou, Poynton & Weatherburn 2016) to eight times higher (Pitts 2014).

Finally, property damage during the domestic violence incident has an unclear relationship to subsequent reporting, although the balance of evidence suggests that it has no impact. Five studies looked at the role of property damage, two of which found that victims were more likely to contact police when the offender damaged property (Akers & Kaukinen 2009; Birdsey & Snowball 2013). The other three studies found no relationship (Berk et al. 1984; Hickman & Simpson 2003; Hutchison 2003).

Other incident characteristics

A range of other incident characteristics were explored in the reviewed studies. First, five studies examined the use or presence of a weapon during a domestic violence incident, with three finding that offender weapon use increased the likelihood and frequency of reporting (Ackerman & Love 2014; Akers & Kaukinen 2009; Bonomi et al. 2006). The other two detected no correlation (Johnson 1990; Lee, Park & Lightfoot 2010).

Offender intoxication (drugs or alcohol) at the time of the incident was examined in six studies, of which half identified that incidents involving a perpetrator who was intoxicated were more likely to be reported to the police by the victim. However, the findings were in part influenced by the type of intoxication measured:

- three studies looked at offender alcohol use, of which two found a significant increase in the likelihood of reporting (Akers & Kaukinen 2009; Ackerman & Love 2014) and one detected no relationship (Johnson 1990);
- two studies looked at offender drug and/or alcohol use, with one demonstrating a positive relationship with reporting (Novisky & Peralta 2015) and the other identifying no impact (Hickman & Simpson 2003); and
- one study looked at offender drug intoxication and found no correlation with victim reporting (Ackerman & Love 2014).

This suggests that incidents involving an offender who is alcohol intoxicated are more likely to be reported to the police than those involving a drug-affected offender.

All seven studies that included information about whether a child was present at the time of an incident found that child witnesses increase the likelihood of victim reporting (Akers & Kaukinen 2009; Ammar et al. 2005; Berk et al. 1984; MacQueen & Norris 2016; Meyer 2010; Mirrlees-Black 1999; Pitts 2014). The studies indicate that incidents involving child witnesses were approximately three times more likely to be reported to the police than incidents that did not involve children (MacQueen & Norris 2016; Meyer 2010; Pitts 2014). This indicates that, while having children living

in the family home may not increase reporting, children witnessing the violence may prompt victims to report to the police out of concern that the abuse has escalated to a point where their children's safety or wellbeing is threatened (MacQueen & Norris 2016; Meyer 2010).

Overall, there is strong empirical support for the influence of situational incident characteristics on victim reporting behaviour. The type and severity of abuse appear to play an important role in reporting, with severe physical abuse the most likely to be reported to police. Children witnessing the abuse and the victim suffering physical injury are also consistent predictors of victim reporting. Despite mixed findings, the balance of the evidence suggests that weapon use and offender alcohol intoxication also increase reporting, while property damage and offender drug intoxication have no relationship to reporting.

Table 1: Independent variables and their relationship with reporting domestic violence to police[a]

Independent variables	Total number of studies	Study finding (n)		
		Increased reporting	Decreased reporting	Non-significant
Victim characteristics				
Female	3	2		1
Non-white	7	4		3
Older	14	2		12
Pregnant	4	1		3
Living in urban area	3			3
Access to social support	3			3
Low-level occupation	9	1		8
Low education level	10	1		9
Low SES	12	4		8
Suffered previous abuse[b]	3	2		1
Has reported to police previously	3	2		1
Offender characteristics				
Employed	3			3
Offender arrested previously[c]	3			3[b]
Victim–offender relationship characteristics				
Long duration of abuse	3	1		2
Frequent abuse	5	4		1
Married	10		1	9
Current partner[d]	4	1	1	2
Living together	5		2	3
Long-term relationship	4		2	2
Victim has children	4			4
Children living in home	3	1		2

Table 1: Independent variables and their relationship with reporting domestic violence to police[a] (continued)

Independent variables	Total number of studies	Study finding (n)		
		Increased reporting	Decreased reporting	Non-significant
Characteristics of the reported incident				
Severe violence[e]	3	3		
Physical assault[f]	4	4		
Physical injury	13	10		3
Property damaged	5	2		3
Weapon used/present	5	3		2
Offender using alcohol	3	2		1
Offender using drugs/alcohol	3	1		2
Children witnessed violence	7	7		

a: Table only includes findings from the 21 studies included in the review. For each independent variable, the number of studies examining the variable is presented, along with the breakdown of studies by findings from significance testing
b: outside the current relationship
c: although prior arrest history did not predict future reporting, it was associated with frequency of reporting (Bonomi et al. 2006)
d: vs former partner
e: vs minor violence
f: vs all other forms of abuse
Source: AIC Predictors of reporting, 2016–17 [computer file]

Who reports and who doesn't?

The current study aimed to understand what factors increase or decrease the likelihood that victims will report domestic violence to police. It is somewhat encouraging that the findings suggest that the people who are contacting police are also the most vulnerable to either experiencing domestic violence in the first place (eg women), or being significantly affected by the violence because it is severe and/or ongoing. Considering their relative risk and the harms they experience, there is a clear rationale for continued efforts to improve reporting within these groups.

Overall, the study identified that victim and offender characteristics are less reliable predictors of reporting than characteristics of the relationship and the incident itself. This said, it is possible from the evidence to say that women who are not white, who are experiencing frequent abuse and who have had a violent partner in the past are more likely to report domestic violence to the police. Incidents involving an intoxicated offender, serious violence (eg violence that results in a physical injury, physical abuse) and child witnesses are also more likely to be reported to the police.

Conversely, men are less likely to contact police, as are victims who are white, experiencing violence for the first time or experiencing violence that is infrequent or minor in nature. Incidents that are typically not reported to police involve relatively minor violence (ie violence that does not involve physical abuse or result in an injury), a sober offender and no child witnesses.

Conclusion

Victims of domestic violence proactively make a number of decisions about how to manage abusive relationships and use law enforcement to promote their safety (Lewis et al. 2000). These decisions involve consideration of a number of factors which can facilitate or inhibit reporting to police. Factors encouraging victims to report include the perception that the abuse is serious enough to constitute a crime or represent an acute danger, or threats to the safety or wellbeing of the victim's children. Factors deterring victims from reporting to police include fear that they will not be believed, fear of reputational damage, uncertainty that the abuse is serious enough to report, and having financial and social resources that can be used as an alternative to police intervention.

The findings from this analysis highlight significant issues around victim under-reporting, and an opportunity to recognise those groups of victims who are not coming to the attention of law enforcement. It is also an opportunity to critically examine where police responses to domestic violence have been directed in the past, where police resources and partnerships may be targeted, and whether new pathways for reaching victims could be explored. Finally, the purpose of this paper was to identify *who* is more likely to report, not *why* some cohorts may be more likely than others to contact police. Understanding of this issue would benefit from additional research that focuses on the reasons encouraging and inhibiting victim cohorts from reporting.

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2. Targeting repeat domestic violence: Assessing short-term risk of reoffending

Anthony Morgan, Hayley Boxall and Rick Brown

Repeat domestic violence offending poses a significant challenge for police and other frontline service providers. Recidivist offenders account for a sizeable proportion of overall domestic violence offending and associated harms (Bland & Ariel 2015; Boxall, Rosevear & Payne 2015; Millsteed & Coghlan 2016; Sherman 1992; Sherman et al. 2016).

Given the significant harm associated with repeat domestic violence for victims and their families, preventing the recurrence of domestic violence is vitally important (Cattaneo & Goodman 2005). This requires identifying offenders who are more likely to reoffend, as well as victims who are at greater risk of being revictimised, and targeting responses at these high-risk individuals and relationships.

Both the National Plan to Reduce Violence Against Women and their Children and the Royal Commission into Family Violence in Victoria describe the important role of risk assessment and risk management frameworks in informing the response to domestic violence victims and offenders (National Council to Reduce Violence against Women and their Children 2009; State of Victoria 2016). Risk assessment and risk management principles now underpin many aspects of the criminal justice response to domestic violence, from the response by police through to the management of offenders by correctional agencies.

For example, police in several jurisdictions have implemented high-risk domestic violence offender teams which target repeat offenders (Fentiman 2017; NSW Government 2016). Similarly, there has also been a greater focus on programs targeting perpetrators of domestic violence, and recognition of the importance of measures to understand, respond to and manage the risk that a perpetrator will reoffend (Day et al. 2010; Mackay et al. 2015). Integrated responses to domestic violence, which rely on collaboration between criminal justice agencies and other government and non-government service providers, also target those victims who are identified as being at the highest risk of further victimisation (Breckenridge et al. 2016; Trimboli 2017).

Assessing the risk of further violence involving offenders and victims who come into contact with police has required the development of risk assessment tools. These risk assessment tools use factors relating to the incident, offender, victim and relationship history believed to be associated with higher risk of violence. The most common approach combines actuarial risk assessment with professional judgement (State of Victoria 2016; Messing & Thaller 2013). Several risk assessment tools have been developed for police in Australia, including the Risk Assessment Screening Tool in Tasmania, the Domestic Violence Safety Action Tool in New South Wales, and the Family Violence Risk Assessment and Risk Management Report (the L17 form) in Victoria. Similar tools have been developed overseas. The purpose of these tools is to enable police to make quick decisions about how to respond to protect the safety and welfare of victims of domestic violence, including decisions about detention, bail and the assistance provided to victims (Fitzgerald & Graham 2016).

Validating these instruments typically involves using statistical methods that assess the likelihood that the instrument will produce a higher predicted probability of recidivism for those offenders who go on to commit a further offence, compared with offenders who do not (Millsteed & Coghlan 2016). A meta-analysis of 25 studies (all from outside of Australia) by Messing and Thaller (2013) found that, while there was considerable variation between the different instruments, each tool estimated risk at a rate better than chance. However, the results did not indicate an acceptable ability to discriminate between reoffenders and non-reoffenders (Millsteed &

Coghlan 2016). Australian research has proven more promising, with Mason and Julian (2009) and Millsteed & Coghlan (2016) both showing that a model limited to those factors (in the Risk Assessment Screening Tool and L17 forms, respectively) most strongly associated with recidivism could predict reoffending with a reasonable degree of accuracy.

Nevertheless, certain challenges with the identification of high-risk offenders remain. One such challenge is finding a balance between specificity and sensitivity (Messing et al. 2015). Specifically, assessment tools should minimise the likelihood that offenders who go on to reoffend are incorrectly assessed as low risk (a false negative), without increasing the number of false positives (offenders who are assessed as being likely to reoffend who do not) to such a level that it is no longer possible to efficiently target resources at the highest risk offenders. Chalkley and Strang (2017) analysed domestic homicides in Dorset and found that the Domestic Abuse, Stalking and Harassment risk assessment protocol failed to correctly classify two-thirds of homicides as high risk, while 99 percent of high-risk assessments resulted in no serious harm. Using information on the risk assessment tool with the highest predictive validity reported by Messing and Thaller (2013), Pease and Roach (2017: 95) illustrate how nearly nine in 10 victims predicted to experience further serious injury or death do not, arguing 'the "false alarm rate" is a huge problem in resource-strapped organisations like the police'. This is particularly relevant given the number of domestic violence offenders apprehended by police in Australia every year—equivalent to around one in five of all offenders proceeded against by police (ABS 2017)—as well as the resources required for intensive interventions for high-risk victims or offenders (Agnew-Pauley & Poynton 2017), and the serious injury or death that can occur when a victim does experience further violence (NSW Domestic Violence Death Review Team 2015).

Risk assessment tools are designed to assist police and other frontline services to make quick decisions about detaining offenders and the nature of support provided to victims. They do not, however, provide any real indication as to the speed with which these decisions need to be made. Different instruments have been validated based on variable follow-up periods ranging from six months to five years (Messing & Thaller 2013). The accuracy of these tools relates to their ability to predict reoffending sometime within this period—they do not estimate when, nor do they provide an indication of the potential frequency or severity of future violence (Messing & Thaller 2013).

Finally, there are issues related to their implementation by frontline responders. Domestic violence risk assessment tools require officers to collect substantially more information than is the case for other offence types. While this information may assist police decision making beyond the assessment of risk (Mason & Julian 2009), collecting it can be resource intensive. Ringland (2013) and Fitzgerald and Graham (2016) argue that this additional time and resource cost may be for little additional predictive accuracy. While they have been shown to offer more accurate predictions of reoffending than professional judgement alone (Braaf & Sneddon 2007; Van Tongeren, Millsteed & Petry 2016), specialised risk assessment scales have been shown to have similar levels of accuracy to scales designed for general or violent reoffending (Hanson, Helmus & Bourgon 2007), while victims' assessments of their own risk have been shown to be just as accurate as some tools (Wheller & Wire 2014).

While risk assessment tools for domestic violence are a relatively new development (Messing & Thaller 2013), and there is significant work underway to continue to refine the instruments that exist (State of Victoria 2016), there is merit in looking beyond these instruments to better understand and identify opportunities for intervention and to help inform the response to domestic violence, including by police. The broader repeat victimisation literature offers several important insights. Grove and Farrell (2012) outline 20 key findings from the research into repeat victimisation, some of which have direct relevance to domestic violence.

These include that an individual's risk of becoming a repeat victim is heightened during the period immediately following a victimisation incident, and that the risk of repeat victimisation increases with each subsequent incident. Further, they argue that most recorded crime constitutes repeat victimisation of the same targets, that a small group of victims experience a disproportionate amount of repeat victimisation, and that repeats are disproportionately committed by the same offenders. These latter conclusions are supported by recent systematic reviews, which have confirmed that, across all crime types studied, five percent of victims experience 12 percent of victimisations (O et al. 2017), and 10 percent of offenders are responsible for approximately 40 percent of all crime (Martinez et al. 2017). These findings have important implications for targeting prevention, and reviews of measures to reduce repeat victimisation have repeatedly been shown to reduce overall crime (Grove et al. 2012).

In domestic violence, repeat offending and repeat victimisation frequently intersect, whereby a current or former partner repeatedly offends against the same victim. Unlike many other crime types, where the target of an offence is unlikely to know the offender, the heightened risk of repeat domestic violence victimisation (and repeat offending) is largely a consequence of the relationship that exists between the offender and the victim, and the opportunities this provides for repeated acts of violence (Farrell, Phillips & Pease 1995).

There are different explanations, however, for why the risk of violence remains elevated following a domestic violence incident. It may reflect the frequent, repeated acts of violence perpetrated by a violent, controlling partner (Johnson 2006). It might also be a consequence of the situational factors or stressful events experienced by an offender, victim or couple that were present during the initial act of violence—such as the excessive consumption of alcohol (Marcus & Braaf 2007), separation or infidelity (perceived or actual), the male partner losing his employment and the female partner obtaining employment (Krishnan et al. 2010; Riger & Staggs 2004; Roberts et al. 2011), the death of a loved one (Roberts et al. 2011), pregnancy (Devries et al. 2010) or the birth of a child (Bowen et al. 2005). Reoffending may be driven by the offender's desire to seek revenge on the victim, retaliating against the victim's perceived transgression of contacting the police and getting them in trouble (Felson, Ackerman & Gallagher 2005). Finally, it might be a function of the criminal justice response—specifically, repeat offences that relate to a breach of a protection order, which may or may not coincide with other offences.

Irrespective of the cause, understanding patterns of repeat domestic violence victimisation and offending may assist with targeting responses. Recent Australian research has demonstrated that a relatively small cohort of offenders is responsible for a disproportionate number of domestic violence incidents, while a relatively small proportion of victims experience a disproportionate amount of harm (Kerr, Whyte & Strang 2017; Millsteed & Coghlan 2016; Sherman et al. 2016). This is consistent with research overseas (Barnham, Barnes & Sherman 2017; Bland & Ariel 2015). Risk assessment studies have shown that one of the strongest indicators of future offending is prior offending, including prior violence and breaches of violence orders (Dowling et al. 2018; Hilton et al. 2004; Klein & Tobin 2008; Mason & Julian 2009; Millsteed & Coghlan 2016). Importantly, a number of recent studies have also examined the conditional probability of reoffending for dyads (pairs of offenders and victims) (Barnham, Barnes & Sherman 2017; Bland & Ariel 2015; Kerr, Whyte & Strang 2017). All of these studies have found that the likelihood of reoffending increases with each subsequent offence or police call-out. There is some evidence that the time taken to reoffend decreases with each subsequent offence (Barnham, Barnes & Sherman 2017; Bland & Ariel 2015; Kerr, Whyte & Strang 2017; Mele 2009), although there are limitations to this analysis—most notably, the observation period reduces with each subsequent event, which constrains the period in which reoffending may be detected.

Relatively little literature has focused on when reoffending is most likely to occur, and how this might change over time. Lloyd, Farrell and Pease (1994) analysed 14 months of domestic violence related calls for assistance to Merseyside Police (UK) and found that after an initial incident, one-third (35%) of households called police again for assistance within five weeks, and after the second incident almost half (45%) called again within five weeks. In their discussion of the findings, the authors suggested that this 'gives a good indication of where resources can be deployed to prevent crime and detect perpetrators' (Lloyd, Farrell & Pease 1994: 3). Similarly, Poynton, Stavrou, Marott and Fitzgerald (2016) found that, while only a minority of Apprehended Domestic Violence Orders in New South Wales were breached while they were in effect, breaches most frequently occurred in the months after the order had been issued. Taken together, this suggests there 'exists a "heightened risk period" for repeat domestic victimisation' in the period following an incident (Lloyd, Pease & Farrell 1994: 3).

This brief summary suggests there is a need to explore the temporal dimensions of repeat domestic violence victimisation and offending and, in particular, focus on the period immediately following a domestic violence incident. Understanding the timing of future violence has important implications for police and other frontline services, with victims and offenders who are at higher risk of immediate violence able to be prioritised for intervention.

Aim and method

The overall aim of this research was to assist frontline police and other service providers to more effectively target perpetrators and survivors of domestic violence who may be at increased risk in the period immediately following a domestic violence incident.

The research focused on developing a better understanding of the temporal dimensions of domestic violence reoffending. It aimed to address the following research questions:

- What proportion of domestic violence offenders reoffend in the period immediately following a domestic violence incident?
- To what extent is prior domestic violence offending associated with an increased likelihood of short-term reoffending?
- Are domestic violence offenders more likely to offend with each subsequent offence?

This involved the analysis of data extracted from the Family Violence Management System (FVMS) maintained by Tasmania Police. The FVMS is a purpose built database that stores information on all domestic violence incidents that are reported to Tasmania Police and result in a call-out. Domestic violence incidents do not have to result in an arrest or charge to be included in the FVMS (Boxall, Payne & Rosevear 2015).

The definition of domestic violence underpinning this study is provided by *Tasmania's Family Violence Act 2004*. Under the Act, domestic violence (referred to in the Act as family violence) means any of the following types of conduct committed by a person, directly or indirectly, against that person's past or current spouse or partner:

- assault (including sexual assault);
- threats, coercion, intimidation or verbal abuse;
- abduction;
- stalking;
- economic abuse (eg withholding money);
- emotional abuse or intimidation; or
- contravening an external Family Violence Order (FVO), an interim FVO, an FVO or a Police Family Violence Order.

The current study examines short-term reoffending among 1,099 offenders who were involved in a domestic violence incident attended by police. These offenders were followed for a six-month period following this initial incident (ie all offenders were followed for the same length of time). The first domestic violence incident recorded for each unique offender is referred to as the 'index incident'. Data on the criminal histories of offenders for the five years prior to the first incident were also analysed to understand the relationship between prior and repeat offending.

Limitations

There are limitations to this study. The first is that it relies on incidents reported to police. There are many reasons why domestic violence offences are not reported to police, meaning that recorded crime data only provides the 'tip of the iceberg' (Boxall, Payne & Rosevear 2015; Gracia 2004; McPhedran & Baker 2012). The current study will therefore likely underestimate actual reoffending, as well as prior violence between partners. Importantly, one of the strengths of the FVMS database is that it is not limited to offences but includes all domestic violence incidents that come to the attention of police.

Restricting the sample to offenders apprehended by police in a six-month period was necessary due to the limits of available data. It did, however, result in a relatively small sample, which limited some of the analysis that might otherwise have been possible. It is also important to consider the implications of the follow-up period in terms of the estimated rate of reoffending—the longer offenders are observed, the more repeat offending will be detected, albeit with diminishing marginal returns (Farrell, Sousa & Weisel 2002). Interventions targeting short-term reoffending, which is the focus of the current study, should not be at the expense of programs designed to reduce reoffending more generally.

Finally, custodial data were not available for offenders in the sample, meaning that it was not possible to account for time spent in custody during the observation period. Periods spent in custody reduce an offender's free time to commit further offences. This may affect estimates of both the time to and prevalence of short-term reoffending. There is some evidence that accounting for custodial episodes has limited impact on the results of recidivism analyses; however, the effect is more noticeable for violent offending and for shorter follow-up periods (Ferrante, Loh & Maller 2009).

Findings

What proportion of offenders reoffend in the period immediately following a domestic violence incident?

The first step was to determine the prevalence of short-term reoffending among domestic violence offenders observed for a six-month period following the index incident (n=1,099). Characteristics of the sample of domestic violence offenders included in this component of the study are presented in Table 1. The majority of offenders included in the sample were male (85%), while three in five offenders (60%) were aged 35 years and younger.

Table 1: Sample characteristics (n=1,099)		
	n	%
Gender		
Male	935	85
Female	164	15
Age		
25 years and under	246	22
26–35 years	420	38
36–45 years	273	25
46 years and over	160	15
Relationship with victim (index incident)		
Current partner	565	53
Former partner	505	47

a: Relationship status was unknown for 29 offenders
Source: Tasmania Police FVMS 2010-11 [computer file]

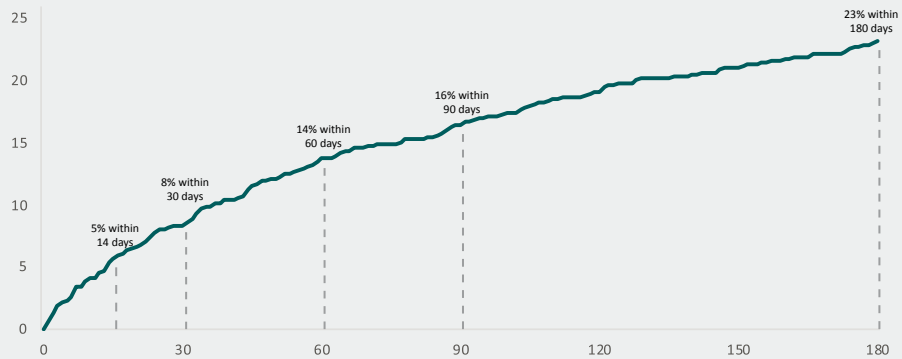
Survival analysis was used estimate the cumulative rate of reoffending at each time point following the index incident (Figure 1). Overall, nearly one-quarter (23%, n=255) of the offenders in the sample were involved in at least one more domestic violence incident in the six months following the index incident. Rates of reoffending at key intervals were as follows:

- one in 20 offenders (5%, n=59) committed their first reoffence within 14 days of the index incident;
- eight percent of offenders (n=92) committed their first reoffence within 30 days of the index incident;
- one in seven offenders (14%, n=151) committed their first reoffence within 60 days of the index incident; and
- sixteen percent of offenders (n=180) committed their first reoffence within 90 days of the index incident.

These results show that, while the majority of offenders will not be involved in another domestic violence incident in the six months following their index incident, a significant proportion of offenders will come into contact with police again in a matter of months, if not weeks. The reoffending rate at six months (23%) is similar to the rate reported by the Crime Statistics Agency (21%; Van Tongeren, Millsteed & Petry 2016) in their analysis for the Victorian Royal Commission into Family Violence.

Further, given the relatively small increase in reoffending between 60 and 90 days (two percentage points), these results suggest that particular emphasis should be placed on the first two months following a domestic violence incident. The likelihood of reoffending declines over time. Reducing or even delaying reoffending within this window may offer significant benefits in terms of the number of victims who might otherwise be affected.

Figure 1: Reoffending rates at key intervals following the index incident (%)



Source: Tasmania Police FVMS 2010-11 [computer file]

Of the offenders who were apprehended for a subsequent domestic violence incident, the vast majority offended against the same victim (Table 2). Ninety-one percent of offenders who reoffended committed their first reoffence against the same victim, while 89 percent of offenders reoffended against the same victim in each subsequent incident within the six-month follow-up period.

Eight percent of offenders reoffended multiple times in the six months following the index incident. Offenders who reoffended more quickly were more likely to be involved in multiple incidents. The median number of days to the first reoffence was significantly lower for individuals who reoffended more than once than it was for offenders who committed a single reoffence (34 days vs 59 days; z=3.594, $p<0.001$). Similarly, offenders who reoffended within the first 60 days after the index incident were significantly more likely to commit multiple reoffences than those offenders who committed their first reoffence after 60 days (41% vs 20%; $\chi^2(1)=12.21$, $p<0.001$, Cramér's V=0.22). This further reinforces the importance of intervening in the first two months following an incident.

Table 2: Characteristics of short-term reoffending (six-month follow-up)

	n	%
Total reoffences		
None	844	77
One	172	16
Two	51	5
Three or more	32	3
Victim (first repeat incident)		
Same victim	232	91
Different victim	23	9
Total victims		
One	227	89
Two	27	11
Three	1	<1

Note: Percentages may not add to 100 due to rounding
Source: Tasmania Police FVMS 2010-11 [computer file]

To what extent is prior domestic violence offending associated with an increased likelihood of short-term reoffending?

Consistent with the focus on repeat victims and offenders, the next step was to examine the relationship between prior offending and short-term domestic violence reoffending. Unlike previous studies exploring the predictive validity of risk assessment instruments (Hilton et al. 2004; Mason & Julian 2009), which have tended to limit offending/victimisation history data to lifetime variables (although not always, eg Millsteed & Coghlan 2016), the current study focuses on different measures of reoffending—whether the offender had been apprehended for any prior domestic violence incidents (within the last five years), the number of prior incidents, and the timing of the most recent incident. Both prior incidents and prior breaches of violence orders were examined.

The relationship between prior offending and the dependent variable—a domestic violence reoffence within 180, 60 or 30 days of the index event—was examined using chi-square tests of association, while unadjusted odds ratios are presented to enable comparison between groups. A statistically significant result, indicated by a *p*-value of less than 0.05, means that the probability of the observed difference being due to chance or error is less than five percent. The strength of the association was measured using Cramér's V, a value between zero and one where a score of 0.1 indicates a small effect size, a score of 0.3 indicates a medium effect size, and a score of 0.5 or more indicates a large effect size.

Offenders who had been apprehended for a domestic violence incident in the five years prior to the index incident were significantly more likely to reoffend within 180 days (30% vs 18%; $\chi^2(1)=19.11$, $p<0.001$, Cramér's V=0.13), 60 days (17% vs 11%; $\chi^2(1)=7.47$, $p<0.01$, Cramér's V=0.08) and 30 days (10% vs 7%; $\chi^2(1)=3.97$, $p<0.05$, Cramér's V=0.06). The odds of an offender with a prior domestic violence incident reoffending within 180, 60 or 30 days were 1.9, 1.6 and 1.5 times the odds for an offender without a prior history, respectively.

There was also a significant relationship between the number of prior incidents and reoffending within 180 days ($\chi^2(2)=23.80$, $p<0.001$, Cramér's V=0.15), 60 days ($\chi^2(2)=8.97$, $p<0.05$, Cramér's V=0.09) and 30 days ($\chi^2(2)=8.55$, $p<0.05$, Cramér's V=0.09). As shown in Table 3, offenders with four or more prior incidents were significantly more likely to reoffend at each interval—36 percent reoffended within 180 days, 20 percent within 60 days, and 15 percent within 30 days. The odds of an offender with four or more prior incidents reoffending within 180 days, 60 days and 30 days were 2.5, 2.0 and 2.3 times the odds of offenders with no prior incidents, respectively. These odds were consistently higher than those for offenders with one to three prior incidents. The results suggest that the frequency of prior violence is a better indicator of short-term reoffending than prior violence more generally.

Similarly, having been apprehended for breaching a protection order within the last five years was associated with an increased likelihood of reoffending within 180 days (33% vs 21%; $\chi^2(1)=14.36$, $p<0.001$, Cramér's V=0.11), 60 days (19% vs 13%; $\chi^2(1)=5.73$, $p<0.05$, Cramér's V=0.07) and 30 days (13% vs 7%; $\chi^2(1)=8.46$, $p<0.01$, Cramér's V=0.09). The odds of an offender apprehended for a breach offence in the past five years reoffending within 180 days was 1.9 times the odds of an offender with no prior breaches. For reoffending within 60 days, the odds ratio was 1.6 and, for 30 days, the odds ratio was 2.0.

There was a significant relationship between the number of prior breaches and reoffending at 180 days ($\chi^2(2)=15.39$, $p<0.001$, Cramér's V=0.12) and at 30 days ($\chi^2(2)=8.54$, $p<0.05$, Cramér's V=0.09). The results for reoffending at 60 days fell just below the threshold for statistical significance. However, knowing the number of prior breaches provided limited additional information with respect to the likelihood of further offending. The only exception was that 36 percent of offenders with multiple prior breaches in the previous five years reoffended within 180 days (OR=2.1), compared with 30 percent of offenders with one prior breach (OR=1.6) and 21 percent with no prior breaches.

Table 3: Reoffending rates, by prior domestic violence incidents and prior breaches							
		180 days		60 days		30 days	
	n	%	Unadj. OR (CI)	%	Unadj. OR (CI)	%	Unadj. OR (CI)
Prior domestic violence incidents (past 5 years)							
No prior incidents	622	18	1.00	11	1.00	7	1.00
1–3 prior incidents	348	27	1.6 (1.2–2.3)**	16	1.5 (1.0–2.2)*	9	1.3 (0.8–2.1)
4 or more prior incidents	129	36	2.5 (1.7–3.9)***	20	2.0 (1.2–3.3)**	15	2.3 (1.3–4.2)**
Prior breaches of violence orders (past 5 years)							
No prior breaches	880	21	1.00	13	1.00	7	1.00
1 prior breach	110	30	1.6 (1.1–2.5)*	19	1.6 (1.0–2.8)	13	1.9 (1.0–3.5)*
2 or more prior breaches	109	36	2.1 (1.4–3.3)***	18	1.6 (0.9–2.7)	14	2.1 (1.1–3.8)*
Total	1,099	23	–	14	–	8	–

***p<0.001; **p<0.01; *p<0.05
Note: Unadj. OR=unadjusted odds ratios; CI=confidence interval
Source: Tasmania Police FVMS 2010-11 [computer file]

Overall, the results confirm the importance of prior offending, particularly more frequent prior domestic violence, as a predictor of short-term reoffending. They also illustrate, however, the limitations of relying on retrospective assessments of risk based on a single event. Around one in five offenders with no prior incidents reoffended within six months, while more than two-thirds of offenders with a prior history of violence did not.

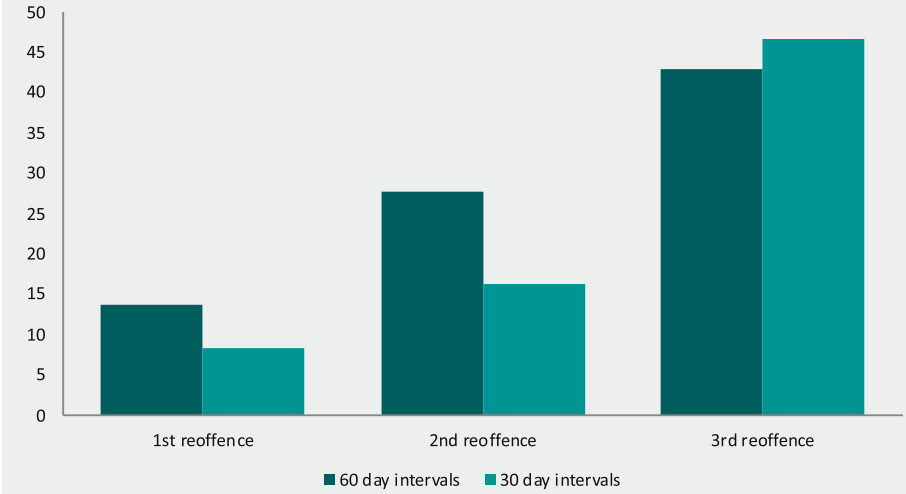
Are domestic violence offenders more likely to offend with each subsequent offence?

Up to this point, this analysis has focused on the first repeat offence perpetrated by an offender after the index incident recorded by police. However, there are offenders who were involved in multiple domestic violence incidents within the observation period. One of the main hypotheses of this chapter was that, consistent with the broader repeat victimisation literature, the risk of domestic violence offenders reoffending does not remain stable. Understanding whether domestic violence offenders are more likely to offend following each subsequent incident is important because of the potential implications for the targeting, timeliness and intensity of the response by police and partner agencies.

The results show that the risk of reoffending is cumulative (Figure 2). While 14 percent of offenders reoffended within 60 days of the index incident, more than one-quarter of those offenders (28%; n=42) went on to commit a second reoffence within 60 days of the first reoffence. Nearly half of this cohort (43%; n=18) went on to commit a third reoffence within the next 60 days. Those who committed three reoffences within three consecutive 60-day periods represent only two percent of the original sample of domestic violence offenders.

Similar patterns emerge when the time intervals between offences were reduced to 30 days, although the numbers become relatively small. Eight percent (n=92) of offenders committed their first reoffence within 30 days of the index incident, 16 percent (n=15) went on to commit their second reoffence within 30 days of the first reoffence, and half (47%; n=8) went on to commit a third reoffence within the following 30 days.

Figure 2: Reoffending rates at each reoffence, 60 and 30 day intervals (%)



Source: Tasmania Police FVMS 2010-11 [computer file]

To determine whether the observed pattern in repeat offending was associated with the criminal justice response to the index incident and each subsequent incident—namely, the issuing of protection orders—further analysis excluded those incidents that resulted in an offender being charged with a breach of order and no other offences. The reoffending rates at the first, second and third reoffences were 11 percent, 30 percent and 47 percent, respectively. This suggests that the elevated risk of reoffending at each subsequent reoffence was not associated with the criminal justice response—or at least the issuing of a protection order.

Discussion

Considerable attention has been given to the problem of high-risk and repeat domestic violence offenders; however, there have been limited attempts to draw upon the broader repeat victimisation literature, despite the significant opportunities for prevention. The results from this study show that a substantial proportion of offenders were involved in at least one more incident in the months following a domestic violence incident. Offenders who reoffended more quickly were more likely to be involved in multiple incidents. Repeat incidents most often involved the same victim.

Based on bivariate analyses, prior domestic violence history and prior breaches of violence orders were associated with an increased likelihood of short-term reoffending. Any prior non-compliance with breach orders and frequent prior domestic violence incidents appeared to be the best predictors of short-term reoffending, particularly in the 60 days following the index incident. However, the risk of short-term reoffending is not static. Further analyses showed that, not only do a significant proportion of offenders reoffend relatively quickly, the likelihood that they will reoffend again increases with each subsequent incident. The rate of reoffending among those who had already committed one reoffence following the index incident doubled, irrespective of the time frame (60 or 30 days), while nearly half of those offenders who committed a second reoffence went on to commit a third reoffence.

These findings have important implications for frontline responders. The findings here replicate the results of repeat victimisation studies for other crime types, as well as research conducted in the United Kingdom by Lloyd, Farrell and Pease (1994) on domestic violence offenders, and add further insight into recent findings on the conditional probability of domestic violence reoffending (Barnham, Barnes & Sherman 2017; Bland & Ariel 2015; Kerr, Whyte & Strang 2017).

Taken as a whole, the results point to the need for responses that focus on repeat victimisation and offending and that are timely, targeted and graduated. There is a high-risk period for further violence in the weeks and months following a domestic violence incident, and offenders who reoffend more quickly are more likely to reoffend more often. Timely responses are required to reduce the elevated risk of further violence in the short term. The results also reiterate the importance of targeting the most prolific repeat offenders—those most likely to reoffend, reoffend more quickly and reoffend multiple times—because they are responsible for a disproportionate amount of harm. Knowing when the most recent incident occurred, and whether there have been one or more prior incidents in recent months, is vital to knowing which offenders and which victims to target. This requires more active monitoring of recent, repeated incidents of domestic violence. Finally, the results of this study demonstrate that the intensity of the response provided by frontline services including the police should be graduated, and increase with each subsequent incident (Hanmer, Griffiths & Jerwood 2009; Morgan 2004).

Further research and replication studies

The limitations of this study have already been noted. Further work is needed to explore the correlates of short-term reoffending, particularly in terms of whether the predictors of short-term reoffending are consistent with those of longer follow-up periods. Further work is also needed to verify the generalisability of these findings to other jurisdictions and to larger samples of offenders. Replicating this analysis with other cohorts may provide further insights into the patterns, characteristics and correlates of short-term reoffending and potential opportunities for intervention. Finally, the effectiveness of the intervention approach and measures described in this chapter should be assessed in terms of their impact on short-term reoffending.

Conclusion

The current study aimed to provide new insights into the targeting of high-risk domestic violence offenders and victims, drawing upon the broader repeat victimisation literature. The findings have important implications for police and other frontline agencies responding to domestic violence, demonstrating the importance of addressing repeat victimisation and offending through timely, targeted and graduated responses.

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3. Is methamphetamine use associated with domestic violence?

Christopher Dowling and Anthony Morgan

Reducing domestic violence is a priority for all levels of government in Australia. The high rates of physical, psychological and emotional abuse, particularly among women (Australian Bureau of Statistics (ABS) 2017; Ayre et al. 2016; Cox 2016), create financial costs for victims and put pressure on health, legal and government services (KPMG 2016; PricewaterhouseCoopers 2015). This has led to growing investment in a wide range of criminal justice interventions and perpetrator programs. Research into the individual, interpersonal and broader socio-economic factors that increase the risk of domestic violence has also intensified as a result.

Research has shown that substance use, including both alcohol and illicit drug use, is a risk factor for many forms of violence (Boles & Miotto 2003; Exum 2006), including domestic violence (Capaldi et al. 2012; Choenni, Hammink & van de Mheen 2017; de Bruijn & de Graaf 2016; Moore et al. 2008; Shorey, Stuart & Cornelius 2011; Stith et al. 2004). While further research is needed to understand the mechanisms underlying this association, particular attention has been paid to the pharmacological effects of alcohol and illicit drugs. The prevailing view is that these substances reduce inhibition by weakening the cognitive mechanisms restraining violent or otherwise inappropriate actions, while also exaggerating certain emotional states (Boles & Miotto 2003).

Broader contextual factors related to substance use can also influence the likelihood of violence. Of particular relevance to domestic violence are the lifestyle stressors and relationship pressures that emerge from or are exacerbated by substance use. These stressors include financial strain, relationship breakdown and family conflict (Boles & Miotto 2003; Shorey, Stuart & Cornelius 2011). Finally, research has found that both substance use and violence are influenced by a similar set of developmental risk factors, including abusive or neglectful parenting, impulsivity and other antisocial traits (Boles & Miotto 2003; Menard, Mihalic & Huizinga 2001). However, different substances have different pharmacological and behavioural effects, and the profiles of users can vary by substance, meaning the association of different substances with the risk of violence also varies.

Amphetamine-type stimulants are a series of synthetic central nervous system stimulants which accelerate the release of certain neurotransmitters (dopamine, serotonin and noradrenaline), along with adrenaline and other stress hormones throughout the body (eg Berman et al. 2009). They include, principally, amphetamine, the more potent methamphetamine ('speed' or 'ice'), and 3,4-methylenedioxymethamphetamine (MDMA or 'ecstasy').

Over the past decade the use of amphetamines, particularly methamphetamine, has increased both in Australia and internationally. In 2015–16 amphetamine-type stimulants accounted for the highest proportion of illicit drug seizures by weight in Australia, and the second highest proportion of seizures by number, with increases in both since 2006–07 (Australian Criminal Intelligence Commission (ACIC) 2017a). Surveys also indicate that the use of methamphetamine in its most potent, crystalline form (crystal methamphetamine), has increased (Australian Institute of Health and Welfare 2017; Stafford & Breen 2017). Additionally, analysis of wastewater from 54 sites across Australia indicates that, out of the 13 licit and illicit drugs examined (which did not include cannabis), methamphetamine was the most consumed illicit drug in 2016 (ACIC 2017b).

The increased availability and use of crystal methamphetamine has also been linked to a range of harms, indicated by increases in amphetamine-related treatment, arrests and hospital admissions (Degenhardt et al. 2016). More so than other illicit drugs, methamphetamine has become popularly associated with violent behaviour, particularly in the context of methamphetamine-induced psychotic episodes. Indeed, a large number of case-control and cohort studies have found that methamphetamine use can impact social-cognitive functioning and increase violence, even though much of this research fails to establish a direct, causal relationship (for reviews of this research see Homer et al. 2008; Tyner & Fremouw 2008).

Australian research has produced similar findings. In a study comparing users of methamphetamine and heroin, Darke, Torok, Kaye, Ross and McKetin (2010) concluded that methamphetamine users were more likely to have committed violence in the previous 12 months, controlling for other group differences. In a longitudinal cohort study, McKetin et al. (2014) observed a significant dose-related increase in violent behaviour among methamphetamine-dependent users while under the influence of methamphetamine, particularly when psychotic symptoms or heavy alcohol consumption were also present.

While some research has examined the association between methamphetamine use and domestic violence, there have been no previous attempts to synthesise the available evidence. Reviews have tended to focus on the role of other substances in domestic violence, while either neglecting methamphetamine use, or aggregating it into broader categories of substance use. In a meta-analysis of 96 studies, Moore et al. (2008) found a significant association between drug use or drug-related problems and domestic violence. Critically, the use of cocaine, a stimulant similar to methamphetamine, was the strongest predictor of increased psychological, physical and sexual aggression, while cannabis use was also significantly related to domestic violence (Moore et al. 2008). In a more recent review, de Bruijn and de Graaf (2016) found that men and women who had consumed cocaine, particularly at high levels, were significantly more likely to perpetrate domestic violence on the same day. Like Moore et al. (2008), they also concluded that cocaine plays a greater role in domestic violence than many other illicit substances, including cannabis, opiates, sedatives and hallucinogens.

This chapter presents the results from a rapid evidence assessment of empirical research on the association between methamphetamine use and domestic violence offending—specifically, any violence against a current or former intimate partner—along with the factors that moderate this association. In order to properly assess the contribution of methamphetamine to the problem of domestic violence, this review examines both the extent to which methamphetamine use increases the likelihood of domestic violence offending and the prevalence of methamphetamine use among domestic violence offenders.

Method

Search strategy

Rapid evidence assessments are systematic reviews of a body of research undertaken in an accelerated manner within a restrictive time frame (ie four weeks to six months; Booth, Sutton & Papaioannou 2016). Despite the speed at which these reviews are completed compared to other systematic reviews, the methods used to search, collate and synthesise existing research are similarly pre-determined, rigorous, explicit and reproducible.

Eleven criminology, social science and health research databases were searched as part of this rapid evidence assessment, including:

- SocINDEX;
- Criminal Justice Abstracts;
- ProQuest;
- International Security and Counter Terrorism Reference Center;
- National Criminal Justice Reference Service Abstracts;
- Violence and Abuse Abstracts;
- Psychology and Behavioral Sciences Collection;
- E-Journals;
- PubMed;
- Australian Drug Foundation; and
- SAGE.

The reference lists of all studies published between 2016 and 2017, and all systematic reviews of research on substance use and domestic violence published between 2005 and 2017 (inclusive), identified in the initial search were also searched. Additionally, targeted follow-up searches of the academic journals *Addiction* and *Drug and Alcohol Review* were conducted. Standard search terms were used across all searches, incorporating terms for both methamphetamine and domestic violence (see Figure 1).

Searches were restricted to peer-reviewed studies, English language studies and studies published from 1990 onwards where possible, and only studies that met these criteria were eligible for inclusion. Study suitability was initially assessed on the basis of title and abstract information, while a second full-text screening was subsequently carried out to determine final inclusion in the review (see Figure 2). While inclusion was limited to peer-reviewed studies reporting quantitative findings on the association between methamphetamine use and domestic violence offending involving adult current or former intimate partners, and factors moderating this association, some of these studies also included qualitative findings. The literature search was conducted in November 2017.

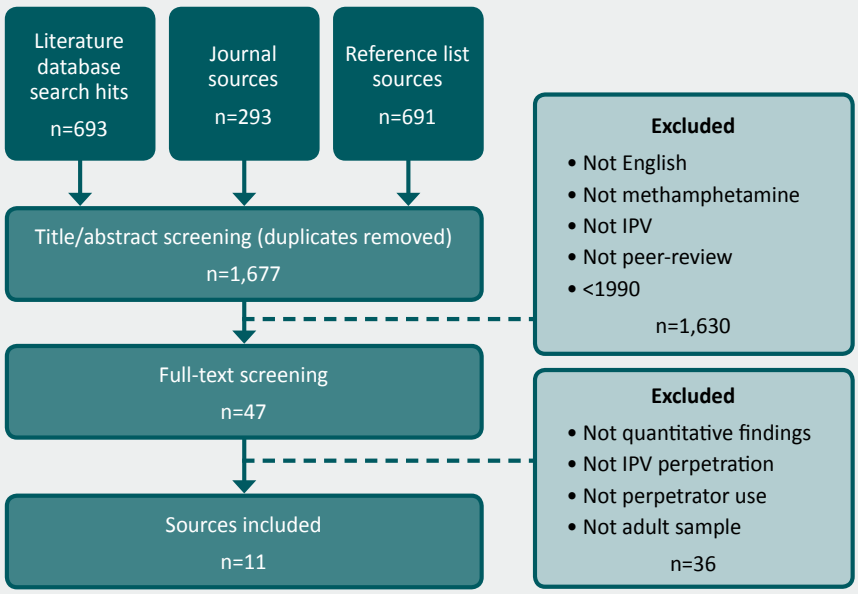
Figure 1: Search terms

(methamphetamine OR methylamphetamine OR meth OR ice OR crystal)

AND

("intimate partner violence" OR "domestic violence" OR "domestic abuse" OR "domestic assault" OR "partner abuse" OR "partner assault" OR "spousal abuse" OR "spousal assault" OR "family violence" OR batter* OR IPV OR DV)

Figure 2: Literature search and appraisal process



Data extraction and analysis

Details on study location, design, sampling and data collection methods, along with results regarding the association of methamphetamine use and domestic violence, were extracted from each study. Narrative synthesis was used to summarise and critique this information. Narrative synthesis is an analytic approach that allows for a relatively broad description and critique of a body of research (Booth, Sutton & Papaioannou 2016).

Findings

Search results

Eleven studies were identified for inclusion in the review. Eight of these were carried out in the United States, with one carried out in Iran, one in South Africa and one in Australia. Publication dates ranged from 1991 to 2017. However, most studies were recent, and four were published in 2016 or 2017. Sample sizes ranged from 20 to 1,712. Two studies focused exclusively on female perpetrated domestic violence, one on male perpetrated domestic violence, and the remainder included both male and female perpetrators.

Methamphetamine use

Methamphetamine use was ascertained across included studies in various ways. Some studies asked participants whether they or their partner had recently used methamphetamine (four studies), had ever used methamphetamine (one study), or had used methamphetamine for a minimum period of time in the past (three studies). The other three studies relied on toxicological analysis of blood, urine and/or saliva. Importantly, none of the studies included in this review specified whether victims were also methamphetamine users, or under the influence of methamphetamine, when the violence occurred.

Domestic violence

The 11 studies included in the review examined different types of domestic violence. Seven studies focused only on threatened and actual physical violence (one of which examined only intimate partner homicide), one separately examined physical and sexual domestic violence, and three did not specify, meaning they may have examined a range of physical, verbal, sexual and psychological forms of violence. However, all studies examined some form of violence perpetrated against a current or former intimate partner.

Additionally, while most studies examined instances of violence in which there was a clear offender and victim, one also examined bidirectional domestic violence, or intimate partner relationships in which partners perpetrated violence against each other. Another did not distinguish between offending and victimisation in its measure of domestic violence experience. Most studies relied on self-report methods (ie interviews and questionnaires) to ascertain the prevalence of domestic violence, with two drawing on information from police records of reported domestic violence incidents.

Study design and data analysis

All but two of the studies provided descriptive quantitative findings on the association between methamphetamine use and domestic violence offending. Four studies compared methamphetamine users and non-users in terms of domestic violence offending (case-control studies). Three of these studies controlled for the use of other substances. Critically, only three studies (two of which used different subsets of the same sample) specifically examined domestic violence perpetrated while under the influence of methamphetamine, as distinct from recent methamphetamine use.

Table 1: Studies included in the rapid evidence assessment

Source	Sample	Type of DV	Meth. users who perpetrate DV	DV offenders who use meth.	Odds ratio[a]
Baskin-Sommers & Sommers 2006a	n=106, 59% male Drug treatment/ community sample of users	Physical violence (offender-reported)	35% violent while under the influence (61% of these incidents were DV)	–	–
Baskin-Sommers & Sommers 2006b	n=243, 49% male University students	Non-specific (offender-reported)	71% in the past year	24% ever used	6.5**
Ernst et al. 2008	n=1,712 Victims of police-reported domestic violence incidents	Non-specific (victim-reported)	–	9% using around time of reported DV incident	–

Table 1: Studies included in the rapid evidence assessment

Source	Sample	Type of DV	Meth. users who perpetrate DV	DV offenders who use meth.	Odds ratio[a]
Hamilton & Goeders 2010	n=30, 100% female Drug treatment sample of users	Physical violence (offender-reported)	57% any prior violence (mostly domestic violence)	–	–
Hayashi et al. 2015	n=30, 100% female Community sample of users	Non-specific (offender-reported)	50% in past year	–	–
Khalkhali et al. 2016	n=120, 100% male Psychiatric treatment and healthy sample	Physical violence (victim-reported)	90% in past year	–	vs Psychiatric controls= +10.0*** vs Healthy controls= +10.0***
Khalkhali et al. 2016	n=120, 100% male Psychiatric treatment and healthy sample	Sexual violence (victim-reported)	37% in past year	–	vs Psychiatric controls=5.2* vs Healthy controls= +10.0***
Mouzos & Smith 2007	n=631 Police detainees (any crime)	Physical violence (offender-reported)	–	–	1.13
Petering et al. 2017	n=238, 64% male Homeless young adults with ≥1 sexual relationships in the past year	Physical violence (offender-reported)	–	–	Perpetrated DV=0.5 Bidirectional DV=3.4**
Slade, Daniel & Heisler 1991	n=20 Perpetrators of intimate partner homicide	Homicide (police detected)	–	0% with meth. in their system at time of detection	–

Table 1: Studies included in the rapid evidence assessment

Source	Sample	Type of DV	Meth. users who perpetrate DV	DV offenders who use meth.	Odds ratio[a]
Sommers & Baskin 2006	n=205, 59% male Drug treatment/ community sample of users	Physical violence (offender-reported)	27% violent while under the influence (51% of these incidents were DV)	–	–
Watt et al. 2017	n=360, 56% male Community sample of users	Physical violence (offender-reported)	38% in the past year	–	–

*p=<0.05. **p=<0.01. ***p=<0.001
a: Where not stated, odds ratios have been manually calculated from available statistics
Note: DV=domestic violence

Association between methamphetamine use and domestic violence

Findings regarding the association between methamphetamine use and domestic violence are summarised according to the type of study: prevalence studies that examined rates of domestic violence offending among methamphetamine users, prevalence studies that examined rates of methamphetamine use among domestic violence offenders, and case-control studies that compared rates of domestic violence among methamphetamine users and non-users.

Prevalence studies: Domestic violence offending among methamphetamine users

There is a high prevalence of domestic violence offending among methamphetamine users. However, rates varied markedly across studies, due largely to differences in sample size and composition, and the definition of key variables. In a sample of young adult college students (aged 18–24), Baskin-Sommers and Sommers (2006b) found that around one-quarter (24%) of those who had ever used methamphetamine had been physically violent towards a partner in the prior six months.

Thirty-eight percent of methamphetamine users in Watt et al.'s (2017) sample had been physically violent towards a partner at some point in the past, with 29 percent reporting having done so in the prior three months. In an older and smaller sample of female methamphetamine users undergoing a residential treatment program, 57 percent had been physically violent at least once in their lifetime, with an unspecified majority indicating that this violence had been directed at their partners (Hamilton & Goeders 2010). Similarly, in a sample of female stimulant users (over 90% of whom indicated using methamphetamine) examined by Hayashi et al. (2015), 50 percent reported having perpetrated domestic violence in the previous year. Finally, Khalkhali et al.'s (2016) study of individuals with a diagnosed methamphetamine-induced psychotic disorder reported much higher rates of physical domestic violence offending (83%), and very high rates of sexual (53%) domestic violence offending.

Sommers and Baskin (2006) reported that 27 percent of their sample of methamphetamine users had perpetrated at least one incident of violence while under the influence. Additionally, of the 80 methamphetamine-influenced incidents of violence they collectively reported, the largest proportion (51%) was domestic violence. Follow-up analyses of a younger subset of this sample (aged 18–25) generated similar findings; 35 percent of the sample had committed at least one incident of violence while under the influence of methamphetamine, and 61 percent of the 54 violent incidents reported by these individuals were domestic violence (Baskin-Sommers & Sommers 2006a).

Prevalence studies: Methamphetamine use among domestic violence offenders

The rate of recent methamphetamine use among domestic violence offenders is comparatively low, although this finding is based on only a small number of studies. An early study of intimate partner homicide by Slade, Daniel and Heisler (1991) found that none of the offenders tested positive for methamphetamine, based on samples collected soon after apprehension. However, these findings are likely anomalous given they concern only the most severe form of domestic violence, and were generated from a small sample (n=20) at a time when methamphetamine availability and consumption were not as widespread as today. More recent research by Ernst et al. (2008) found that nine percent of domestic violence offenders involved in incidents reported to the police were methamphetamine users. Higher rates have also been reported; Baskin-Sommers and Sommers (2006b) reported that 24 percent of domestic violence offenders had used methamphetamine during their lifetime.

Case-control studies

The strongest evidence of the association between methamphetamine use and domestic violence comes from the four case-control studies. Overall, rates of domestic violence offending were found to be higher among methamphetamine users than non-users, even when controlling for other substance use. In their sample of young adult college students, Baskin-Sommers and Sommers (2006b) found that any prior use of methamphetamine significantly and positively predicted domestic violence offending in the prior six months, after controlling for alcohol and cannabis use. The odds of domestic violence offending were 6.5 times higher among participants who reported prior methamphetamine use, compared with non-users.

Khalkhali et al. (2016) also found that patients with a methamphetamine-induced psychotic disorder and no alcohol or other illicit drug use in the past year were significantly more likely than groups of psychiatric patients and healthy participants with no alcohol or illicit drug use in the past year to have been physically violent towards a partner in the year prior (90% vs 27% and 13%, respectively). The odds of prior physical domestic violence offending were over 10 times higher among those in the methamphetamine-induced psychotic disorder group than among healthy controls and other psychiatric patients.

In their analysis of a sample of homeless young adults, Petering et al. (2017) found that those who reported both domestic violence offending and victimisation in their most recent relationship were significantly more likely (odds ratio=3.4) to have used methamphetamine in the 30 days prior than those who reported no history of domestic violence. However, methamphetamine use was not significantly associated with domestic violence offending alone. Conversely, in their examination of an Australian sample of police detainees, Mouzos and Smith (2007) found no significant association between methamphetamine use and experiences of domestic violence offending and/or victimisation in the year prior, controlling for cannabis, heroin and benzodiazepine use. However, the lack of specificity in this study's measure of domestic violence, which does not distinguish between offending, victimisation and both, means these findings should be interpreted with caution.

Factors that moderate the association between methamphetamine use and domestic violence

Gender

While men account for the overwhelming majority of domestic violence offenders (ABS 2017), the studies included in this review found similar rates of domestic violence offending among male and female methamphetamine users (Baskin-Sommers & Sommers 2006a; Sommers & Baskin 2006). At least half of female methamphetamine users within the samples included in these studies had been violent towards their partner (Hamilton & Goeders 2010; Hayashi et al. 2015). Further, Watt et al. (2017) found no significant differences in the rate of domestic violence offending, either overall or in the most recent three months, between male and female methamphetamine users.

Age

There is little evidence available regarding the moderating effect of other demographic factors on the association between methamphetamine use and domestic violence offending. However, Baskin-Sommers and Sommers (2006a) found age to be a factor. Younger methamphetamine users were more likely than older users to be violent while under the influence of methamphetamine (35% vs 27%) and were more likely to be involved in violent incidents in which the violence was directed towards a partner, as opposed to some other victim (61% vs 51%).

Methamphetamine dependency

Evidence regarding the effect of methamphetamine dependency on domestic violence is equivocal, with 'dependency' having been measured using a variety of objective scales (frequency of use, entry into treatment, development of psychosis) and subjective scales (self-reported urge to use). Watt et al. (2017) found that the self-reported strength of participants' addiction to methamphetamine did not significantly predict domestic violence offending among either male or female users. This contrasts with Khalkhali et al.'s (2016) study, which found very high rates of domestic violence relative to other studies (>50%) among those who had used methamphetamine to the point of developing a severe psychotic disorder. The prevalence of domestic violence offending was also comparatively high in Hamilton and Goeders' (2010) sample of female methamphetamine users who had entered treatment due to the severity of their addiction. Two other studies (Baskin-Sommers & Sommers 2006a; Sommers & Baskin 2006) reported lower rates of domestic violence offending than either Khalkhali et al. (2016) or Hamilton and Goeders (2010), but the samples in the former studies included users in treatment and in the community, whose addiction may not have developed to the point of requiring treatment. Importantly, no research has examined whether methamphetamine dependency increases the frequency or severity of pre-existing domestic violence within a relationship.

Developmental and dispositional factors

Finally, Sommers and Baskin (2006), Baskin-Sommers and Sommers (2006a) and Watt et al. (2017) all found that the likelihood of domestic violence offending was significantly higher among methamphetamine users who also had childhood histories of violent offending or victimisation, familial criminality, mental health problems and difficulties with socialisation. Further, Sommers and Baskin (2006) also found that the average age of onset for all forms of violence was younger than the average age of onset for methamphetamine use. Two-thirds of participants who had been violent towards a partner while under the influence of methamphetamine reported having engaged in violence prior to using the drug. In other words, methamphetamine users who had been violent before using methamphetamine were more likely to be violent towards a partner while using it.

Discussion

Current research suggests that there is a high prevalence of domestic violence offending among methamphetamine users, and that methamphetamine users are more likely to be violent towards their partner than non-users. Specifically, between 25 and 50 percent of methamphetamine users across most of the studies included in this review had a history of domestic violence offending, although in a sample of severe and psychotic methamphetamine users the rate of offending exceeded 90 percent. However, rates of domestic violence appear to be lower when participants are asked specifically about violence while under the influence of methamphetamine, and, as expected, about violence within shorter time periods (eg in the last 6–12 months, or in their most recent relationship). As suggested by the literature on substance use and violence more broadly, methamphetamine use likely influences domestic violence offending both directly through its pharmacological effects, and indirectly through its broader lifestyle, relationship and financial effects.

In most of the case-control studies reviewed, rates of domestic violence offending were significantly higher among methamphetamine users than non-users, even after controlling for the use of other substances. Domestic violence offending among methamphetamine users is at least three times more common than among non-users, with a substantially higher likelihood among psychotic users. The limitations of case-control studies must be acknowledged; specifically, they have limited ability to determine the temporal association between methamphetamine use and violence (ie determining the exact order of drug use and violence) or whether there is a direct causal relationship between the two (Tyner & Fremouw 2008). Nevertheless, findings from the small number of case-control studies focused specifically on the role of methamphetamine in domestic violence, coupled with the larger and more robust evidence base on the impact of methamphetamine and violence more broadly (McKetin et al. 2014; Tyner & Fremouw 2008), suggests that methamphetamine use increases the likelihood of domestic violence offending.

However, the rate of recent methamphetamine use among perpetrators of police-reported domestic violence is comparatively low. While a significant proportion of methamphetamine users have a history of recent domestic violence, users account for only a small proportion of domestic violence offenders overall. Australian research has previously shown that methamphetamine use has a limited impact on overall assault trends (McKetin et al. 2006; Payne & Gaffney 2012), although more recent evidence indicates that the proportion of offenders who attribute their offending to methamphetamine use increased significantly between 2009 and 2015 (Goldsmid et al. 2017).

Findings tentatively suggest that methamphetamine use may exert a stronger influence on domestic violence offending among women than men. There are a number of possible explanations. Research has shown that, on average, female methamphetamine users rate higher on measures of dependency, that some of the pharmacological effects of methamphetamine use may be greater among female users, and that female users are more likely to have comorbid mental health issues that could predispose them to violence (Dluzen & Liu 2008). Unfortunately, there is currently insufficient evidence to draw any conclusions on the moderating impact of other demographic factors or degree of dependency.

The increased likelihood of domestic violence among methamphetamine users who exhibit other risk factors for violence—including prior physical violence, familial criminality, mental health problems and childhood histories of violent victimisation—and the particularly high rates of domestic violence among users with symptoms of psychosis, suggest methamphetamine use is an aggravating factor rather than a cause of domestic violence.

These findings support the idea that the psychostimulant effect of methamphetamine increases aggression among those individuals who are more likely to exhibit impulsive and aggressive behavior prior to drug use, and that this may be further exacerbated by the presence of methamphetamine-induced psychosis (Hoaken & Stewart 2003; Homer et al. 2008). This is consistent with much of the research on the impact of alcohol on domestic violence, which suggests that it increases the risk of, rather than causes, violent behaviour (eg Langenderfer 2013).

Qualitative interviews with methamphetamine users in Hamilton and Goeders' (2010) and Watt et al.'s (2017) studies support this hypothesis. Many participants acknowledged that their methamphetamine use exacerbated pre-existing problems with anger and violent tendencies, which were commonly attributed to histories of abuse. Additionally, acts of violence were typically a reaction to certain contextual stressors and real or perceived transgressions, including arguments and other relationship problems, financial difficulties and parenting responsibilities, rather than being predatory and premeditated. Some participants in these studies also acknowledged that their methamphetamine use directly or indirectly contributed to these stressors and transgressions emerging in the first place, creating tension with their partners and placing financial and emotional strains on their relationships. This illustrates the cyclical and bidirectional influence of methamphetamine use, lifestyle or contextual stressors and domestic violence, which has also emerged in research on substance use and violence generally (eg Boles & Miotto 2003).

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B

Child exploitation

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4. Understanding and preventing the onset of child sexual abuse in adolescence and adulthood

Nadine McKillop, Susan Rayment-McHugh, Stephen Smallbone and Zoe Bromham

Given the known short- and long-term harms associated with the sexual abuse of children (Paolucci, Genuis & Violato 2010), effective responses to this issue are at the forefront of the prevention agenda. The substantial social and economic costs associated with child sexual abuse has necessitated a focus on reducing sexual recidivism among known offenders and developing effective responses for victims. Although these tertiary responses are important and necessary, preventing these incidents from occurring in the first place is the ultimate goal. Investigations into key factors associated with the onset of sexual abuse can inform theoretical developments and advance primary and secondary prevention efforts, alongside tertiary responses, to truly reduce the extent and impacts of these crimes.

Unlike general crimes, research indicates a bimodal pattern for the onset of child sex offending—adolescence and middle adulthood (Hanson 2002). According to Finkelhor, Ormrod and Chaffin (2009), for example, adolescents (<18 years of age) account for approximately one-quarter (26%) of all sex offenders, and 36 percent of those who perpetrate child sex offences. During 2016–17 in Queensland (where this study was conducted) adolescents accounted for 22 percent of all sexual offences reported to police (Queensland Police Service 2017). Nationwide there has been a 35 percent increase in sexual assaults (particularly non-assaultive sexual offences) committed by adolescents since 2008 (Australian Bureau of Statistics 2017).

It is now well accepted within the field that, although some adolescents will persist with sexual offending into adulthood, for most this behaviour is limited to adolescence (Caldwell 2010; McCann & Lussier 2008). This is supported by prospective (Lussier & Blokland 2013) and retrospective (Marshall, Barbaree & Eccles 1991; McKillop et al. 2015a, 2012; Smallbone & Wortley 2004) studies that suggest only a minority of adult child-sex offenders begin sexual offending in adolescence. It seems, for the most part, adolescents and adults comprise two distinct groups with potentially unique explanatory factors for the onset of their offending. In this regard, and for some time now, concerns have been voiced about the appropriateness of traditional criminal justice policies and interventions directed towards adolescents, particularly their reliance on adult aetiology and patterns of offending without regard for possible developmental (including neurological, cognitive and maturational) differences or the contextual constraints and opportunities that comprise adolescents' and adults' lives (Chaffin 2008; Chaffin, Letourneau & Silovsky 2002).

Further to this, responses have been historically grounded in clinical and psychiatric explanations which rely heavily on assumptions that sexual deviance sets these individuals apart from the majority (Smallbone 2006). These have often been explained by developmental adversities (eg family violence, disrupted attachment relationships, and unstable home environments) that shape individual behaviour (Dennison & Leclerc 2011; Lussier et al. 2015).

These factors are important for understanding individual-level vulnerabilities that may contribute to the development of sexual offending behaviour. However, this dispositional focus does not explain why some perpetrators begin sexual offending in adolescence while others seemingly navigate successfully through adolescence refraining from sexual offending until adulthood.

One way forward is to conceptualise sexually abusive behaviour, like all human behaviour, in terms of the person–situation interaction (Mischel 1968). Offending behaviour cannot be understood in isolation from the ecological and situational context in which it occurs. It is these contextual factors that best explain opportunities to offend, and why behaviours manifest at specific places and at particular times. Perpetrators and victims are embedded within a social ecology spanning family, peer, neighbourhood and community systems. Factors within these systems influence an individual's behaviour and may either act as risk factors for the development of offending, or provide some protection from an offending pathway.

Within these social ecologies, situational factors have the most direct and powerful influence over behaviour. Emerging findings strongly suggest that contextual factors in the situations immediately preceding child sexual abuse provide both the opportunity and impetus to offend (eg McKillop et al. 2015b, 2012; Wortley & Smallbone 2006). Situations may actively trigger offending motivations that may not otherwise have developed at that time and place (Wortley 2008; Wortley & Smallbone 2006). For adults, the combination of proximal stressors (eg marital, living conditions, financial stressors) with other personal vulnerabilities, such as attachment insecurity, intimacy deficits, and emotional regulation problems that developed in childhood might increase the risk of engaging in sexually abusive behaviour (eg McKillop et al. 2012). For adolescents, it has been proposed that sexual offending behaviour may be an extension of existing antisocial tendencies coincident with the onset of ordinary sexual curiosity and experimentation (Caldwell 2002), as well as difficulties with social relationships (see Grant et al. 2009).

It is possible that adolescent and adult life stages offer contextual similarities conducive to the enactment of sexually abusive behaviour during these times. For example, changes in routines (eg becoming a parent or step-parent, paid and unpaid employment) increase exposure to children and therefore opportunities to engage in sexually abusive behaviour during everyday interactions with children (Hanson 2002). There may also be contextual constraints that limit sexual offending in adolescence that are absent in adulthood by virtue of age, trust, status and responsibility. Certainly, the limited research directly comparing adolescent and adult sexual offending behaviour indicates some important distinctions in this regard (Finkelhor, Ormrod & Chaffin 2009; Kaufman et al. 1996; Lussier et al. 2015; Miranda & Corcoran 2000).

Despite current efforts in Australia (eg Flanagan 2003; O'Brien 2008) and worldwide (eg Borduin, Schaeffer & Heiblum 2009) to differentiate prevention and intervention approaches for adolescents and adults who sexually harm, there is a lack of research directly comparing adolescents and adults, and their offending, to inform policy and practice at a national and international level. Discerning the commonalities and differences between adolescent- and adult-onset sexual abuse behaviour provides opportunities to validate or challenge the way this issue is currently conceptualised and responded to so that criminal justice policies, therapeutic interventions and prevention initiatives are developmentally appropriate and thus effective.

Research aims and questions

The current study builds on two previous government-funded projects (Smallbone et al. 2005; Smallbone, Leclerc & Allard 2011) that highlighted important gaps in knowledge concerning the similarities and differences in the circumstances of adolescent- and adult-onset sexual abuse of children. The present study aimed to compare individual, ecological and situational factors that contribute to the onset of sexual abuse in adolescence and adulthood. Specifically, this study sought to identify:

- common (ie to both adolescent-onset and adult-onset offenders) and unique developmental risk factors associated with the onset of sexual abuse;
- situational elements and contextual factors associated with the onset of child sexual abuse during these two life stages; and
- whether such factors have a unique or interactive relationship with the onset of child sexual abuse in adolescence and adulthood.

There were three key research questions:

- Is it possible to distinguish adolescent-onset from adult-onset child sexual abuse offences based on individual (developmental) factors?
- In what circumstances and contexts do child sexual abuse incidents first occur in adolescence and adulthood?
- Do certain individual and contextual factors predict adolescent-onset and adult-onset child sexual abuse offences?

Method

Participants

Two separate samples were integrated for this study. The first sample included 104 convicted adult male child-sex offenders who participated in the Smallbone et al. (2005) study. Additional participant data (n=62) were collected between 2014 and 2016 to increase this adult sample to 166 participants. The adolescent sample was drawn from a larger cohort of clients referred by a court between 2000 and 2013 to a specialist forensic and clinical program for adolescents who commit sexual offences (Smallbone, Leclerc & Allard 2011). Only those adolescents who had committed their first sexual offence against a child aged under 16 years (n=193) were included in the present study. Sample characteristics are described in Table 1.

Classification of onset type

Adolescent-onset offenders were classified as individuals who committed their first known sexual offence between the ages of 10 and 17. All other offenders were classified as adult-onset offenders. Twenty-two participants from the adult cohort (13.3%) reported that they had committed their first child-sex offence in adolescence and were classified as 'adolescent-onset' for the purposes of this study. As shown in Table 1, the final sample size for the adult-onset group was 144 participants (40.1% of total sample). The adolescent-onset group included 215 participants.

Table 1: Sample characteristics		
Participant group		
	Adolescent (n=193)	**Adult (n=166)**
Offender age at time of study		
Mean (SD)	15.7 yrs (1.4)	46.0 yrs (12.0)
Range	12–19 yrs	20–84 yrs
Heritage		
Non-Indigenous Australian	65.6%	84.6%
Aboriginal & Torres Strait Islander Peoples	30.2%	10.5%
Other	4.2%	4.9%
Highest level of education		
University/TAFE/Apprenticeship	0.0%	24.9%
Secondary school	7.3%	10.3%
Some secondary school	86.0%	52.7%
Primary school	6.7%	11.5%
No formal schooling	0.0%	0.6%
Residence		
Custodial	8.8%	95.2%
Community	91.2%	4.8%
Onset type		
	Adolescent (n=215)	**Adult (n=144)**
Age at onset sexual offence		
Mean (SD)	13.9 yrs (1.5)	34.1 yrs (12.3)
Range	10–17 yrs	18–79 yrs
Victim characteristics		
Mean age (SD)	8.6 yrs (3.5)	10.8 yrs (3.4)
Range of ages	1–15 yrs	1–15 yrs
Female	73.4%	75.7%

Source: Smallbone et al. 2005; Smallbone et al. 2011; AIC CRG collection 2016 [computer file]

Measures

Data from the two previous projects (Smallbone et al. 2005; Smallbone, Leclerc & Allard 2011) included detailed official and self-report information on developmental pathways, sexual offence situations and offending trajectories. A range of individual, ecological and situational factors associated with onset were considered. Moderate to high inter-coder and test-retest reliability were found for these measures (McKillop et al. 2018).

Procedure

Comparable data from the existing adult and adolescent databases were integrated. Separate permissions to use these de-identified data were obtained at the time of each research study. Participants for the new adult cohort were identified by Queensland Corrections staff and subsequently interviewed by the research team. Participation was confidential and voluntary. Chi-square analyses and independent samples t-tests were conducted to directly compare the two groups on developmental, ecological and situational factors associated with the onset offence. Binomial logistic regression (using temporal block-entry method) was subsequently conducted to examine predictors of adolescent- and adult-onset sexual abuse.

Results

Is it possible to distinguish adolescent-onset from adult-onset child sexual abuse offences based on individual (developmental) factors?

Two key findings emerged from this analysis, as indicated in Table 2.

Key finding 1: Adverse developmental histories are common among adolescents and adults who sexually abuse children

Both groups shared developmental backgrounds marred by child maltreatment, although the type of abuse experienced differed. A larger proportion of the adolescent-onset group reported experiences of non-sexual abuse, while a larger proportion of the adult-onset group reported sexual abuse. Problems appeared more pronounced in the adolescent-onset group, with a greater proportion reporting child protection histories resulting in placement in out-of-home care. These findings reiterate previous propositions (Lussier et al. 2015) that adverse developmental experiences are common in the backgrounds of offenders and may produce individual-level vulnerabilities that increase the risk of engagement in antisocial (including sexually abusive) behaviour across the life course.

Key finding 2: Sexual offending in adolescence is often preceded by a history of contact with the youth justice system for non-sexual offences

Consistent with previous studies (eg Knight, Ronis & Zakireh 2009; Lussier et al. 2015), a history of contact with the youth justice system for non-sexual offences featured more prominently in the adolescent-onset group. This fits with theorising that sexually abusive behaviour at this stage of development may coincide with the onset of puberty and the salience of sexual feelings and curiosity at this peak risk period, particularly for those males who already have a broader involvement in antisocial and illegal activities. Such activities are characterised by coercion, deception, rule-breaking and exploitation of others, all of which are also characteristic of sexual abuse (Smallbone, Rayment-McHugh & Smith 2013). This may be more reflective of the motivations for the onset of sexually abusive behaviour in adolescence than previous conceptions focused on sexual deviance or deep-seated propensities for sexual offending (Smallbone 2006).

In turn, these findings raise questions as to whether the lack of youth justice history of some might help explain delayed-onset pathways for sexual abuse. As Lussier and colleagues (2015) theorise, delayed sexual abuse onset until adulthood might be associated with less exposure to antisocial peers and behaviour during adolescence than their adolescent counterparts—that is, adult-onset offenders may have had fewer opportunities to offend at an earlier stage. More investigation into protective factors associated with delayed onset is required to answer these questions.

Table 2: Individual (developmental) factors					
	Onset type			Test	
	Adolescent (n=215)	Adult (n=144)	Total (N=359)	χ^2	*p*-value (ϕ)
Child maltreatment	**72.1%**	**71.6%**	**71.5%**	**0.03**	**0.86**
Non-sexual abuse only	33.3%	19.1%	27.5%	7.67	0.006 (–0.16)
Sexual abuse only	7.5%	19.9%	12.3%	11.11	0.001 (0.19)
Sexual & non-sexual	31.3%	32.6%	31.9%	0.02	0.90
Child protection history					
Out-of-home placement	31.3%	19.7%	26.6%	5.23	0.02 (–0.13)
Youth justice history	**75.1%**	**41.3%**	**60.9%**	**38.51**	**<0.001 (–0.34)**

Note: Values were missing (6–19 depending on cell); non-sexual abuse included physical and emotional abuse and neglect
Source: Smallbone et al. 2005; Smallbone et al. 2011; AIC CRG collection 2016 [computer file]

In what circumstances and contexts do child sexual abuse incidents first occur in adolescence and adulthood?

One key finding emerged from these analyses. The results of this part of the investigation are presented in Table 3.

Key finding 3: Offending is differentially influenced by situational factors within the routine activities and social ecologies that comprise these two developmental stages

The findings highlight the proximal influences on behaviour found within the social ecologies and immediate situations preceding onset. In terms of commonalities, both adolescents and adults tended to first sexually abuse someone well known to them and with whom an established relationship existed. Females were the main victims of abuse, although adolescent offenders tended to abuse non-familial children, and adults familial children. This is consistent with the types of relationships and interactions with children that characterise these two stages of development. In adolescence, independence from family is a dominant factor. More time is spent engaging with peers, in and outside the home environment, and supervision may be relaxed somewhat. At the peak risk period for adults, it is more likely they will have access to children within their immediate or extended family and those of their friends.

In line with previous findings (eg McKillop et al. 2015b; Smallbone & Wortley 2004) offending within the domestic setting was a common feature for both groups. Private spaces such as bedrooms, where time is shared engaging in routine activities (eg playing games, getting ready for bed) seem to present risks conducive to sexual abuse. The finding that many offenders formed their intention to abuse during the encounter with the victim suggests that these routine interactions can dynamically influence motivation and behaviours (Wortley 2008).

Compliance strategies used to engage the child in sexual contact and maintain their silence also differed between the two groups, as did the child victim's resistance strategies. More adolescents relied on strategies involving coercion or force compared to adults. Likewise, child victims were more likely to use overt resistance strategies with adolescents. These behaviours were more evident when the adolescent offender and victim were closer in age (M=4.72, SD=3.41 for coercive; M=5.90, SD=3.22 for non-coercive), t(203)=2.52, p=0.01, d=0.35. As the age gap increased, strategies tended to mimic those often observed in abusive adult–child relationships (eg emotional manipulation, bribes, initiating through play). Child victims were also less likely to overtly resist the offender as the age gap increased (M=4.22, SD=2.90 for overt resistance; M=6.19, SD=3.42 for covert resistance), t(193)=4.17, p<0.01, d=0.62.

This highlights the inherent authority older adolescents and adults have in these relationships. As such, common messages encouraging children to 'speak up' in protective behaviours programs should be made with caution, as this may not be realistic for many children.

The findings also point to the situational constraints of adolescence. A higher proportion of incidents by adolescent offenders occurred when others were close by and most times this was an adult. These incidents were also more likely to have been witnessed. Adolescents have less authority and control over domestic spaces. They are more likely to be around children under circumstances of adult supervision compared to adults, who may have sole caregiving roles or have access to children unsupervised for longer periods of time.

More adult witnesses intervened with adolescents than with adults. Adults may be more confident to question and intervene when they witness something suspicious with adolescents, than with adults. This tends to be a natural inclination in everyday life, but is also likely to be a consequence of adults' ability to conceal their intentions, or provide plausible explanations for suspicious behaviour, compared to adolescents. Children were least likely to successfully intervene, reinforcing the point that children should not be expected to take on responsibility for preventing abuse.

The longer duration and higher frequency of abuse by adults may be explained by the transient nature of adolescent sexual behaviour, the fact that many incidents were witnessed or that adults are more likely to have frequent unsupervised access to victims. For adult-onset offenders, maintaining a sexual relationship with the child may also be a persistent maladaptive care-seeking response to the need for attachment, especially in times of distress (McKillop et al. 2012).

Table 3: Offence onset characteristics (ecological and situational factors)

	Onset type			Test	
	Adolescent (n=215)	Adult (n=144)	Total (N=359)	C^2	*p*-value (ϕ)
	%	%	%		
Prior to onset					
Situational precipitators					
Lonely	5.2	36.2	17.6	54.02	<0.001 (0.40)
Depressed	2.4	30.5	13.6	54.70	<0.001 (0.40)
Sexually aroused	52.1	16.3	37.9	44.71	<0.001 (–0.36)
Intoxicated	9.9	17.7	13.0	16.68	<0.001 (0.23)
Intention to abuse					
Formed during encounter	66.4	75.2	69.9		
Formed while knew, before onset[a]	31.3	19.9	26.8	6.85	0.03 (0.14)
Formed before met victim	2.3	5.0	3.4		

Table 3: Offence onset characteristics (ecological and situational factors) (continued)					
	Onset type			Test	
	Adolescent (n=215)	Adult (n=144)	Total (N=359)	c^2	*p*-value (ϕ)
	%	%	%		
During onset incident					
Relationship context[b]					
Familial[a]	43.5	54.6	47.9		
Non-familial[a]	51.4	36.9	45.6	7.63	0.02 (0.15)
Stranger	5.1	8.5	6.5		
Offence setting					
Domestic	79.4	84.4	81.4		
Organisational	6.1	2.1	4.5	3.26	0.20
Public	14.5	13.5	14.1		
Interactions at time of onset					
Watching television with child	11.9	17.7	14.2	1.90	0.17
In bed with child	1.9	13.5	6.6	16.60	<0.001 (0.23)
Playing a game	29.0	12.1	22.2	13.12	<0.001 (–0.20)
Not doing anything with child	31.4	28.4	30.2	0.24	0.62
Compliance strategies					
Force	46.1	2.8	28.4	77.42	<0.001 (–0.47)
Victim reaction					
Overt resistance	39.8	8.5	26.7	39.42	<0.001 (–0.35)
Sexual behaviours					
Penetrative	55.0	37.0	47.9	10.15	0.001 (–0.18)
Presence of others	82.1	59.2	72.9		
Adult guardian	76.9	60.2	71.5	21.46	<0.001 (–0.25)
Child guardian	23.1	39.8	28.5		
Following onset incident					
Offence witnessed	31.1	7.9	21.9		
Adult	32.3	55.6	35.1	25.09	<0.001 (–0.27)
Child	67.7	44.4	64.6		
Strategies to secure silence					
Nothing (spur of moment)	81.6	83.1	82.2		
Force/threats/coercion	7.3	0.7	4.4	17.62	0.001 (0.24)
Emotional manipulation/bribes	5.6	14.7	9.5		
Verbal/gestured not to tell	5.6	1.5	3.8		

Table 3: Offence onset characteristics (ecological and situational factors) (continued)					
	Onset type			Test	
	Adolescent (n=215)	Adult (n=144)	Total (N=359)	c^2	*p*-value (ϕ)
	%	%	%		
Frequency of contact					
Once[a]	52.5	28.7	42.9	35.71	<0.001 (0.32)
2–10 times	39.7	40.4	40.0		
11–50 times[a]	5.7	23.5	12.8		
More than 50 times[a]	2.4	7.4	4.3		
Duration of contact					
One day[a]	53.1	29.4	43.8	34.47	<0.001 (0.32)
Between 1 day and 1 month	16.6	10.3	14.1		
Between 1 and 6 months	12.8	16.2	14.1		
More than 6 months[a]	17.5	44.1	28.0		

a: Adjusted residuals ≥ +/–2.0
b: Familial=biological child or stepchild, sibling, niece/nephew, grandchild, cousin. Non-familial=child of friend, neighbour, child met through workplace. Stranger=a child known for less than 24 hours
Note: Values were missing (4–22 depending on cell)
Source: Smallbone et al. 2005; Smallbone et al. 2011; AIC CRG collection 2016 [computer file]

Do certain individual and contextual characteristics predict adolescent-onset and adult-onset child-sex abuse offences?

This part of the investigation focused on predictors of onset. Variables that preceded onset and found to be significant at earlier stages of the investigation were included in the analysis. Table 4 presents the results of the logistic regression. One key finding emerged from this analysis.

Key finding 4: Adolescents and adults may be motivated to sexually abuse children for different reasons

Adolescent-onset offending was predicted by a history of contact with the youth justice system for non-sexual offences and sexual motivations. Negative mood states (eg depression and loneliness) and intoxication were predictors of adult-onset. The findings suggest that these two groups may often have fundamentally different reasons and motivations for engaging in the sexual abuse of children.

For adolescents this may be a spillover of other already established antisocial and violating behaviours into the sexual domain, at a stage where sexual exploration, curiosity and activity is pronounced. For adults their behaviour may reflect difficulty coping with significant negative life changes or events associated with this developmental stage, including problems in intimate partner relationships (Lussier & Blokland 2013). One possible explanation already espoused in the adult literature (Burk & Burkhart 2003; McKillop et al. 2012) is that adult-onset offending is associated with attachment-related insecurities that interact with situational stressors leading to diathesis of stress and, in turn, sexually abusive behaviour. The combination of emotional vulnerability and the disinhibiting effects of intoxication may have led to the onset of sexual abuse for some of these adults as a maladaptive coping strategy.

Table 4: Predictors of adolescent- versus adult-onset sexual abuse							
						95% CI for OR	
Model and predictor	B	SE	Wald	*p*-value	Odds ratio	Lower	Upper
Block 1: Individual factors							
Youth justice history	1.36	0.27	26.20	<0.001	3.88	2.31	6.52
Sexual abuse	–0.93	0.39	5.77	0.011	0.40	0.19	0.84
Non-sexual abuse	0.56	0.29	3.82	ns	1.76	0.99	3.10
Out-of-home placement	0.23	0.30	0.58	ns	1.26	0.70	2.28
Block 2: Individual and contextual factors							
Youth justice history	1.94	0.36	28.84	<0.001	6.94	3.42	14.07
Sexual abuse	–0.45	0.48	0.85	ns	0.64	0.25	1.65
Non-sexual abuse	0.48	0.37	1.66	ns	1.62	0.78	3.37
Out-of-home placement	0.04	0.39	0.01	ns	1.04	0.49	2.22
Prior intent	0.58	0.40	2.05	ns	1.78	0.81	3.90
Sexual motivation	1.95	0.38	27.04	<0.001	7.05	3.38	4.73
Lonely	–1.76	0.45	15.19	<0.001	0.17	0.07	0.42
Depressed	–2.34	0.60	15.34	<0.001	0.10	0.03	0.31
Intoxicated	–1.63	0.40	16.40	<0.001	0.20	0.09	0.43

Note: Group membership (0=adulthood, 1=adolescence); all dichotomous variables coded (0=no, 1=yes); $\chi^2(9, N=325)=174.53$, $p<0.001$ (Nagelkerke $R^2=0.56$); correct classification=81.5% (81.4% adolescent-onset & 81.8% for adult-onset); AUC=0.89, $p<0.001$ (95% CI: 0.85–92)
Source: Smallbone et al. 2005; Smallbone et al. 2011; AIC CRG collection 2016 [computer file]

Discussion

The four key findings from this research map three important areas of focus for policy and practice relevant to a range of community and government agencies.

Recommendation 1: Investment in prevention and early intervention should be a key priority for policy development in Australia

In line with findings 1, 2 and 4, there are currently missed opportunities for early intervention with adolescents and adults. For adolescents, assessment and treatment of individuals in contact with the youth justice system should be broadened to address non-sexual pathways to sexual offending as a secondary prevention approach. Existing youth justice programs may benefit from incorporating psycho-education sessions on safe sexual relationships and consent to raise awareness of the risks and circumstances surrounding sexual behaviour at this age. It is acknowledged that great sensitivity surrounds these issues and that most adolescents who engage in non-sexual offences will not go on to perpetrate sexual offences. However, adolescents coming into contact with the youth justice system are all navigating through puberty, when sexual interests, relationships and activity are salient. The inclusion of these components in youth justice programs may be a logical, productive and pre-emptive measure in this regard. It could also extend to other community-based services working with at-risk youth.

As per key finding 3, the fact that most offenders knew their victim and some had had thoughts about having sexual contact with them before engaging in abuse indicates possible opportunities for both (potential) offenders or concerned others to seek help before or during the early stages of sexual abuse. Stop It Now! (USA; UK) is one secondary prevention initiative at the forefront of sexual abuse prevention overseas. This anonymous, confidential helpline assists people concerned about their thoughts and/or behaviour or those of others (Denis & Whitehead 2012).

Evaluations of Stop It Now! (UK) show promise in both the uptake of service-seekers and positive outcomes resulting from intervention. For instance, Stop It Now! (UK) received over 30,000 calls in their first 10 years of operation, 38 percent of whom were adults concerned about their own thoughts and behaviour; six percent were parents or carers concerned about a young person's sexual behaviour (particularly males between 11 and 15 years; Denis & Whitehead 2012). There is potential for programs like this to target adolescents as well as adults. The alternative would be to integrate this support into existing youth helplines (eg Kids Helpline) by training relevant staff in responding to these issues. Services like this are lacking in Australia and should be a key area for policy development as a new initiative in the prevention of sexual abuse in Australia.

Also in line with finding 3, at a more general level, education for children, parents, teachers and health providers on indicators, dynamics and dimensions of sexual abuse, risky situations and contexts can instil resilience, enhance capacities for capable guardianship and encourage early disclosure. For adolescents, school-based programs that address issues of consent, sexual ethics, coercion and misperceptions of sexual behaviour should be considered as a primary prevention initiative. The finding that emotional manipulation and use of trust in relationships as a powerful compliance tool is particularly important for informing policy around education programs to create awareness that sexual abuse can be preceded by perceived prosocial behaviours that are subtle and manipulative. Importantly, promoting open communication within families and other support networks within the child's social ecology (eg school and peers) is a universal prevention tool that everyone can use.

Recommendation 2: Policy development and implementation should consider ecological and situational factors as a contextualised approach to explaining, and responding to, child sexual abuse

Consistent with all four key findings, a comprehensive approach to understanding and preventing sexual abuse must explicitly consider the ecological and situational influences and how these interact with individual-level vulnerabilities, to produce sexually abusive behaviours at particular times and places. Smallbone, Rayment-McHugh and Smith (2013) have previously cautioned against clinical assessment and observations that 'artificially frame the problem in terms of the individual offender alone' (p 49).

Many adolescent programs now recognise the developmental context of adolescence (Smallbone, Rayment-McHugh & Smith 2013). Multi-systemic approaches focus on the multiple determinants of sexually abusive behaviour in the context of adolescents' natural social ecology (eg peers, family and school). Evaluations of these approaches indicate promising outcomes for adolescents (Borduin, Schaeffer & Heiblum 2009; KPMG 2014). However, adult treatment programs still tend to focus heavily on dispositional features (eg deviant sexual interests/preoccupations, cognitive distortions) of offenders (Bumby 2006). Recognising ecological and situational factors shifts the focus to the risks posed within the immediate offence setting to complement and extend existing offender-focused interventions.

It might be worthwhile considering whether systemic models like those implemented with adolescents could be useful for adults, who are also embedded in, and shaped by, their own social ecosystem. A promising re-entry program for adult child-sex offenders is Circles of Support and Accountability (Wilson, Cortoni & McWhinnie 2009). This program focuses on fostering connection and support within the context of the offender's environment upon release from prison, to assist them in their integration. Positive outcomes from these programs (Wilson, Cortoni & McWhinnie 2009) have been attributed to these increased supports. This may lessen feelings of social disconnection that can lead to negative emotional states which might trigger reoffending in some men. This program has recently been introduced into Australia and outcome evaluations will help to determine the short- and long-term effectiveness of these interventions.

Regardless of offending motivations, results showed both groups tended to victimise people they knew, and with whom they had an established and trusting relationship, in places familiar to them. The findings emphasise the role that situational factors play in the onset of sexual offending. Modifying situational and environmental factors to reduce opportunities for child sexual abuse should be considered as part of a comprehensive prevention plan. Opportunities to intervene successfully may be greater in the adolescent group, who, because of their developmental status, tend to be less sophisticated in their offending behaviour and who live in a world characterised by greater scrutiny and supervision than adults where witnesses are more likely to intervene.

Recommendation 3: Effective intervention requires developmentally tailored approaches that address the criminogenic risks and needs unique to these two developmental stages

Overall, the present findings highlight some differences in offence pathways for adolescents and adults who sexually harm, and suggest that they may in fact engage in this behaviour for fundamentally different reasons. This research therefore provides another platform from which to approach the task of extending current policies and interventions that attend to some of the distinct risk factors associated with the onset of sexual offending at these two life stages.

Limitations

There are always concerns raised about the accuracy of self-report and retrospective data, particularly in offender samples (Payne & Piquero 2016). Despite these known limitations, this methodology presented a unique opportunity to obtain rich information about the origins of sexual abuse from those who commit these crimes, rather than relying on assumptions drawn from official data. However, the circumstances under which the sets of data were collected differed somewhat between the adult and adolescent cohorts. Most adolescent participants were residing in the community and adults in custody at the time of data collection. This may have impacted perceptions regarding their behaviour. The data for the adult cohort were also more reliant on offender self-report. Although reliability analyses indicated low response-bias and good test-retest reliability, the potential for recall error is acknowledged given that this group was much older than the adolescent cohort. The extent to which these findings can be generalised beyond individuals who have been detected and found guilty is not known, nor can assumptions be made regarding female-perpetrated child sexual abuse. Finally, multiple comparisons were conducted in this study. Rothman's (1990) recommendation to refrain from adjusted significance thresholds was applied due to the exploratory nature of this research, and as such should be considered a platform for further research in this area.

Directions for future research

The findings, limitations and recommendations stemming from this project all provide directions for future research. These include the following.

Replication and extension of these findings

This will help to further clarify the different explanatory factors that predict adolescent-onset and adult-onset child sexual abuse offending to inform criminal justice policy. Several other aetiological factors associated with the perpetration of child sexual abuse (eg social skills deficits, intellectual disability) not investigated in the present study would be valuable avenues for research.

More longitudinal research

Studies like that by Lussier and colleagues (2015) should be prioritised. Qualitative data is also often overlooked but provides rich, detailed content on the context and circumstances surrounding sexual abuse incidents. As Lussier et al. (2015) contend, perhaps those who do not begin offending until adulthood come from a socio-ecological background characterised by more prosocial or protective factors that precluded sexual abuse earlier in life. Asking adult-onset offenders whether they had thought about sexually abusing a child prior to adulthood, and the reasons they did not act on these thoughts, might help elucidate some of the protective factors that precluded earlier-onset offending, which might then help drive early intervention strategies.

Further investigation into proximal influences that produce sexual offending behaviour, especially in adult-onset offending

Ecological and situational influences are important explanatory factors in the onset of sexual abuse. Focusing on how situations (especially emotions) precipitate criminal (and sexual) motivations help to conceptualise sexual offending beyond that of sexual deviance. This allows for better explanations of some incidents of sexually abusive behaviour in adulthood, where childhood experiences may be of less direct influence. Wortley's (2008) situational precipitators theory is a ripe area for research in this regard.

Examining sexual abuse in emerging adulthood

The recent emphasis on 'emerging adulthood' (Arnett 2000: 469) has forced consideration of appropriate criminal justice responses for offenders under the age of 25 years. In the current study adulthood was defined according to Australian standards (age 18) where individuals are expected to be more independent in terms of living, financial and relationship responsibilities. For this generation, however, this period appears to be a more delayed transition from adolescence into adulthood. It may be timely to examine these features within this specific age group (18–25) to see if they are more similar to the adolescent-onset group or the adult-onset group, to determine whether tailored responses are required for this group.

Concluding remarks

It is without doubt that preventing sexual abuse from occurring in the first place, rather than intervening after it has happened, is the most desirable goal. While recognising that a small number of adolescents persist with sexually abusive behaviours into adulthood, for the most part these adolescents and adults appear to be distinct from each other, with unique criminogenic needs. Their motivations and strategies for engaging in sexual abuse appear to be differentially affected by the experiences, opportunities and constraints that comprise these two life stages. Therefore developmentally appropriate policies and approaches to the prevention of sexual abuse are required.

These findings present an important opportunity to reflect on current policies addressing the issue of child sexual abuse in Australia and to promote the development of new strategies for combating sexual abuse of children across the prevention spectrum. The recommendations stemming from this research should be considered a priority for policy development. Discussions on new ways forward are welcomed.

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5. Exploring the implications of child sex dolls

Rick Brown and Jane Shelling

Introduction

Child sex dolls are anatomically correct, life-size dolls made to look like pubescent and prepubescent children. Currently manufactured in overseas markets, including China, Hong Kong and Japan, they are designed to be as lifelike as possible. Manufacturers offer the opportunity to tailor skin, hair and eye colour, facial features, body shape et cetera, and the dolls are of a similar weight to a child (Maras and Shapiro 2017; Shaw 2017; Torjesen 2017). They are also designed with vaginas, anuses and mouths that will fit an adult penis. Robotic versions of adult sex dolls are also available (child versions are thought to be in production) that can have a heartbeat, use artificial intelligence and programming to give positive verbal cues, track eye movement and assume sexual positions (Döring & Pöschl 2018; Maras and Shapiro 2017; Sharkey et al. 2017). Danaher (2017) suggests the drive to develop a sex doll or robot in human form is to create an artificial substitute for, or to augment, human sexual interaction.

In recent years, both in Australia and overseas, offenders have been prosecuted for possessing or importing child sex dolls. In response to the issue, the UK's National Crime Agency, with Border Force, jointly established Operation Shiraz, which seized 123 child dolls, preventing them from being imported, between March 2016 and July 2017. This led to successful prosecutions, under UK customs legislation, for importing obscene material (Shaw 2017).

In the USA, the *Curbing Realistic Exploitative Electronic Pedophilic Robots (CREEPER) Act* passed the House of Representatives in June 2018, although it is yet to pass the Senate. Section 2 of the Act raised a number of concerns about child sex dolls (although none of the assertions appear to be substantiated by empirical evidence), including their relationship with child exploitation material ownership; that they can be customised to represent actual children; that robot versions can have settings to simulate rape, which can help teach an attacker how to overcome resistance; that they can normalise submissiveness and normalise sex between adults and children; that obscene material is often used to groom children for sexual exploitation; and that they can lead to the exploitation, objectification, abuse and rape of minors. As a result, the legislation seeks to prohibit the importation and transportation of child sex dolls in the USA (GovTrack 2018).

In 2016, a petition to ban child sex dolls in Australia was reported to have received more than 18,000 signatures (Scott 2016). A search of change.org (a website on which petitions can be created) in October 2018 using the term 'child sex dolls' found nine open petitions calling for the ban of such items in the UK and USA.

In Australia in 2017, a significant increase was reported in the number of child sex dolls imported and seized, with such dolls classed as objectionable goods under the Customs Act 1901 (Sydney Criminal Lawyers 2017). Figures provided by the Department of Home Affairs indicate that, between July 2013 and June 2018, 133 child-like sex dolls were detected at the point of importation, although the vast majority of these detections occurred in the 2016–17 financial year.

Legislation in New South Wales prohibits the ownership of child sex dolls. In 2016, a man was sentenced to two years and three months imprisonment for possession of a child sex doll, after a Sydney District Court judge ruled that a child sex doll could be classed as child abuse material under section 91FB of the *Crimes Act 1900* (NSW) (Commonwealth Director of Public Prosecutions 2016). Legislation in other states and territories could also be used to prohibit child sex dolls, although this largely remains untested in the courts.

In February 2019, the Combatting Child Sexual Exploitation Legislation Amendment Bill was introduced to the Australian Parliament. This bill seeks to prohibit the possession of child sex dolls, as well as criminalising the use of a carriage service to advertise or solicit child sex dolls, and the use of a postal service to send such dolls.

Aim

This chapter explores the available evidence on child sex dolls, with a particular focus on the implications of their use, for both individuals and society as a whole. The specific questions explored in this chapter, developed in consultation with the Department of Home Affairs, are:

- Do child sex dolls promote the sexualisation of children?
- To what extent can the use of child sex dolls be viewed as an escalated form of engaging with child pornography?
- Does using child sex dolls normalise child sexual abuse for offenders, making them more likely to commit a contact offence?
- Is there a risk that child sex dolls can be used as a grooming tool?

Methodology

A literature search for academic articles describing sex dolls was conducted over established commercial databases (CINCH, Criminal Justice Abstracts, Proquest Criminal Justice Database, PsycARTICLES, PubMed, SocINDEX). Further searches were made for grey literature material such as reports and magazine and newspaper articles. Reference lists were also scanned for additional material. Terms used for subject specific articles included:

> 'Anatomically detailed doll*' OR 'anatomically correct doll*' OR 'sex doll*' OR 'sex toy*' OR 'sex robot*' OR 'sex bot*' OR 'sex AND robot*'.

The same databases were used to retrieve related material on aspects of persons with a perceived interest in sex dolls.

It is important to note from the outset that the available evidence in relation to sex dolls in general and child sex dolls in particular is very weak, with almost no studies empirically examining the implications of doll use. Therefore, this chapter also draws on the larger literature associated with child exploitation material and sex offending to examine the implications of child sex doll ownership and use, as well as the more narrative, discursive material found in relation to sex dolls.

Relationship with online child exploitation material

From a societal perspective, it is commonly understood that any sexual activity involving children is unacceptable and that, therefore, by extension, child pornography (from here on termed child exploitation material, or CEM) cannot be consensual. Indeed, Roos (2014) noted that such material actively encourages the sexualisation of children by creating a market that validates sexual gratification through its use, erotising the child's defensiveness and encouraging the use of children for sexual satisfaction.

Every Australian state and territory, as well as the Commonwealth, has legislation that prohibits online child exploitation material within the remit of its jurisdiction (Boxall, Tomison & Hulme 2014). Although precise definitions vary, legislation typically outlaws the production, distribution and possession of such material. Definitions have changed over time to account for developments in technology, as CEM moved from analog to digital formats, with computer generated representations of CEM (particularly in the context of computer games; see Warren and Palmer 2010) also being prohibited (Boxall, Tomison & Hulme 2014).

Parallels can be drawn between computer generated CEM and child sex dolls in that neither involves direct harm to a child in its creation. As a child sex doll cannot experience harm, there is neither a legal nor moral victim (Strikwerda 2017). However, the representation of a child being party to sexual acts in computer generated images has been considered to raise the risk of subsequent child victimisation. The explanatory memorandum to the Crimes Legislation Amendment (Telecommunications Offences and Other Measures) Bill 2004 (Cth) noted that depictions of children in child abuse material would be covered by the proposed act, including representations of children in cartoons and animation.

This was justified:

> …because although it may not directly involve an abused child in the production, its availability can fuel further demand for similar material. This can lead to greater abuse of children in the production of material to meet this demand. (Parliament of the Commonwealth of Australia 2004: 6)

It is reasonable to assume that child sex dolls, like their female adult counterparts, will evolve into child sex robots that can move and be interactive and could plausibly be used to replicate a sexual experience, as opposed to the less interactive activity of viewing CEM. Sexually explicit behaviour with a child sex robot could be seen as a much closer experience to actual child sexual abuse (Strikwerda 2017).

This line of reasoning also suggests that, just as there could be indirect harm from computer generated and animated CEM, so too could there be indirect harm from the production, distribution and use of child sex dolls. These harms include risks associated with escalation, desensitisation, objectification, commodification and grooming.

Potential harms

Escalation

Escalation in relation to child sex dolls refers to the possibility that such devices may promote a continuum of behaviour that results in contact child sexual offending, by bridging the gap between fantasy and reality. This hypothesises that use of a child sex doll may be causally associated with the onset of contact child sexual offending and/or may speed up the process by which such contact offending is initiated. While there is no empirical evidence to test this hypothesis directly, the argument presented here is that escalation in the nature of material viewed can occur with online sexual images. When combined with a general preference for physical representations over virtual ones, there is a plausible argument that some individuals may migrate from viewing child exploitation material to engaging with a child sex doll.

Escalation in relation to pornographic material has previously been documented (Maras & Shapiro 2017; Schell et al. 2006). Accessing CEM has been considered a progressive addiction, with passive viewing of online content leading to an escalation in problematic internet use which, some have suggested, may subsequently lead to contact sexual offending (Maras and Shapiro 2017; Quayle & Taylor 2003). From reviewing the cases of 136 online child sexual offenders in Australia, Davis, Lennings and Green (2018) concluded that the preference for more extreme material increases as the medium moves from photographic to video.

Offenders who viewed only photographic CEM images were less likely to have a preference for more graphic and explicit images (as graded by the Combating Paedophile Information Networks in Europe, or COPINE, Scale) than those who viewed video content. Houtepen, Sijtsema and Bogaerts (2014) noted that heightened online engagement can lead to a need for more extreme material to reach satisfaction.

Given this tendency towards escalation in CEM content, it is possible (although as yet unconfirmed by empirical evidence) that CEM offenders could migrate to child sex dolls as a progression from consuming online content to engaging in sexual contact with a proxy-human object. This may be supported by evidence of our preference for the physical world over the virtual (Darling 2016; Kwak et al. 2013; Li 2015; Suzuki et al. 2015). Further support for the escalation towards dolls can be found in one study that compared men's physical attraction to adult sex robots with their attraction to women (Szczuka & Krämer 2017). The study found no difference in men's underlying (implicit) perception of attractiveness towards sex dolls versus women, although explicit perceptions (that took account of social acceptability) found a preference for women over dolls.

Conceptually, child sex dolls could provide their users with both emotional and physical stimuli; this is borne out by testimonials of adult sex doll owners, who frequently report emotional attachment to their dolls, including romance, closeness and companionship (Ciambrone, Phua & Avery 2017; Döring & Pöschl 2018; Wolak, Finkelhor & Mitchell 2012). A recent study of sex doll owners indicated that companionship and alleviation of loneliness were important aspects of sex doll ownership (although over three-quarters still described sex as the core element of their relationship; Langcaster-James & Bentley 2018). This train of reasoning would suggest that CEM offenders might be attracted to child sex dolls because they potentially provide greater intimacy and sexual satisfaction than might be derived solely from viewing online content. In support of this reasoning, the US Congress found, 'There is a correlation between the possession of the obscene dolls, and robots, and possession of and participation in child pornography' (US Congressional Bill 115 Congress; CREEPER Act of 2017; 14 June 2018), although it should be noted that this finding was based on opinion rather than empirical evidence.

This does not necessarily mean that child sex doll users would progress to contact child sexual offending, or that such dolls act as a bridge between CEM and contact offending, although it has been argued that the step between the use of child sex dolls and child sexual abuse may be smaller than the step between watching CEM and child sexual abuse (Strikiwerda 2017).

It is important to note that the relationship between CEM offences and contact child sexual offending is complex (Eke, Seto & Williams 2010; Prichard & Spiranovic 2014). Contact child sexual offenders are often found to have collections of CEM material (Palermo & Farkas 2013), and early exposure to pornography among sexual offenders has been shown to reduce empathy for children in abusive situations (Simons, Wurtele & Heil 2002). Long, Alison and McManus (2012) found that contact child sexual offenders tended to access more extreme CEM content than non-contact CEM offenders, providing evidence of escalation from CEM to contact sexual offending. However, a meta-analysis by Babchishin, Hanson and Hermann (2011) found that sexual deviancy was higher among CEM offenders than among contact offenders. Yet, depending on the follow-up period examined, typically less than seven percent of CEM offenders go on to commit a contact child sexual offence, based on official sanction data (Brown & Bricknell 2018), although self-report data suggest the undetected level of recidivism could be much higher (Seto, Hanson & Babchishin 2011). Prichard and Spiranovic (2014) concluded that, while there appears to be a relationship between CEM and contact child sexual offending, there is no direct evidence to support a causal link between the two. Therefore, the imputed relationship between CEM offending, child sex dolls and contact sexual offending needs to be treated with care, given the inconclusive results from studies of the relationship between CEM and contact child sexual offending.

A number of questions remain unanswered regarding the role of child sex dolls in the escalation from online CEM to contact child sexual offending. For example, is there a relationship between the prevalence of CEM possession and child sex doll use? Is there a relationship between the extremity of CEM accessed online and the willingness of offenders to use child sex dolls? How does the use of child sex dolls influence the decision to initiate contact child sexual offending? To what extent is the use of child sex dolls associated with the frequency, prevalence and severity of contact child sexual offending?

Desensitisation

Desensitisation in this context refers to the distorted cognitions that may derive from child sex doll use where sexual abuse of a proxy-child becomes normalised, thereby providing justification for the initiation of contact child sexual offending. Howitt and Sheldon (2007) found that CEM offenders were more likely than contact child sexual offenders to view children as sexual beings. This was a function of CEM offenders' views being fuelled by their fantasies, while contact offenders were aware of the realities of sexual contact with children. Child sex dolls could continue to fuel the fantasy perception of children as sexual beings, further supported by the lack of negative feedback received from a doll. Indeed, Maras and Shapiro (2017: 17) noted that such dolls:

> …fail to provide pedophiles with accurate emotional feedback from aggressive actions, particularly ones that would result in emotional and physical damage if performed on a real child.

This results from the fact that such dolls will typically be silent and offer no emotional feedback or, in the case of robotic models, only positive responses (Maras & Shapiro 2017).

Objectification

The sexual objectification of women has been shown to be associated with violence against women in various ways (Gervais & Eagan 2017). It has been argued that (adult) sex dolls objectify women by making the sole reason for their existence the sexual pleasure of men (Sharkey et al. 2017). Dolls can be tailored to suit their owners' wishes, thereby fulfilling the fantasy role their owners desire and potentially creating a distorted view of women. These distortions could increase sexual violence towards women resulting from expectations that they will accord with men's sexual fantasies. Cox-George and Bewley (2018: 161) have termed this misogynistic objectification. Gutiu (2016: 196) noted:

> Whatever the true motivations may be to own a sexbot, there are gender dynamics at play which should make us question whether sexbots are part of a broader continuation of women's oppression.

Indeed, the instrumental use of sex dolls to relieve sexual urges, as proposed by Levy (2007), fails to account for the importance of empathy and reciprocity in sexual relationships and reduces humans to things (Richardson 2016). By extension, they characterise women as being primarily sexual objects and submissive, and essentially a means to an end (Gutiu 2016). Richardson (2015) argued that the way we attribute meaning to robots reflects what is of value to us. Human constructs of gender, class, race or sexuality can come into question when sex dolls are used in a sexually abusive manner. This usage could serve to reinforce negative societal stereotypes which lead to children being perceived as sexual objects.

Such dolls could also offer another means by which children (and girls in particular) self-objectify as sexual beings, by internalising the sexualising messages of the prevailing culture (APA Task Force on the Sexualisation of Girls 2007; Hatch 2011). This can lead to a range of health problems in later life (Fredrickson & Roberts 1997).

Also of concern are ethical issues associated with consent (Frank & Nyholm 2017). As manufactured objects, sex dolls (or rather the more sophisticated robotic versions) may or may not be designed to give consent to sex. Failure to give consent could mean that users assume consent is always implied. Sparrow (2017) argued that adult sex robots that are designed to always consent to sex would represent a woman who never refused sex, thereby fuelling misconceptions common in rape culture that women are always available for sex. Regardless of whether consent is implied or always given, there are concerns that this will lead to increased sexual assault (Cox-George & Bewley 2018; Heath 2016; Sparrow 2017).

In the case of child sex dolls, consent for sex with a child can never be given, because it is illegal. Therefore, sex with a child doll can be viewed as morally problematic in the same way that Sparrow (2017: 18) has viewed sex robots designed for the purpose of rape as being 'a moral hazard to the character of the user'. Similarly, Danaher (2014) has viewed the use of child sex dolls as problematic because it both involves harm of moral character to the user and shows a lack of sensitivity to the social meaning that sex with a child sex doll signifies. Such dolls also erode respect for others, as a result of the lack of equality and reciprocity in the sexual behaviour involved, which can therefore be considered morally objectionable from a legal moralism perspective (Strikwerda 2017).

Commodification

Objectification of sex raises the concern that sex dolls essentially package and market non-consensual sex as a commercial product. The act of seeking out, selecting, purchasing and receiving a child sex doll is the result of a planned consumer choice that signals a demand to the market, which in turn further promotes the sexualisation and commodification of children. Indeed, as Roos (2014: 152) has noted in relation to child exploitation material (and, by extension, child sex dolls), such material sexualises the asexual, reinforcing 'a boundlessness of want, in disregard of others' needs'. Such want is then supplied through the packaging and selling of child sex—either directly or indirectly with CEM, dolls et cetera. This has the potential to normalise the use of child sex dolls, even in society more widely, which may in turn influence attitudes towards women and children and ultimately encourage violence.

Grooming

The discussion so far has centred on the role of child sex dolls in influencing the behaviour of those who use them, by increasing desire and distorting cognitions regarding sex with children. However, there is evidence that adult sex dolls have been used as tools in the grooming of children for sex. For example, in one case, a minor was encouraged to have sex with a blow-up (adult) sex doll as part of the grooming process (see *R v Gommeson* [2014] NSWCCA 159). There is as yet no evidence that child sex dolls have been used for grooming children, although it could be argued that they would be of even greater benefit to offenders than adult sex dolls in normalising sexual contact with children in the same way that CEM has been shown to be used in the grooming process (Cohen-Almagor 2013).

Therapeutic benefit

The therapeutic benefit of child sex dolls has been hotly debated (Rutkin 2016). Behrendt (2018) has set out the arguments for and against the therapeutic use of child sex dolls. In favour of child sex dolls, they can be viewed as a technological device that could protect society. Regardless of whether they are used for recreational or therapeutic purposes, the end result could be the same—the prevention of harm to children from sexual predators. Indeed, one Japanese manufacturer of such dolls has long argued they have therapeutic benefit by satiating sexual urges that may otherwise have been inflicted on children (Morin 2011). With these assumed benefits in mind, Moen and Sterri (2018) have proposed that child sex dolls could be regulated by providing paedophiles with access to them through psychiatrists.

In opposition to their use is the contention that child sex dolls may increase users' sexual desires for children, by acting as a springboard that incites users to abuse children (Behrendt 2018). Further, Facchin, Barabara and Cigoli (2017) argue that discussion about the function of dolls in relieving sexual urges misses the point, as sexual abuse is more about domination and control than sexual satisfaction.

Currently there is no empirical evidence to support the assertion that sex dolls (whether adult or child) reduce the likelihood of sexual violence.

Conclusions

Despite a lack of robust evidence in relation to child sex dolls, there is reason to suggest they may lead to societal harms through a number of different mechanisms. They may bridge the gap between fantasy and reality by allowing potential offenders to move from the virtual to the physical world, although it is currently unclear whether this intermediary step between viewing online CEM and contact child sexual offending increases the likelihood of subsequent child sexual abuse.

It is reasonable to assume that interaction with child sex dolls could increase the likelihood of child sexual abuse by desensitising the doll user to the physical, emotional and psychological harm caused by child sexual abuse and normalising the behaviour in the mind of the abuser. At the same time, there is no evidence of therapeutic benefit from child sex doll use.

From a societal perspective, questions have been raised over the potential for child sex dolls to lead to the objectification of children as sexual beings and the commodification of products that promise the opportunity for an adult to play out their sexual fantasies with a simulated child.

This remains an under-researched topic. Little is currently known about the actual risk associated with child sex dolls and the extent to which they add to the risk associated with online child exploitation material. However, by drawing on the limited material that is available, both theory and empirical research would appear to point towards possible areas of concern.

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6. Benevolent harm: Orphanages, voluntourism and child sexual exploitation in South-East Asia

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This chapter reviews the literature to explore the risks of sexual exploitation faced by children living in orphanages in South-East Asia, as well as the links between orphanages and child trafficking, illicit adoption, and orphanage scams. It is unknown how many orphaned, separated and abandoned children there are worldwide—including how many are living in some form of institutional care—although researchers, advocates and policymakers agree that the number is substantial. Estimates have placed the number of orphaned and separated children at 153 million globally (Gray et al. 2015), with up to eight million living in institutional care (Pinheiro 2006). In South-East Asia, the number of orphanages is thought to have grown substantially since the 1990s. In Indonesia, for example, approximately 500,000 children are estimated to be living in 8,000 childcare institutions (Csáky 2009), while in Cambodia the number of residential care facilities for children is reported to have increased by 75 percent between 2005 and 2010 (MoSVY 2011). However, the extent of orphanage care is thought to be underestimated due to the unreliability of data collection methods and reporting (Browne 2009).

Terminology

Different terms are used to describe facilities where children live in non-family group settings, including 'orphanages', 'institutional care', 'residential care' and 'children's homes'. These terms are used interchangeably to refer to structured group living arrangements involving a professional rather than parental relationship between adults and children (Browne 2009; Farrington 2016). The term 'orphanage' is most commonly used throughout this chapter; however, the term is a misnomer. The vast majority of children living in orphanages—perhaps 80 to 90 percent—are reported to have at least one living parent (Browne 2009; Csáky 2009). Interpretations of 'child sexual exploitation' also vary markedly and there is considerable overlap between definitions of child sex trafficking, child prostitution, commercial sexual exploitation of children and child sex tourism. In this chapter, child sexual exploitation broadly refers to the sexual abuse of persons aged under 18 years, with or without the exchange of money, gifts or favours, and with or without the consent of the child (Farrington 2016).

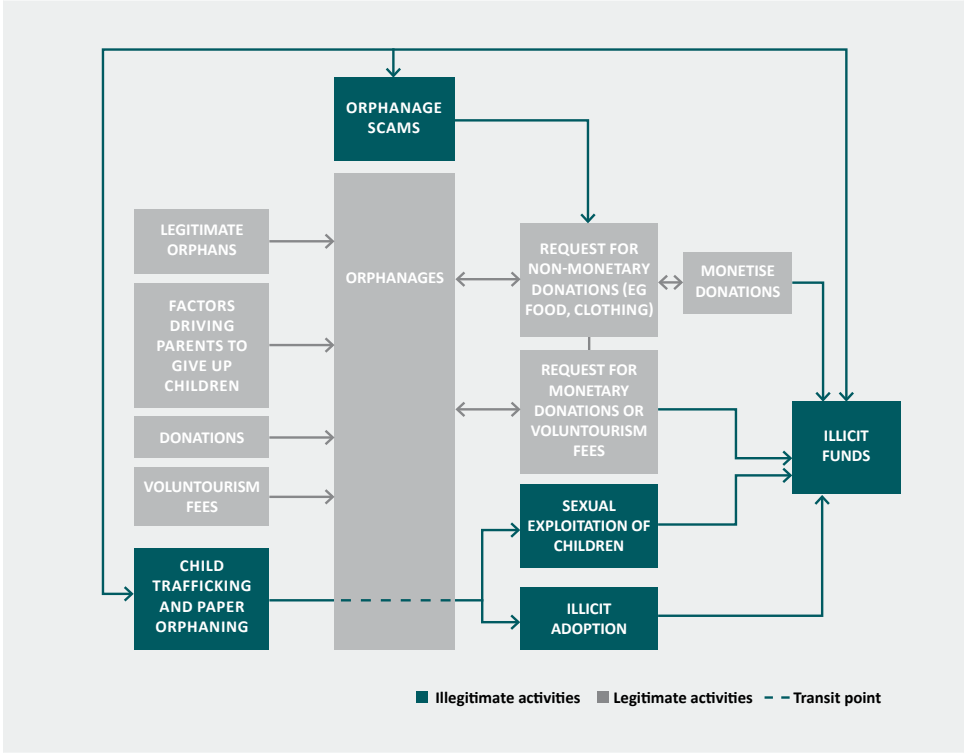
Orphanages and associated harms

Children are placed in orphanages for reasons including poverty, natural disasters, armed conflict, homelessness, family conflict and neglect, illness, discrimination, and disability (Ebbe 2008; Williamson & Greenberg 2010). Parents who place their children in orphanage care may believe that orphanages can provide better standards of material support, including the provision of food, shelter, clothing, health care and education (Dunn, Jareg & Webb 2007). To this end, orphanages are perceived to provide a safe environment for vulnerable children who cannot be cared for by parents or other relatives. However, the harms and variable quality of orphanage care are well documented (Dunn, Jareg & Webb 2007; Williamson & Greenberg 2010). Children living in orphanages are vulnerable to physical and sexual abuse (Pinheiro 2006; Sherr, Roberts & Gandhi 2017); intellectual, developmental and cognitive delays (Browne 2009; Gray et al. 2015; National Scientific Council on the Developing Child 2012; Sherr, Roberts and Gandhi 2017); and social and behavioural problems (Williamson & Greenberg 2010).

More recently, concerns have been raised about the vulnerable conditions created by the expanding popularity of volunteer and orphanage tourism, which may expose children to sexual abuse and exploitation.

Institutional care settings are emerging as the third most prominent site of child sexual exploitation in South-East Asia, behind exploitation occurring on the streets (ie in public places such as beaches, parks, markets and transit areas around bus and train stations) and in commercial establishments such as brothels, massage parlours, karaoke venues, restaurants, bars and clubs (ECPAT International 2011; Farrington 2016; Shaw & Frugé 2016; Sofian, Krisna & Ardian 2016). There is a complex relationship between orphanages, child sexual exploitation and other harmful practices that increase children's vulnerability. Orphanage tourism exposes children to the risk of sexual exploitation. It also creates a financial incentive for unscrupulous operators to use illegitimate methods such as child trafficking, illicit adoption or paper orphaning to manufacture orphans to meet the demands of tourists and generate funds. Orphanage tourism also creates opportunities to scam those who volunteer or donate money. Figure 1 illustrates the interactions between these harmful practices and the legitimate activities of orphanages.

Figure 1: Processes by which orphanages are used for legitimate and illegitimate activities



The legitimate activity of running an orphanage results from the supply of children into orphanage care either as a result of becoming a genuine orphan or due to parents being unable to care for their children. These orphanages are supported by donations and tourism fees. To ensure the continued operation of an orphanage, further requests for donations are made and orphanage tourism is promoted. In a legitimate operation, these funds are used to care for the children.

In an illicit operation, child trafficking and paper orphaning may be used to increase the number of children living in orphanages, and facilitate sexual exploitation or illicit adoption. Here, orphanages may be the site of or the transit point for exploitation. Orphanage scams may also be created to elicit money from charitable persons seeking to donate to orphans or purchase volunteer tourism (or 'voluntourism') packages. All of these illegitimate activities generate illicit funds, which may then be used to facilitate the cycle of illegal activity involving orphanages.

Volunteer and orphanage tourism

Volunteer and orphanage tourism underlies many of the harms to which children in orphanages may be exposed. South-East Asia has the fastest growing tourism industry in the world (Farrington 2016), with voluntourism being a significant driver of tourism in the region (ECPAT International 2016). Voluntourism is the combination of voluntary work with travel for leisure, study or paid work and is popular among Australian travellers (ECPAT International 2016). Orphanage tourism is a form of voluntourism and is particularly popular among faith-based organisations, education providers, young people on gap years, employees of businesses that encourage participation in corporate social responsibility initiatives, and people wanting to help developing and disadvantaged communities (van Doore, Martin & McKeon 2016). Orphanage tourists often spend leisure time with children, help with English language lessons and provide manual labour, money or material support (Punaks & Feit 2014; Reas 2013). Orphanage visits range from day trips to longer stays where voluntourists live in or near the orphanage to care for and interact with the children (van Doore, Martin & McKeon 2016). Voluntourism is often planned in advance, with packages available from specialised tour providers or through humanitarian aid projects. Voluntourism can also be undertaken spontaneously once an individual is travelling.

Experiences are generally paid for through a volunteer agency or tour provider, or directly to the place where the tourist is volunteering (Punaks & Feit 2014). As a result, voluntourism is a marketable product and one of the most lucrative sectors of the tourism industry (ECPAT International 2016). Some unscrupulous orphanage operators have capitalised on the demand for socially conscious tourism experiences as an alternative source of funding (ECPAT International 2016). Consequently, privately owned, and therefore generally unregulated, orphanages have proliferated in popular tourist destinations to attract more volunteers and donations (van Doore, Martin & McKeon 2016; USAID 2005).

Child exploitation facilitated by orphanage tourism

Sexual exploitation of children in travel and tourism (SECTT; also known as child sex tourism) refers to child sex offenders and accomplices seeking to sexually exploit children in the context of travel and tourism (Farrington 2016). SECTT relies on tourism-related services, such as flights, accommodation, transportation and tours to facilitate access to children for sexual exploitation (Perera 2016; Sofian, Krisna & Ardian 2016). Evidence suggests that some providers of tourism services may be involved in facilitating the sexual exploitation of children by arranging sex tours, acting as brokers or intermediaries to provide access to children, or overlooking suspicious behaviour (Sofian, Krisna & Ardian 2016).

Travelling sex offenders can be classified as either preferential or situational offenders. Preferential child sex offenders travel with the deliberate intent of engaging in sexual acts with children (Perera 2016) and use tourism infrastructure to gain access to vulnerable children (Farrington 2016). In contrast, situational child sex offenders are opportunistic offenders and do not travel with the specific intent to sexually exploit children. Rather, their offending is supplementary to their travel or tourism experience (Farrington 2016) and is enabled by a situation in which a child becomes accessible (Sofian, Krisna & Ardian 2016).

The increase in child sexual exploitation in institutions has been attributed to volunteer and orphanage tourism because it facilitates contact between vulnerable children and child sex offenders (APLE Cambodia 2014; Farrington 2016). The voluntourism industry may therefore be attractive to travelling sex offenders who perceive easy and direct access to children living in orphanages through a seemingly legitimate channel (Farrington 2016; van Doore, Martin & McKeon 2016). Most reported cases of sexual exploitation in orphanages have involved travelling sex offenders who engaged with children via professional and volunteer roles (ECPAT International 2016; Nijholt 2016; Renault 2006). Orphanage managers and workers have also offended or been complicit in facilitating access to children—for example, by allowing tourists to spend time with children outside of orphanages and even take children away to stay overnight in their hotel (MoSVY 2011; Renault 2006; Sofian, Krisna & Ardian 2016).

Travelling sex offenders engage victims through voluntourism activities such as play or the exchange of money or gifts in order to manipulate them into voluntarily participating in sexual activities and refrain from reporting (APLE Cambodia 2014). Offenders have also been known to approach orphanages ostensibly to sponsor a child in order to make contact with children (Renault 2006), and have asked managers directly about children's availability for sex (ECPAT International 2016). The 'open door policy' of some orphanages has further contributed to children's vulnerability to child sex offenders, with tourists able to visit as they please and remove children for excursions. Unsupervised access allows exploitation by preferential offenders, but also creates opportunities for situational child sexual exploitation (van Doore, Martin & McKeon 2016).

Child trafficking

The growth in voluntourism has raised concerns that child trafficking can be used to separate children from their families to increase orphan numbers and encourage further orphanage tourism. Child trafficking is defined by the United Nations (UN) *Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children 2000* (Article 3(c); the UN Trafficking Protocol) as the recruitment, transportation, transfer, harbouring or receipt of a child for the purpose of exploitation. Exploitation in this context includes, at a minimum, sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs (Article 3(a)). Approximately one-third of human trafficking victims in South Asia, East Asia and the Pacific are children (UNODC 2016, 2014).

The relationship between child trafficking and orphanages is two-fold. Orphanages may be the destination point, whereby the child is recruited and placed in an orphanage for the purpose of exploitation, or the orphanage may be a transit point in the trafficking process before the child reaches the final destination of exploitation. Recruiters use varied methods, which can include inducing parents to place their children in orphanages by offering money and promising that the child will be educated and returned in the future (Smolin 2006). As part of the trafficking process, traffickers may create new identity documents and fraudulent parental death certificates to present the child as an orphan—a practice known as 'paper orphaning' (van Doore 2016).

Where the orphanage acts as a transit point, illicit adoption may be used as a method of obtaining illicit funds or moving the child into an exploitative situation. Illicit adoption uses intercountry adoption to illegally remove children from their birth parents to create legally adoptable orphans (Smolin 2006). It occurs as a result of 'shortcomings in legislation, law enforcement, birth registration and social welfare systems' that allow the falsification of adoption papers to go unnoticed (Bosco, Luda di Cortemiglia & Serojitdinov 2009: 54). While there are inherent harms in illegitimately removing a child from their family and adopting them illegally, illicit adoption constitutes child trafficking only if the exploitative elements of the Trafficking Protocol are met (ie the child is sexually exploited, forced to provide labour, placed into servitude etc; UNODC 2015).

Orphanage scams

Orphanage scams have also been linked with the rise in voluntourism. Orphanage scams are a type of fake charity scam and play on people's benevolence to garner donations or facilitate money laundering (ACCC 2016). Media, non-government and research reports have revealed the methodologies of orphanage scammers, which may include the indirect or direct involvement of children. Scammers may pose as charities collecting donations for orphanages or asking for sponsorship of what are actually fake orphans (Weibel 2011). Donations may be elicited via telephone calls, emails or scam websites, using photographs and stories of fake orphans to garner sympathy. Corrupt orphanage operators have also been known to directly scam international tourists who have volunteered in orphanages (Beck 2013; Saxe-Smith 2015; Watson 2014).

Such scams do not involve direct contact with children but reflect an environment where unscrupulous individuals profit off the vulnerability of orphans and create a context in which harms are more likely to occur. However, direct contact can occur in cases where a donor wishes to meet the orphanage children. In these cases, scammers have been found to seek out children who are not orphans and display them for the length of the tourist's stay (Weibel 2011). The children may be forced to actively solicit funds from visitors through performances and begging (MoSVY 2011). In some cases, children have been kept malnourished to stimulate tourism, volunteering and donations (van Doore 2016).

Prevention and response measures

Orphanages appear to provide a straightforward response to the complex problem of orphaned, separated and abandoned children (Csáky 2009; Williamson & Greenberg 2010). They have therefore been used as a primary response to children in need of care and protection in South-East Asia (Dunn, Jareg & Webb 2007). However, evidence of the harmful effects of orphanage care has prompted a policy shift, and they are now largely considered an over-used and inappropriate response to the situation of orphaned and separated children. Prevention and response measures to address the problem of sexual exploitation and related harms affecting children in orphanages are largely derived from the broader move to reduce the use of institutional care and promote family-based care. The dominant response has therefore been to avoid institutional care as a means of caring for orphaned and separated children or, if institutional care is used, to reduce the amount of time children spend in such care (Browne 2009; Lumos Foundation 2014; Save the Children 2014; Williamson & Greenberg 2010). Fewer measures specifically aim to prevent the exploitation of children living in orphanages and reduce related risks, particularly those resulting from the vulnerabilities created by the orphanage tourism industry. The international, regional and national efforts to protect children living in orphanages from exploitation and related harms are discussed below.

International measures

A number of international legislative and policy instruments exist to combat and prevent harms experienced by children living in orphanages. These multi-faceted instruments aim to:

- reduce the number of children in institutional care, including orphanages;
- promote family- and community-based care as the most appropriate form of care for children;
- promote appropriate alternative care that ensures the safety and wellbeing of children, only in circumstances where family- and community-based care is not possible; and
- prevent the abuse and exploitation of children in alternative care.

The UN *Convention on the Rights of the Child 1989* (UNCRC) is the pre-eminent instrument outlining the minimum standards of orphanages and residential care. The UNCRC articulates the fundamental rights of all children with a focus on family- and community-based care and protection, child freedoms and agency, recovery and reintegration of child abuse victims and cooperation among international entities. All South-East Asian nations have ratified the UNCRC.

The UNCRC recognises that family- and community-based care is paramount to the wellbeing and development of children, and only when this is not possible should alternative care be used. The United Nations *Guidelines for the Alternative Care of Children* (United Nations General Assembly 2010) support the implementation of this principle. These guidelines are designed to aid the development and implementation of policy and programs relating to issues around alternative care, mainly the unnecessary institutionalisation of children and maintaining the rights of the child when alternative care is needed (CELCIS 2012).

Other key international instruments governing the protection of children from sexual exploitation include the following:

- UN Trafficking Protocol;
- *Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography 2000* (the Optional Protocol); and
- International Labour Organization (ILO) *Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour 1999* (ILO Convention No. 182).

The Optional Protocol extends various articles of the UNCRC to ensure the protection of children from all forms of sexual and economic exploitation. Singapore is the only South-East Asian nation yet to ratify this protocol. ILO Convention No. 182 prohibits the sale and trafficking of children, procuring or offering a child for prostitution, and the production of pornography or pornographic performances. All South-East Asian nations have ratified this convention. These legislative instruments are important because, after ratification, countries are obliged to uphold the standards of the UNCRC in their respective jurisdictions.

Regional measures

Regional initiatives have primarily been developed through the Association of Southeast Asian Nations (ASEAN). These initiatives promote regional cooperation to combat child sexual exploitation, support family stability and, where this is not possible, promote family- or community-based care. Specific instruments include the following:

- *Declaration on the Commitments for Children in ASEAN 2001*—a broad commitment to protect children from exploitation, promote the welfare and wellbeing of children, prioritise family-based care, and ensure that alternative care is family- or community-based;
- *ASEAN Tourism Agreement 2002*—commits member nations to take stern measures to prevent tourism-related abuse and exploitation of children;
- *ASEAN Declaration Against Trafficking in Persons, Particularly Women and Children 2004*—a commitment to improving regional responses and networks to trafficking in persons, especially women and children; and
- *ASEAN Treaty on Mutual Legal Assistance on Criminal Matters 2004*—a treaty to facilitate the cooperation and collaboration of law enforcement agencies in the investigation, prosecution and punishment of offenders of transnational crimes such as SECTT.

Sub-regional initiatives have similar objectives and include:

- *Memorandum of Understanding on Cooperation against Trafficking in Persons in the Greater Mekong Sub-Region*—a formal alliance for transnational cooperation and collaboration in responding to human trafficking; and
- Project Childhood—an Australian Government initiative to combat SECTT in the Mekong Sub-Region.

In addition, there are a range of bilateral agreements between South-East Asian nations regarding cooperation to eliminate and combat human trafficking, and provide victim support.

National measures

The legislative and policy response at the international and regional levels is comprehensive; however, there is substantial variability in the enactment of relevant protections among individual South-East Asian nations (Hamilton 2015; see Table 1). Most countries have adopted domestic legislation and policies broadly aligned with the standards of the UNCRC (Flagothier 2016), and all have specific laws against child trafficking and exploitation (Hamilton 2015). However, many countries fail to address the situation of children in orphanages and other forms of institutional care, and they often lack provisions related to non-penetrative child sex offences and neglect. Therefore, as noted by Farrington (2016: 41):

> The regulated implementation of rigorous child protection policies and practices, and the monitoring of these policies and practices, in all child contact-related professions throughout the region should be a priority for governments looking to ensure that vulnerable children are kept safe from predators.

Table 1: Relevant child protection legislation enacted by ASEAN members

	Child neglect[a]	Child Trafficking and exploitation	Unlawful removal from parent/ guardian	Abduction by force	Inter-country abduction	Extra-territorial jurisdiction over travelling child sex offenders	Non-penetrative child sex offences
Brunei	P	Y	Y	Y	Y	Y	N
Cambodia	P	Y	Y	Y	Y	Y	P
Indonesia	Y	Y	Y	P	N	N	P
Laos	N	Y	P	P	N	Y	P
Malaysia	Y	Y	Y	Y	Y	N	P
Myanmar	N	Y	Y	Y	Y	Y	N
Philippines	Y	Y	Y	Y	N	N	P
Singapore	Y	Y	Y	Y	Y	Y	P
Thailand	Y	Y	Y	Y	P	P	P
Vietnam	N	Y	P	P	N	Y	P

a: Includes physical, emotional, mental and educational neglect, and abandonment
Note: Y=Largely complies with international instruments. P=Partially complies with international instruments. N=Not compliant with international instruments
Source: Adapted from Hamilton 2015

Broadly, the Philippines *National Strategic Framework for Plan Development for Children 2000–2025* outlines a strategy for public and private entities to protect the rights of the child by strengthening families; prioritising children in the allocation of resources by families, communities and government; transforming the education, health, justice and legislative system to meet the needs of children; transforming values and practices in the labour market to better protect children from abuse and exploitation; and improving information and information-sharing (Council for the Welfare of Children 2000).

More specifically in relation to child sexual exploitation, the Cambodian *National Plan of Action of The National Committee for Counter Trafficking 2014–2018* aims to enhance national and local law enforcement, preventative efforts, interagency collaboration and victim services relating to child trafficking and exploitation. Similarly, Cambodia's Ministry of Tourism released the *Strategic Plan on the Promotion of Child Safe Tourism to Prevent Trafficking in Children and Women for Labour and Sexual Exploitation in the Tourism Industry in Cambodia 2007–2009* to minimise the negative impacts of tourism such as SECTT.

Regarding orphanage and institutional care, Malaysia's Department of Social Welfare offers financial assistance, psychosocial support and community-based activities to improve socio-economic circumstances and quality of life for families in crisis in order to decrease the need or desire to place children in institutional care (UNICEF EAPRO 2006). Similarly, the Indonesian province of West Java established the Child and Family Support Centre to provide children at risk of being separated from their families with case management services (CELCIS 2012). Support workers determine the most appropriate course of action for a referred child based on their needs, making sure that alternative care is offered only if necessary.

Addressing the specific harms of volunteer and orphanage tourism in South-East Asia

In addition to the broad legislative and policy environment outlined above, more direct strategies for addressing child exploitation linked to South-East Asian orphanages involve raising awareness, regulating orphanages, and conducting background checks on potential voluntourists.

Education and awareness raising

Media attention in Western nations has illuminated the harms associated with orphanage voluntourism. Campaigns promoting ethical volunteering are becoming more evident, as is the awareness of the need for family- and community-based alternative care. For example, the *Children are Not Tourist Attractions* campaign, developed with support from the United Nations Children's Fund (UNICEF), includes a website where potential voluntourists can find information about appropriate volunteering practices and tips to prevent unintended harms to children (Friends-International nd). Similarly, the Cambodian Children's Trust—established by Australian Tara Winkler—advocates for family preservation and reintegration and, where this cannot be achieved, family-based alternative care. The Trust also assists orphanages to transition to a family-based care model, and raises awareness in Cambodia and internationally about institutional reforms and deinstitutionalisation (Cambodian Children's Trust nd). Most recently, the Australian Government's Department of Foreign Affairs and Trade launched the *Smart Volunteering* campaign 'to prevent Australians from inadvertently contributing to child exploitation through the practice of orphanage tourism' (Department of Foreign Affairs and Trade 2018: np). The campaign discourages Australians from engaging in any form of short-term, unskilled volunteering in orphanages.

Resources available to Australian and international volunteers and tourists include:

- *Smart Volunteering, an Australian Government booklet and checklist to assist orphanage voluntourists to be informed, child safe and prepared* (Department of Foreign Affairs and Trade 2018: np);
- *Orphanages: Not the Solution* website, which provides information on orphanage scams and alternative options for donors, travellers and volunteers who wish to give their time or money;
- anti-scam websites that publish emails from scammers posing as orphanage workers (eg Christensen 2010);
- the Australian Charities and Not-for-profits Commission, which provides a web-checking service to identify whether a charity is registered (Australian Charities and Not-for-profits Commission nd);
- Scamwatch, an Australian Government online service that provides information on current scams (ACCC 2016); and
- information from travel agents, tour operators, and travel and volunteering websites warning of orphanage scams and corruption (eg Karsten 2019; Murdoch 2013).

Further, the public can report orphanage scams to the Australian Cybercrime Online Reporting Network (ACCC 2016).

Registration and regulation of orphanages

A substantial number of South-East Asian orphanages are unregistered and therefore operate without scrutiny. It is estimated that up to 70 percent of Cambodian orphanages and 99 percent of Indonesian childcare institutions are opened without being officially registered (Csáky 2009; MoSVY 2011). In response, Indonesia has developed a regulatory framework for childcare institutions, including National Standards of Care and the establishment of a regulatory authority and licensing system (Csáky 2009). Further, the *Child Safe Organisations Framework and Training Toolkit*—developed by ECPAT International in collaboration with Save the Children UK and UNICEF Thailand—'promotes the development and implementation of child protection policies, particularly within centres providing care to children' (Farrington 2016: 59). As a result, training for organisations working with children has subsequently been offered in Thailand, Indonesia and Vietnam (Farrington 2016).

Regulation ensures orphanages operate within the law and meet minimum standards for the care and protection of children (MoSVY 2011). Regulation improves the safety and wellbeing of children by setting minimum quality standards for orphanages and orphanage volunteers. This allows orphanages to be monitored and inspected. However, regulatory frameworks have not been implemented in all South-East Asian nations. Without this oversight, orphanage staff and volunteers may be allowed to engage with children without proper training, qualifications and legal authority (Dunn, Jareg & Webb 2007; ECPAT International 2016: 2).

Background checks for voluntourists

The majority of volunteers and workers seeking employment in South-East Asian orphanages are not subjected to background and criminal checks (APLE Cambodia 2014; Farrington 2016). National Police Checks for Australian volunteers are available online to orphanage operators and staff through the Australian Federal Police; however, orphanage operators often lack knowledge of and are limited in their capacity to use this service. Where volunteers are placed through a third party, orphanages may assume checks have been carried out and that a volunteer is suitable. Finally, where orphanage tourism is undertaken spontaneously, there may be no opportunity for background checking to be conducted.

The unregulated nature of voluntourism activities has recently been highlighted through international research. As part of the *Global study on sexual exploitation of children in travel and tourism* (ECPAT Germany, Tourism Watch, Bread for the World 2015), 44 voluntourism projects offered by 23 voluntourism providers were analysed for child protection measures.
Of these:

- 96 percent of providers did not have a child protection policy;
- 75 percent of providers did not have a code of conduct outlining appropriate behaviour towards children;
- 56 percent of projects did not require a police clearance certificate;
- 79 percent of projects did not ask for a resume and 93 percent did not conduct a personal interview; and
- 96 percent of projects did not require the volunteer to undertake a pre-departure preparation course (ECPAT Germany, Tourism Watch, Bread for the World 2015).

Conclusions

Institution-based sexual exploitation, including within orphanages, is rising and is now the third most prevalent form of child exploitation in South-East Asia, behind exploitation on the street and in commercial establishments (Farrington 2016). The drivers of this increase are complex, but the popularity and profitability of volunteer and orphanage tourism has created opportunities for sex offenders to gain access to potential victims. These factors have also resulted in the practice of paper orphaning and the trafficking of children into orphanages to boost orphan numbers, as well as illicit adoption. Voluntourism is also linked with orphanage scams.

Legislative and policy responses to prevent harms experienced by children living in orphanages have several aims. The primary aim is to reduce the number of children living in such institutions by promoting family-based care and addressing the conditions which lead families to relinquish their children. If family-based care is not possible, the policies aim to promote the safety and wellbeing of children placed in alternative care. This includes the prevention of child abuse and exploitation.

However, legislative instruments across international, regional and domestic levels generally do not focus specifically on the issue of child exploitation within orphanages. Instead, specific responses are found in strategies that create awareness, ensure regulation of orphanages and require background checks of potential voluntourists. These initiatives aim to prevent voluntourism and promote more ethical forms of assistance, to ensure orphanages are registered and can be monitored, and to prevent harms towards children by implementing rigorous screening processes for volunteers.

Effective prevention strategies and interventions require a solid understanding of the issues and how they affect victims. Research examining child sexual exploitation in South-East Asia has overlooked the vulnerabilities of children in orphanages. The rise in orphanage tourism has seen a proliferation of practices and institutions that can facilitate the exploitation of this particularly vulnerable population. Thus, strengthening the evidence base around sexual exploitation in orphanages is the first step in addressing this problem and ultimately ensuring children in residential care are protected and nurtured and have their rights and dignity maintained.

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7. Diversionary pathways for Aboriginal youth with fetal alcohol spectrum disorder

Harry Blagg and Tamara Tulich

Attention in Australia has recently focused on the inter-generational impact of long-term alcohol use in the form of fetal alcohol spectrum disorder (FASD). FASD is a diagnostic umbrella term encompassing a collection of disorders resulting from exposure to alcohol in utero, including FASD with three sentinel features (a new diagnostic category replacing fetal alcohol syndrome (FAS)) and FASD without three sentinel features (replacing the previous categories of partial FAS (pFAS) and neurodevelopmental disorder–alcohol exposed) (Bower and Elliott 2016). The Australian Parliament's House Standing Committee on Social Policy and Legal Affairs (2012: 3) recently reported:

> Australia currently lags behind other countries in recognising the prevalence of FASD and the impact on the individual as well as social and economic impact on families and society. It is clear that urgent measures must be taken to reduce the incidence of FASD and to better manage those diagnosed with FASD.

There is also a growing awareness of the criminal justice system's inadequate accommodation of FASD-associated impairments (Roach & Bailey 2009: 3; Parliament of Australia 2015, 2012, 2011; Parliament of Western Australia 2012: 75). People with FASD may experience a range of cognitive, social and behavioural difficulties, including difficulties with memory, impulse control and linking actions to consequences (Douglas 2010). A person with FASD may therefore be disadvantaged in police interviews and unable, rather than unwilling, to comply with court orders. An inadequate legal response can also increase the likelihood of people with FASD developing secondary disabilities such as substance abuse which in turn increase their susceptibility to contact with the criminal justice system, as victims and offenders (Koren, Roifman & Nulman 2004: 4). International research indicates that 60 percent of individuals with FASD have been in trouble with the law (Streissguth et al. 2004), with young persons affected by FASD being over-represented in the juvenile justice system (Cox, Clairmont & Cox 2008).

While Australian data is limited, the prevalence of FASD in Indigenous communities is indicatively higher than in non-Indigenous communities (Parliament of Australia 2011). The issue of FASD in the West Kimberley was highlighted by campaigns initiated by Bunuba women June Oscar, Emily Carter (Marninwarntikura Women's Resource Centre) and Maureen Carter (Nindilingarri Cultural Health Services) as part of a broader campaign to reduce alcohol consumption in Fitzroy Crossing and publicise its catastrophic effects. In 2015, rates of FAS/pFAS of 12 per 100 children were reported in Fitzroy Crossing in the West Kimberley region of Western Australia (Fitzpatrick et al. 2015). This is the highest reported prevalence of FAS/pFAS in Australia and similar to rates reported in 'high-risk' populations internationally (Fitzpatrick et al. 2015: 450).

The need to divert Indigenous youth with FASD from contact with the justice system has been acknowledged by a number of official sources (Parliament of Australia 2015: para 5.84). The Western Australian Office of the Inspector of Custodial Services (OICS 2014: 10) has recommended 'community based alternatives to custody orders for people who are found unfit to stand trial but require some degree of supervision'.

Diversionary alternatives are sorely needed. However, this research raises questions about the relevance of mainstream diversionary mechanisms to this task, particularly given the failure of existing community-based sanctions to stem the flood tide of Indigenous over-incarceration in Western Australia. FASD amplifies the chances of Indigenous youth being caught up in the justice system in Western Australia, including indefinite detention in prison if found unfit to stand trial. A fresh diversionary paradigm is required.

Methodology

This research responds to specific concerns raised by Indigenous women in Fitzroy Crossing, in particular, about the numbers of children with FASD who were vulnerable to enmeshment in the justice system—concerns amplified by a range of professionals working in the justice system, from lawyers to police prosecutors. This project explores diversionary methods and law reform options that will equip courts and multi-agency teams, partnered with community owned and managed services, to construct alternative pathways into treatment and support. The research was conducted in three locations in remote Western Australia: Broome, Derby and Fitzroy Crossing.

To ensure the research was in line with the aspirations of Indigenous people in the West Kimberley, the researchers formed partnerships with three prominent Indigenous led and managed agencies: Nindilingarri Cultural Health Services in Fitzroy Crossing, Garl Garl Walbu Alcohol Association Aboriginal Corporation in Derby, and Life Without Barriers in Broome. These organisations were identified on the basis of existing relationships of trust with these bodies, formed over several decades of research in the Kimberley by Professor Blagg, and because each was engaged in work that brought them into contact with youths and families affected by FASD.

The research had the support of the Magistrates Court and various court user groups (including police prosecutors, the Aboriginal Legal Service, Legal Aid and Regional Youth Justice Services) and the researchers were able to accompany the West Kimberley Magistrate on circuit, including court sittings in Broome, Derby and Fitzroy Crossing.

The research design involved a mix of comparative legal analysis, a review of the extant police and practice literature around FASD, an examination of the literature on the Western Australian justice system in relation to Aboriginal youth, and a qualitative research phase. Extensive interviews and focus groups were undertaken with key stakeholders in the West Kimberley region. The field work was initiated by staging a workshop co-hosted with respective research partners in each research site. In Broome, the largest of the three sites and the regional services hub, there were 19 attendees at the workshop; there were eight in Derby. These were mainly representatives from key mainstream agencies (police, health, justice, education) but also included Indigenous service providers and youth agencies. The Fitzroy Crossing workshop included senior lawmen from Kimberley Aboriginal Law and Culture Centre, as well as Nindilingarri Cultural Health Services and Marninwarntikura Women's Resource Centre and the police (10 people).

The process then snowballed, picking up potential recruits suggested by attendees; an estimated 25 more subjects were contacted in this way—19 in the Broome area and the remainder in Derby and Fitzroy Crossing. Travelling on circuit with the magistrate allowed researchers to interview not only the magistrate but also the Legal Aid and Aboriginal Legal Service lawyers and police prosecutors who accompanied the magistrate. It also afforded an opportunity to meet with approximately 20 more subjects from court user groups (drug and alcohol services, Indigenous community organisations, bail support workers, juvenile justice workers, mental health and disability support services, domestic and family violence workers) whose work brings them into contact with FASD issues.

This place-based research was supplemented with discussions in metropolitan Perth. For example, a roundtable with key agencies (police, judiciary, disability services, legal services and Indigenous organisations) attracted 30 participants. These were followed by individual interviews with senior personnel including executive level police (superintendent and above), the Chief Justice of Western Australia and the President of the Children's Court, senior counsel with the Aboriginal Legal Service, and prominent health and disability advocates. Approximately 10 subjects were in this group. In all, approximately 122 people were interviewed.

The field work methodology in relation to Indigenous participants was based upon a participatory model of research that respects and integrates Indigenous perspectives into the research process. To this end the research adopted a stance fitting broadly into the Appreciative Inquiry paradigm, in that it is concerned with identifying strengths (or potential sources of strength) rather than continuously focusing on deficits and weaknesses (Robinson et al. 2013). Appreciative Inquiry validates a 'yarning' style involving deep conversations with Indigenous people that do not set out from a position of preconceived intellectual certainty and implicit superiority.

Why is FASD a justice issue?

The range of cognitive, social and behavioural difficulties a person with FASD may experience can render them more susceptible to contact with the criminal justice system, and pose challenges at each stage of the criminal justice process. Difficulties with memory and suggestibility mean that a person with FASD is more likely than those without the disorder to agree with propositions put to them, and may therefore be disadvantaged in police interviews (Parliament of Western Australia 2012: 75). Difficulties with memory may make it harder for people with FASD to explain their behaviour, to instruct lawyers and to give evidence in court (Parliament of Western Australia 2012: 75). Difficulties with memory and linking actions to consequences are likely to render diversionary alternatives such as fines, community-based orders and good behaviour bonds futile (Douglas 2010: 228; Parliament of Western Australia 2012: 76).

Research undertaken in the United States suggests that over half of persons with FASD will interact with the criminal justice system: around 60 percent will be arrested, charged or convicted of a criminal offence, and about half will spend time in juvenile detention, prison, inpatient treatment or mental health detention (Streissguth et al. 2004: 238). In relation to young people, Canadian research indicates that young people with FASD are 19 times more likely to be arrested than their peers (Brown et al. 2015: 144). These statistics are particularly troubling in light of the reported prevalence of FASD among Indigenous youth in Western Australia, and the worsening over-incarceration of Indigenous youth in that state (Amnesty International 2015; Loh et al. 2005; Parliament of Australia 2011). Despite constituting only 6.4 percent of youth in Western Australia (AIHW 2014), Indigenous youth account for 77 percent of youth in juvenile detention, and are 53 times more likely to be detained than their non-Indigenous peers (Amnesty International 2015; Department of Corrective Services 2015a, 2015b). It is unsurprising, then, that Indigenous community members and justice professionals are worried that increasing numbers of Indigenous youth are displaying symptoms of FASD and becoming enmeshed in the criminal justice system.

It is not simply that young people with FASD are more likely to interact with the justice system. An inadequate criminal justice response, as noted, can increase the likelihood of people with FASD developing a secondary impairment, such as substance abuse or mental illness, which increases their susceptibility to further contact with the criminal justice system (Douglas 2010: 225; Koren, Roifman & Nulman 2004: 4).

Secondary impairments are social and psychological problems that develop as a result of FASD's primary effects being exacerbated by repeated negative contact with the criminal justice system and related systems, inadequate support and misdiagnosis, existence on the margins of society, racism, and institutionalisation (Streissguth & Kanter 1997). Research indicates that over 90 percent of people with FASD will be diagnosed with a psychiatric disorder during their lifetime (O'Malley 2007: 11), with 30 percent developing substance abuse problems (Boland et al. 1992: para 2).

Importantly, however, secondary impairments can be prevented or the impact reduced by appropriate interventions: by improving the responsiveness of the justice system and support services to young people with FASD. It is crucial that the identification of FASD does not itself, however, become the source of greater harm (Roach & Bailey 2009: 5). Criminological research warns that even well-intended intervention can have the unintended consequence of widening the carceral net by drawing young people deeper into judicial and correctional systems in order for them to receive treatment and support (see, for example, Cunneen & White 2007). Currently, however, the greatest fear is that a diagnosis of FASD will lead to a child being detained indefinitely under Western Australia's law relating to mentally impaired accused.

Mentally impaired accused legislation

An accused's fitness to stand trial is central to the fairness of the trial process. If a person is unfit to stand trial, he or she cannot be tried without unfairness and injustice to him or her (*R v Presser* [1958] VR 45; *Eastman v The Queen* (2000) 203 CLR 1). Each jurisdiction in Australia has separate legislation governing fitness to stand trial. However, the Western Australian regime is controversial because it provides for indefinite detention in a custodial setting without trial of a person found unfit to stand trial under the *Criminal Law (Mentally Impaired Accused) Act 1996* (WA) (the CLMIA Act). An individual can therefore spend a longer time in detention than if he or she plead guilty and was sentenced to imprisonment for the offence. The CLMIA Act does not contain special procedures for persons who are 17 years of age or younger.

The inadequacies of Western Australia's regime with regard to accused persons found unfit have been raised in a number of contexts (Crawford 2010, 2014; Martin 2015; Parliament of Western Australia 2012; *State of Western Australia v BB (A Child)* [2015] WACC 2; *State of Western Australia v Tax* [2010] WASC 208). Particular concern has been expressed about:

- the absence of a trial or special hearing process to determine the accused's guilt or innocence (in contrast to regimes in the Australian Capital Territory, New South Wales (District and Supreme Court proceedings), Northern Territory, South Australia and Victoria);
- the limited options available when a court finds a person unfit to stand trial: unconditional release or a custody order (where imprisonment is a sentencing option);
- the unlimited duration of a custody order and place of detention for persons who do not have a treatable mental illness (such as persons with cognitive impairments); and
- the pressure the regime places on legal representatives.

Justice professionals and community members in the West Kimberley have raised concerns, in focus groups and interviews, about the potential for the attention on FASD to lead to greater use of the CLMIA Act. The Western Australian Department of the Attorney General recently undertook a review of the CLMIA Act. On 7 April 2016, the final report of the review was tabled in parliament (Department of the Attorney General 2016). When tabling the report, the Attorney General indicated his intention to 'take to cabinet a package of reforms based on the recommendations of the report' (Mischin 2016). The recommendations of the 2016 review would, if implemented, overcome some of the deficiencies of the regime (namely the limited options available to a judicial officer on a finding of unfitness). However, the recommendations do not address many of the problems that have been identified with the regime.

Better practice: Lessons from comparable jurisdictions

Comparative work has identified a number of legislative schemes that could be drawn upon, and adapted to local context, to improve the WA regime to better meet the needs of Indigenous young people with FASD. In Australia, the Victorian model offers a more child focused approach, being the only Australian jurisdiction with separate provisions for young people found unfit to stand trial, and prohibiting the placing of children in custody unless there are no practicable alternatives (*Crimes (Mental Impairment and Unfitness to be Tried) Act 1997* (Vic) ss 38J(1), 38ZH(7)). The Victorian regime also has a strong focus on treatment and support. New South Wales provides an example of a diversionary option, before fitness is raised, for persons with mental impairment in s 32 of the *Mental Health (Forensic Provisions) Act 1990* (NSW).

Internationally, New Zealand provides a best practice model for young people with FASD. Fitness is governed by the *Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003* (NZ) (IDCCR Act) and the *Criminal Procedure (Mentally Impaired Persons) Act 2003* (NZ). Both pieces of legislation apply to adults and children. The IDCCR Act, in keeping with the approach to managing young people enshrined in the *Children's and Young People's Well-being Act 1989* (NZ), mandates that wherever possible a young person's family must be fully engaged in decision making. It also provides for a needs assessment process, which includes a cultural assessment if the person is Māori.

Each regime involves its own challenges and dilemmas, and caution is necessary in recommending one jurisdiction model its laws on another's. These better practice examples are presented as options from comparable regimes that might be drawn upon, and adapted to local context, to improve the Western Australian regime so it better meets the needs of Indigenous young people with FASD. Further research into how these features might be adapted to the Western Australian context is indicated.

A new diversionary paradigm: A decolonising model

Discussions with Indigenous stakeholders confirmed the premise that the question of FASD and Indigenous youth in Western Australia cannot be uncoupled from the history of colonial settlement and the multiple traumas resulting from dispossession. The solution cannot be isolated from the broader task of decolonising relationships between Indigenous people and the non-Indigenous mainstream.

The reform agenda proposed here takes into account a number of innovative initiatives already in existence: from diversion at the point of first contact with the justice system, through to court innovations such as Aboriginal courts and Neighbourhood Justice Centres. However, the priority is to employ these systems as points of 'cultural interface' (Nakata 2002: 5) with emerging Indigenous owned and place-based practices and philosophies. This could be called a 'decolonising' approach.

This paradigm shift would involve support for 'community owned' rather than 'community based' diversionary options. 'Community owned' refers to processes led and managed by Indigenous communities, whereas 'community based' means programs designed and managed by mainstream bodies but situated in the community. Many have recommended the CLMIA Act be reformed by introducing community-based orders to increase the options available to a magistrate. While this is undoubtedly an improvement on the two options available under the current regime (indefinite detention or unconditional release), the problematic nature of community-based orders has been noted in the context of Indigenous youth who are fit to stand trial (Blagg 2008a: 183). Indeed, the over-representation of Indigenous youth in Western Australia's justice system has only worsened since the introduction of community-based orders in the *Young Offenders Act 1994* (WA).

Developing strategies to end the cycle of Indigenous incarceration necessitates decolonising the justice system, not simply reforming it. This means engaging with the question of Indigenous sovereignty, particularly in the form of demands for the return of land, and the devolution of the care and control of young people to community owned and place-based Indigenous organisations. This decolonising model moves 'place', or 'country', from the periphery to the centre of intervention.

Diversion at the court stage: A mobile 'needs based' court

Consultations with community members and justice professionals revealed support for law reform and the creation of culturally secure initiatives that draw on the authority of Elders and devolve the care and management of young people with FASD to the Indigenous community, particularly 'on-country'. To achieve this, a mobile 'needs focused' court could draw on the techniques employed by 'problem oriented courts' to promote better outcomes for young people with FASD. The preferred model is a hybrid: it takes elements from the Koori Court model used in Victoria, with its focus on the involvement of Elders in the court process, and the same state's Neighbourhood Justice Centre model, which has a single magistrate, a comprehensive screening process for clients when they enter the court, and rapid entry into support programs, preferably on-country. It is envisaged that this hybrid approach would allow greater Indigenous involvement in community based alternatives for those found unfit to stand trial and, through culturally secure and community owned alternatives, lead to better outcomes for Indigenous young people with FASD.

Discussions with Indigenous organisations also stressed that mainstream courts are alien environments for Indigenous people in the West Kimberley. For many people English is a second, third or fourth language. There is glaring need for interpreters able to assist Indigenous people to understand and participate in the process; this is fundamental to the fair administration of justice. A further source of alienation lies in the absence of recognisable Indigenous cultural processes and symbols, and recognition of Indigenous people's own forms of cultural and legal authority, represented by Indigenous Elders and other people of significance.

Aboriginal courts are a relatively new development in Australia's court landscape, emerging in the late 1990s alongside the introduction of specialist courts to deal with particular types of offenders, such as drug offenders (Bennett 2015: 2). While not uniform, Australian Aboriginal courts tend to share the following features: involvement of Elders and respected persons in the court process; a non-adversarial, informal, and collaborative approach; awareness of the social context of the offender and offending; provision of culturally appropriate options; and a focus on rehabilitative outcomes and links to support services (Bennett 2015; King et al. 2014). Western Australia has a patchwork of arrangements for Indigenous offenders: a specialist Indigenous family violence court—the Barndimalgu Family Violence Court—established in 2007 in Geraldton, as well as a handful of communities that allow Indigenous participation in sentencing (Bennett 2015: 3). An Aboriginal court was established in 2006, the Kalgoorlie Community Court, applying to both children and adults. However, it has since been closed.

Australia has one Neighbourhood Justice Centre, located in Collingwood in Victoria. The centre opened in January 2007 and has a single magistrate who has a strong understanding of the community and local issues (Murray 2014, 2009). The magistrate is appointed with regard to his or her awareness and experience in therapeutic jurisprudence and restorative justice principles. The centre adopts a non-adversarial approach, statutorily prescribed to proceed with as little formality and technicality as is appropriate (s 4M(6), *Magistrates' Court Act 1989* (Vic)).

The centre has a co-location of services, combining court with treatment and support services including mediation, legal advice, employment and housing support, family violence support, Indigenous support services, counselling, mental health and drug and alcohol services (Ross 2015). One of the most notable and successful aspects of the centre is the quality of the needs assessment done by the clinical services team when an individual arrives at court. Such an approach is critical to a successful, FASD-aware triage process in this model court.

This needs focused approach shifts the emphasis from processing offenders to identifying solutions. It places emphasis on the co-location of services (sorely needed in remote communities), a trauma informed practice, a 'no wrong door' approach to treatment, and respect for Indigenous knowledge. The West Kimberley may be an ideal place to pilot a mobile needs focused court, as it already has a single magistrate with a deep understanding of local communities able to take on a judicial monitoring role (Blagg 2008b; King et al. 2014), and a range of Indigenous services. This magistrate would be able, with the right support, to work with affected youth and their families, including by referring them to community owned support programs, preferably on-country. Examples of suitable programs include the Murulu Strategy run by Marninwarntikura in Fitzroy Crossing and the cultural health programs run by Nindilingarri. There is no reason why such services should not accompany the magistrate in the West Kimberley circuit.

Placing country at the centre

These proposed reforms take a number of mainstream initiatives, such as Neighbourhood Justice Centres, front-end diversion, family conferencing, Aboriginal courts, therapeutic jurisprudence, triage, judicial management, and so on, and blends them to create a fresh engagement space with Indigenous knowledge and practice. The focus here is on creating engagement spaces between Indigenous and non-Indigenous domains. There are already a number of options, including the Yiriman Project, a community owned initiative in the Fitzroy Valley which takes young people at risk of offending onto remote desert country to 'build stories in young people' (Blagg 2012: 481–9).

Aboriginal Elders at the Kimberley Aboriginal Law and Culture Centre argued that the rhythms of life on country are beneficial for young people with FASD and other cognitive impairments because they are not being bombarded with stimuli and are able to work within Indigenous notions of time. Children with FASD are already being taken on country and, with support, are undertaking culturally based activities, from making spears to assisting local Indigenous rangers to 'care for country'. Immersion in on-country programs may be vital in preventing the emergence of secondary disabilities (Blagg, Tulich & Bush 2015). Existing laws that draw young people with FASD into the correctional system are obstacles to change and improved outcomes. Rather, Indigenous young people with FASD need to be diverted into non-stigmatising therapeutic alternatives run by Indigenous people.

Much discussion of FASD has, unsurprisingly, focused on the need for better screening and diagnostic services, as well as increasing the awareness of police and judicial officers regarding the nature of the condition and its implications for the administration of justice. Building the capacity of agencies to manage FASD is a welcome step. Yet there is also a need to build the capacity of communities and families to provide for the day-to-day care and support of young people with FASD. Once a diagnosis has been made, the main issue becomes one of stabilisation and support.

This 'scaffolding' supporting vulnerable Indigenous children and young people would best be constructed by Indigenous organisations and embedded in Indigenous country. There are examples of successful on-country initiatives that could be used as a basis for a new model of Indigenous youth justice.

For example, the Yiriman Project, run by Elders from around Fitzroy Crossing in Western Australia, takes young people at risk of offending out onto traditional country, where they acquire bush skills in a culturally secure environment. The Magistrates Court has sent young people to the project as an alternative to custody, with considerable success. A three-year review of the Yiriman Project found (Palmer 2013: 122):

> One ought not expect that the project can be a panacea for the range of difficulties confronting communities in the Kimberley. However, there is good evidence that taking young people and other generations on country is important for their health…There is also evidence that Yiriman has assisted in the campaign to minimise young people's involvement in the justice system. Indeed, some, including a magistrate, conclude that Yiriman is more capable in this regard than most other diversionary and sentencing options.

Indigenous organisations should be funded to provide mentoring and family support services, interlaced with on-country camps that help to stabilise young people and heal families, thereby reducing the likelihood of further generations being lost to FASD.

Longing for country

The potential game changer, then, that could provide the basis for a new Indigenous youth justice paradigm emerges not from Western epistemology alone, but at the intersection between Indigenous and non-Indigenous knowledge. Indigenous 'place' (or 'country') should be the heart of this nascent sphere. Indigenous place can become a fulcrum upon which a new decolonised justice system can be leveraged into being. The anthropologist WEH Stanner (1979: 230) observed:

> No English words are good enough to give a sense of the links between an Aboriginal group and its homeland…A different tradition leaves us tongueless and earless towards this other world of meaning and significance.

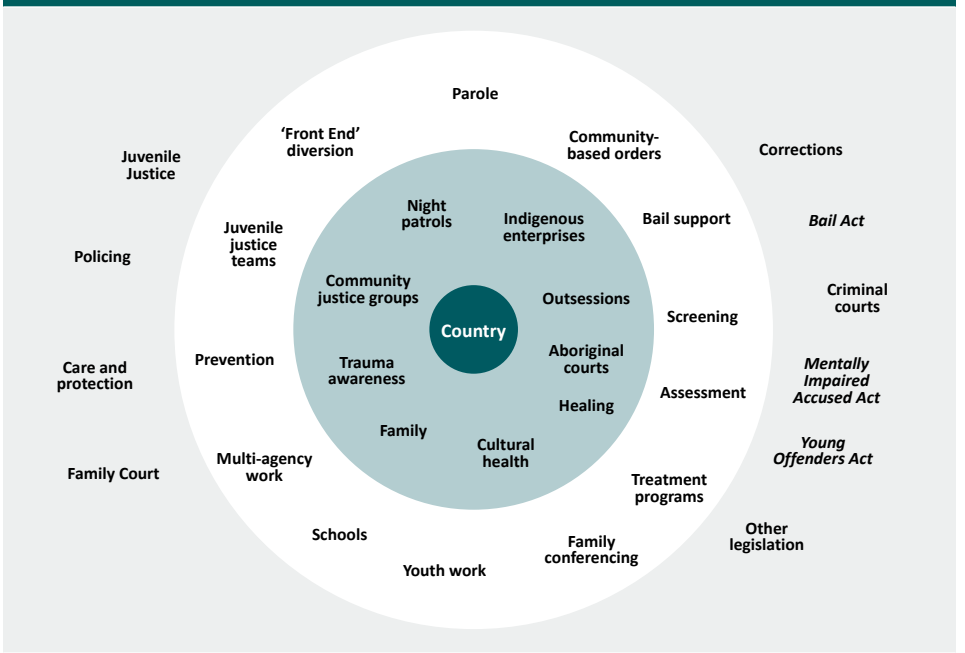
Deborah Bird Rose (1996: 7) describes this eloquently:

> Country in Aboriginal English is not only a common noun but also a proper noun. People talk about country in the same way that they would talk about a person: they speak to country, sing to country, visit country, worry about country, feel sorry for country, and long for country.

This research uncovered strong support among Indigenous and non-Indigenous stakeholders for what might be called a 'country-centric' response to FASD. As set out in Figure 1, the criminal justice response to FASD should increasingly defer to Indigenous organisations and Indigenous practices, placing them at the centre of intervention. Such an approach recognises the enduring legacy of colonisation manifest in the disproportionately high prevalence of FASD in Indigenous communities. The outer rim of the diagram describes the array of mainstream 'colonial' structures that alienate Indigenous people. The next indicates those attempts to bridge the divide between Indigenous people and mainstream justice systems through the creation of top-down community based services. Closer to the centre, it is possible to identify a range of community owned initiatives that draw on Indigenous cultural authority, rather than mainstream governments, for legitimacy and status; they include a range of practices from Aboriginal courts through to Aboriginal Night Patrols. These initiatives are generally place-based and situated on or close to country: the latter being the source of Indigenous law and culture. Paradoxically, the inner circle both acts as a pathway between the mainstream and the Indigenous domain and buffers the Indigenous domain from the negative impact of mainstream laws, policies and practices.

Another key message from the consultations was the need to work with and through family. Indigenous people were critical of the Western paradigm which tends to individualise, cutting Indigenous people off from their collective. There was support for forms of healing that involved the whole family. As one justice worker said, 'We need to support the entire family: don't water one flower and expect the garden to stay alive.'

Figure 1: Placing country at the centre



Improving diversionary pathways and interventions requires an understanding of the needs of people with FASD and a close synthesis of medical knowledge and the law. The aim is to construct a form of external 'cultural scaffolding' around the individual. Emergent research in neurodevelopmental science emphasises the need for interventions focused on optimising the functioning of the frontal lobe and limbic system, such as dance, art, nature discovery and storytelling, which have optimal efficacy when repeatedly implemented (Perry 2009). Research also emphasises the importance of relational health, as interventions are of maximum efficacy in environments of relational stability (Perry 2009). The presence of unfamiliar individuals can make a person with FASD more symptomatic and less responsive to interventions (Perry 2009). Consequently, supports for people with FASD should occur in familiar and safe social networks.

Concluding comments

This approach does not rest on the classic 'all or nothing' notion of decolonisation requiring a radical break with the past, with Indigenous law somehow replacing settler law. This notion is, paradoxically, embedded in the binary logic of colonialism itself, which views sovereignty as absolute and indivisible (Chowdhry 2007). Instead, it poses a pluralist alternative where settler law increasingly cedes sovereign power to Indigenous law, allowing what Fitzgerald (2001: 41) calls a 'vibrant and decentred' justice system to flourish that respects Indigenous law and culture.

This approach is intended to heal, rather than perpetuate, colonial binaries. Justice innovations showing promise in the mainstream system may be used to create constructive engagement spaces with the Indigenous domain where inter-cultural dialogue can take place. Fitzgerald (2001: 41) calls these devolved spaces 'pods of justice'.

The justice system must be recalibrated to focus on the needs of the young person—including cultural needs—and to facilitate diversion into community owned and managed structures and processes. This project, while encouraging reform of the draconian CLMIA Act and highlighting the need to update the *Young Offenders Act* (and, in particular, the need to reform Juvenile Justice Teams), is also intended to illustrate how policing and judicial discretion already existing in legislation and at common law can be employed to better meet the needs of persons with FASD. The return of control over country, through native title, could be the game changer in creating a new space (and place) for decolonised justice practices at a community level. Country could offer a place of healing and stabilisation for children with FASD and their families. Improving diversionary pathways out of the criminal justice system is essential to reducing the incidence of secondary impairments among Indigenous young people with FASD.

Further research is needed into the funding implications of adopting a needs based justice model. The model proposed here would shift the emphasis of justice intervention from processing offenders to identifying solutions. The West Kimberley would be an ideal place to pilot a mobile needs focused court.

Funding is sorely needed for Indigenous community owned diversionary initiatives such as the Kimberley Aboriginal Law and Culture Centre's Yiriman Project. Community owned programs have been successful in reducing the contact between Indigenous young people and the justice system. However, this should not obviate the need to heal families and communities, as well as individuals.

Finally, this project has examined the inadequacies of the justice system's response to Indigenous young people with FASD and the need for diversionary alternatives. Further research is also needed into diversionary alternatives for adults as well as juveniles, especially young adults aged 18 to 25. The support services for young people with FASD are inadequate. Yet there is, at least, an awareness of the problem in the juvenile justice sphere. Given the nature of the disability, there is no prospect of FASD affected people 'maturing' out of the condition—and there is a real danger of adults with FASD disappearing in the system.

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8. Impact of the 'Yes, I Can!' adult literacy campaign on interactions with the criminal justice system

Jenny Wise, Bridget Harris, Ray Nickson, Bob Boughton and Jack Beetson

As discussed in the literature review section, previous studies have found an indirect link between low adult literacy levels and high rates of negative interactions with police and the court system (see, for example AIHW 2013; Community Development and Justice Standing Committee (CDJSC) 2010; House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs (HRSCATSIA) 2011; Putniņš 1999). Additionally, low literacy and education levels have been associated with the over-representation of Aboriginal and Torres Strait Islander people in the criminal justice system.

The 'Yes, I Can!' campaign uses an internationally developed model for raising adult literacy rates in a population. It was first piloted in Australia in 2012, in Wilcannia, a predominantly Aboriginal community in the Murdi Paaki region of north-western New South Wales (Boughton et al. 2013) in an effort to reduce low literacy rates in Aboriginal communities. The campaign is led by a national Aboriginal organisation—the Literacy for Life Foundation (LFLF)—which works in the target communities, in partnership with local Aboriginal organisations.

In 2013 'Yes, I Can!' was introduced in Bourke and Enngonia, two towns in regional New South Wales. At that time, 202 of the 505 Aboriginal adults living in Bourke (approximately 40 percent) had low or very low literacy. In Enngonia, 21 of the 52 adult Aboriginal residents (approximately 40 percent) had low or very low literacy (Boughton et al. 2014; LFLF 2015a). Between 2013 and 2015, four groups of participants took part in the campaign in Bourke, with a total of 51 graduates. In Enngonia only one group took part in the campaign, which included all those who had expressed an interest, with 15 graduates (LFLF 2018).

This study examined service provider and criminal justice practitioner views of the 'Yes, I Can!' campaign. Through 22 semi-structured, open-ended interviews with practitioners and service providers in Bourke and Enngonia, researchers sought to examine the impacts of the 'Yes, I Can!' literacy campaign on Aboriginal community members' encounters with the criminal justice system.

This chapter presents the results of the interview component of a 16-month project funded by a Criminology Research Grant. The results indicate that adult literacy programs (specifically, the 'Yes, I Can!' adult literacy campaign), can improve the type and frequency of interactions between Indigenous Australians and the criminal justice system. In the interests of addressing over-representation and increasing access to justice, this is a field which warrants further attention for policymakers.

Current knowledge

The 'Yes, I Can!' campaign

In 2000, the Latin American and Caribbean Pedagogical Institute developed the 'Yo! Sí Puedo' campaign and by 2016 various models of the program had been adopted in 30 countries, including Australia. Estimates suggest that it has provided 10 million people with a basic ability to read and write (Valdés Abreu 2016). The 'Yes, I Can!' adult literacy campaign uses this internationally developed model for raising adult literacy rates in Australia (Boughton & Durnan 2014). After the 2012 pilot, 'Yes, I Can!' was extended to Bourke and Enngonia—the sites for this study. It has since also been introduced in the communities of Brewarrina, Walgett, Toomelah and Boggabilla.

The 'Yes, I Can!' campaign operates in three stages. The first stage involves mobilising the community; local organisations are asked to support and encourage individuals and families to enrol in the campaign. Local staff conduct a household survey to ascertain interest and the level of need, and to raise awareness of the importance of increasing adult literacy levels in the community (Boughton et al. 2013; Boughton & Durnan 2014). During the second stage, which lasts two to three months, participants watch 64 one-hour long lessons on DVD and complete written and oral exercises with in-class facilitators. In the third 'post-literacy' stage (with a span of two to three months), participants apply their literacy skills to real-life scenarios such as by reading to children, working with computers, preparing resumes, undertaking work experience and attending workshops on community issues (Cullen 2014). On completion of the classes, students are eligible for a scholarship payment of $300 (Williamson & Boughton 2017).

According to LFLF, the campaign focuses on 'building a community culture that values and supports learning' which is said to be a unique feature of 'Yes, I Can!' as compared to other literacy programs (LFLF 2015b: 4). LFLF regards community cooperation and collaboration as essential, as is access to the campaign (LFLF 2015b: 4). Under the LFLF framework, a maximum of 15 people can enrol in each class, and classes are run sequentially until all those who want to attend have done so, or until the funding is exhausted. In the case of Enngonia, all those who expressed interest in the campaign did enrol, whereas in Bourke funding ceased after four intakes, even though greater numbers had expressed an interest in participating than were able to attend. The 'Yes, I Can!' campaign marked the first time a mass campaign model had been adopted to address low literacy rates in specific regions and populations in Australia.

Literacy levels in Australia

There are stark differences in adult literacy levels throughout Australian communities, and rates among Indigenous Australians are significantly lower than among non-Indigenous populations. The 2016 Australian Census highlighted that the proportion of Aboriginal and Torres Strait Islander people aged 20 to 24 years who had completed Year 12 or its equivalent was 47 percent (ABS 2017a). Despite the fact that Year 12 completion rates have increased by more than a third since 2011, rates among non-Indigenous adults were substantially higher, at 79 percent (ABS 2017a). Additionally, the Australian Bureau of Statistics (ABS) states:

> Aboriginal and Torres Strait Islander people aged 25 to 64 years were more likely than non-Indigenous people of the same age to have left school at Year 9 or below (19% compared with 6.7%). (ABS 2017a: np)

There is scant recent data, but a 2011–12 assessment found that 14 percent of adult Australians (2.3 million people) were at or below the lowest level of literacy competence (ABS 2013). The proportion was higher for people who were unemployed or out of the labour force, at 22 percent (ABS 2013). While the ABS did not publish Indigenous literacy data, community studies suggest that at least 35 percent of Aboriginal people have minimal English skills, and this figure is higher in rural and remote communities (Boughton 2009; Kral & Schwab 2003).

Higher levels of illiteracy are evident in the criminal justice system, and in particular the prison system. For example, the NSW Department of Corrective Services found that in 2001 there was a 60 percent rate of functional illiteracy among inmates (Grunseit, Forell & McCarron 2008: 26). Indigenous people are over-represented in Australian prisons, with 27 percent of the total Australian prison population identifying as Indigenous (ABS 2017b). Further, Indigenous people entering or leaving prison have lower levels of educational attainment compared to non-Indigenous Australians (AIHW 2013: 21). Indig et al. (2010) assert that 73 percent of Indigenous male prisoners and 60 percent of Indigenous female prisoners left school before Year 10. This is in comparison to 43 percent of non-Indigenous male prisoners and 39 percent of non-Indigenous female prisoners (Indig et al. 2010: 15).

Low literacy and low school retention rates among Aboriginal people have previously been identified as an explanation for Aboriginal over-representation throughout the criminal justice system (for instance, see AIHW 2013; CDJSC 2010; HRSCATSIA 2011; Putniņš 1999). This corresponds with international research on literacy and incarceration which has investigated the role of poor school performance—coupled with regular absences from school—in creating a 'school-to-prison pipeline'. Individuals most likely to be affected by this are 'minority students in the poorest and most under-resourced communities' (Schiff 2013: 2). Applying this finding to the Australian context, it is reasonable to hypothesise that significant proportions of Indigenous juveniles are likely to be at risk of having low literacy levels and therefore an increased likelihood of travelling down the 'school-to-prison pipeline'.

Links between literacy and Aboriginal over-representation in the criminal justice system

National, state and regional statistics indicate that Indigenous people experience very high rates of contact with the criminal justice system as alleged offenders, victims and witnesses, and as people on bail or probation (ABS 2016; Brown et al. 2016; Cunneen 2001). Indigenous Australians face a series of disadvantages which increase their level of interaction with the criminal justice system, and low literacy levels are just one. International and Australian research demonstrates that low literacy levels can have a detrimental impact on encounters with the criminal justice system, particularly with police, courts and corrections agencies. Siegel (2002: 287) asserts that literacy is a significant tool for empowerment and can enhance such interactions.

Engagement with the criminal justice system operates by way of interaction with police, because of their role as 'gatekeepers'. Accordingly, Randles and Lauchs (2012: 7) note that 'the system is reliant upon the skills and knowledge of the police in its interactions with the Indigenous community'. Low literacy levels can contribute to a breakdown in communication with officers, who may not recognise the problem, particularly if they have minimal experience, skill and awareness of the issue (Randles & Lauchs 2012: 7). These communication barriers have implications for the level and frequency of contact Indigenous Australians have with the criminal justice system.

Advocates, academics and state bodies have acknowledged that Indigenous witnesses and defendants face specific challenges comprehending and engaging in court proceedings because of, or exacerbated by, low literacy levels (Judicial Commission of NSW 2017; see also Eades 2008; Ehrlich, Eades & Ainsworth 2016). Illiteracy is still a prevailing factor of judicial consideration when sentencing Indigenous Australians, as magistrates and judges recognise it as an issue which disproportionately disadvantages Aboriginal defendants (Eades 2016: 472). Moreover, differences between languages can prevent effective communication between defendants, their legal representatives and others involved in the court process. Beqiraj and McNamara (2015: 19) contend that low literacy rates and language skills affect the awareness of legal rights of both the accused and the victim. Having a limited understanding of judicial proceedings and an inability to effectively communicate with lawyers and the court (either orally or in written form) affects experiences of and outcomes for defendants.

Case studies from the Kimberley region highlight how stark problems can be for Indigenous people who have minimal English language skills. Crawford (2010: 470) recounts one case in which an inmate was brought into the court to translate proceedings into the defendant's language as he did not understand English and there was no court appointed translator. Despite the defendant's clear lack of understanding of English, he was asked to sign a form outlining his obligations, which, if contravened, would result in further criminal sanctions. This example illustrates how people whose first language is not English and who have low literacy skills are disadvantaged in criminal justice processes and how this can result in defendants breaching bail conditions (Sanderson, Mazerolle & Anderson-Bond 2011: 53).

Unfortunately, it is often assumed that proceedings conducted and documents written in English are universally understood. In these circumstances, Indigenous Australians with low literacy levels may inadvertently increase their levels of contact with the criminal justice system when conditions issued by criminal justice agencies are not met. Indeed 'language and literacy concerns' have also been identified as barriers to Aboriginal engagement with rehabilitation programs (National Aboriginal and Torres Strait Islander Legal Services 2013: 19).

In the Australian context, there are many ways in which increased literacy rates in Indigenous communities can result in a reduction in criminal activity and reduced contact with the justice system. For example, illiteracy can lead to criminal activity relating to driving offences (Thompson, McGregor & Davies 2016), breaches of bail or compliance orders, and offences relating to welfare fraud and other penalty evasions. An inability to read a penalty notice can result in a fine default and subsequently a custodial sentence (HRSCATSIA 2011; see also CDJSC 2010). In fact, in 2013, 1,358 people were imprisoned in Western Australia solely on the basis of fine defaults, and 16 percent of them were Indigenous Australians (Law Council of Australia 2015: 18). The penalties for unpaid fines continue to escalate, compounded by surplus enforcement fees.

Cullen (2014: np) argues that illiteracy is a critical factor in the over-representation of Indigenous people in Australian prisons because illiteracy prevents people from being able to 'legally perform everyday tasks such as obtaining drivers licences'. Thompson, McGregor and Davies (2016: np) maintain that 'Aboriginal people make up almost a third of all the people jailed in Australia for driving offences'. Driving offences are associated with a complex interaction of social and environmental factors. Specifically, these factors include the need for private transport in remote areas, and high levels of poverty and unemployment which limit car maintenance (CDJSC 2010; Cunneen 2001; Pilkington 2009).

It is evident that literacy impacts on individual and community encounters with the criminal justice system. Low literacy has been linked to problematic justice system encounters, higher rates of incarceration, and reduced opportunities for rehabilitation. Effective campaigns that raise literacy levels should therefore play an important role in improving encounters with the criminal justice system.

Methodology

The research team includes persons who identify as Indigenous and non-Indigenous persons. Non-Indigenous members had completed cultural sensitivity courses run by Indigenous staff at the University of New England or degrees in Indigenous studies, or had longstanding histories of working with Indigenous researchers and communities. Thus all were well aware of the need to ensure that the research design was developed, and executed, in responsible ways that recognised and respected the potential impacts of the research on Aboriginal communities. The researchers also understood that, for Indigenous people, research frequently has negative connotations. As Tuhiwai Smith (2012) has observed, in Indigenous people's experience, research has often been exploitative and self-serving, with negative implications for its subjects. The researchers consulted with Aboriginal communities prior to conducting the research, worked with local Aboriginal researchers and reported back to Aboriginal communities in open forums.

As a pilot study, the researchers decided to collect data from low-risk participants (service providers and criminal justice workers) to determine whether the 'Yes, I Can!' project was reducing Aboriginal people's contact with the criminal justice system. However, the researchers appreciate that a significant limitation of this study is the absence of the views and experiences of the Aboriginal people who participated as students in the 'Yes, I Can!' campaign, and these views should be included and prioritised in future research.

While interviews were not conducted with the Aboriginal community members who participated in the literacy program, the research was intended to be responsive to the needs and desires of Bourke's Aboriginal community. As such, semi-structured, open-ended interviews were conducted to elicit views and experiences of how the 'Yes, I Can!' campaign affected Aboriginal interactions with the criminal justice system. At the conception of the project, a list was compiled of organisations in Bourke and Enngonia that might yield potential participants. A number of these organisations, such as Maranguka and the Murrawarri Local Aboriginal Land Council, provided letters of support for the research during the design of the study and highlighted the importance of the 'Yes, I Can!' campaign to the local communities. Key informants included individuals in community representative roles, as well as their service provider roles. Consequently, this research involved collaborating with key informants who were also members of the community.

Two rounds of field work were conducted in 2016. Twenty-two participants were interviewed for the study; three were interviewed twice. Although this number is modest, which restricts the generalisability of findings, it is important to recognise the import of the location and the communities examined in this research. Staff from a broad cross-section of organisations that fit within the remit of this study participated in interviews. Moreover, most organisations that could be identified as performing work relevant to this study were represented.

One of the most significant ethical issues related to participant identity. Participants in interviews and students who took part in the 'Yes, I Can!' campaign may have been identifiable in stories recounted in interviews. Study participants were asked if they consented to being identifiable in research outputs. While interviewees were given the option to remain de-identified, given the size of Bourke and Enngonia it is likely that even those interview participants who wished to remain de-identified will be identifiable to one another and to the wider community. This was outlined and explained in a Participant Information Sheet. Information that could identify students of the 'Yes, I Can!' campaign has been omitted from the research findings.

One of the challenges of conducting qualitative research is ensuring the research 'fully and correctly captures the true meanings and interpretations of the respondents' (Sarantakos 2005: 46). To minimise problems of interpreting the data, participants were offered copies of their transcripts to ensure that their meaning was fully conveyed throughout the interview.

During the coding of the interview phase, three of the researchers coded the interviews separately and then discussed their scores. A research assistant was then hired to code the data. To ensure inter-rater reliability, four people were involved in the coding process—one independent from the research—thus reducing the problem of researcher bias. Throughout this process, there were variances in the terms used for specific codes (for example, 'empowerment' compared to 'increased confidence'). However, as Armstrong et al. (1997) found, there was close agreement around the fundamental themes that were documented and these overarching terms were then grouped together for analysis.

Results

While many interviewees felt the impact of 'Yes, I Can!' was difficult to measure, in the main they believed the campaign had a positive impact on participants and their interactions with the justice system. The majority of those interviewed were able to cite anecdotal qualitative evidence of a particular campaign participant being positively impacted by their experience. However, in some of these cases, it was also recognised that the 'Yes, I Can!' participant had relapsed into criminal behaviour once the campaign had finished.

The LFLF National Campaign Manager stated that many of the students and all of the staff involved in the campaign had previously been involved in the criminal justice system, or knew of family members who had been. In these interactions they could have been victims, offenders (those arrested, processed through the court system, incarcerated, or placed on probation or parole) or family members of victims or offenders. Throughout some interviews, themes of over-policing and negative police–community relationships were raised.

The majority of interview participants acknowledged that low levels of literacy are problematic for many reasons. Unemployment, general levels of disengagement within the community, and an inability to understand official communication or documents were all cited as problems associated with low rates of literacy.

Criminal justice system outcomes associated with 'Yes, I Can!'

Interviewees identified a range of areas where illiteracy was impacting on engagement with the criminal justice system. In particular, the issue of illiterate persons coming into increased contact with the criminal justice system because of driving without a licence was cited by 10 of the participants. For example, one interviewee said:

> …people want to learn to drive a car in Bourke, a lot of people don't have their licence because they can't do the Ls [learners licence] test. So, this literacy thing would let them be able to get a drivers [licence].' (Mission Australia participant)

As documented in the literature, driving without a licence is a significant problem in rural and remote areas due to the lack of public transport and the long distances to services. The LFLF National Campaign Manager noted the lack of public transport in both communities (but particularly in Enngonia) and the problems associated with travelling to access services:

> …people get a lift into town or drive illegally into town. Because…there is no community bus service that takes people into Bourke or Brewarrina, which are the two closest places…There is no community bus service for shopping, or for medical services or for hospital.

Driving offences were perceived to be a large problem in both the Bourke and Enngonia areas, with many participants noting how the 'Yes, I Can!' campaign reduced contact with the criminal justice system in relation to driving without a licence. For instance, one interviewee noted:

> A lot of young fellows drive while unlicensed and [are] getting big fines and then ending up not being able to get their licence later on because they've got these massive fines, and I think it's helped…they're not embarrassed to actually go and sit down and actually do their exams…people are actually wanting to get their licence so that drops the rate of people driving without a licence. (Aboriginal Community Liasion Officer)

'Yes, I Can!' staff worked with students during classes to practise the licence tests and then with Birrang (an Aboriginal organisation which runs a driving school) to enrol several students in driver education and licensing sessions.

The Darling River Commander of the NSW Police Force perceived a benefit of the 'Yes, I Can!' campaign in reducing a specific individual's offending and interaction with the criminal justice system:

> Clearly a person that was disengaged with society, had no purpose in life. This was a fellow that probably, in part thanks to a lot of the older people that had a lot of courage to go and engage in this system and be trailblazers, he [sic] signed up for the program and attended very regularly; gave him a purpose in life. To my knowledge, he did not come to the attention of the police or the other authorities in his time on the program.

Another interviewee said that the campaign helped to keep students 'out of trouble' with the police because they had a place to go every day (Interviewee 16). There was also a suggestion that, because the students had a greater sense of pride and empowerment as a result of being able to read, crime levels would be reduced (Interviewee 9). However, there were also cases reported of students enrolled in the campaign reoffending or breaching parole.

Enhanced literacy can facilitate compliance with orders, conditions and contracts. In this vein, some participants maintained that Aboriginal community members had high levels of contact with the criminal justice system because they were unable to understand communication regarding tenancy, debts and other issues.

> Because a lot of our people get the letter and then throw it away, the officials say, 'They're ignoring us; we're going to breach them,' and all this. But it comes down to the fact they couldn't read it. (Aboriginal Affairs NSW participant)

> We put a paper down and we'll say 'here, sign this', we'll sign it and that's what a lot of our people do out there, that's why a lot of them end up back in the prison. They don't even know what they're signing, a lot of them consent to whatever you say they did and they don't even realise they just done that. (Interviewee 9)

As such, low literacy appears to affect how Aboriginal people interact with and respond to criminal justice processes. On this issue, participants perceived the 'Yes, I Can!' campaign to be assisting students in a positive manner.

For the LFLF National Campaign Manager, 'Yes, I Can!' gave students more awareness and confidence to 'manage the system' and seek help from service providers such as legal aid.

In regard to the court system, there was evidence that the 'Yes, I Can!' campaign had been used by some magistrates in the local area as a condition of bond. A previous local magistrate reported that he had in fact quashed a habitual offender declaration for one of the students enrolled in 'Yes, I Can!', which permitted that student to apply for a drivers licence.

Some interviewees reported that the 'Yes, I Can!' campaign facilitated better relationships between Aboriginal communities and criminal justice organisations such as the police. One participant said:

> It's building that rapport and building a relationship with police…for instance when there's a class of 'Yes, I Can!' students the police are coming in on a regular basis and introducing themselves. They're making that sort of contact, as opposed to the next time you see them they're dragging you off in handcuffs. (Maranguka Executive Director)

However, one participant (the LFLF National Campaign Manager) raised concerns that negative encounters between the police and Aboriginal students in 'Yes, I Can!' were still occurring in Enngonia. Moreover, there were, interviewees maintained, areas where police needed to take more proactive steps to identify and address illiteracy problems:

> One of the things they could establish, when he's being charged and he has to sign his name or whatever, it's a great opportunity to pick up, 'Oh, this guy can't write his name'. Or, 'Do you understand what I'm saying?' Because they just nod. Straightaway, as a pathway, the police can create the relationships with the ALS [Aboriginal Legal Service] or with Maranguka and say, 'Look, when this guy—when he's charged and released back in the community, we need to link him up. Be that advocacy'. (Aboriginal Affairs NSW participant)

Some of the participants discussed how the 'Yes, I Can!' campaign was transforming some students' quality of life and, subsequently, deterring them from further crime. For example, one interviewee said:

> …what I believe around the 'Yes, I Can!' program, it's something that can help us…break the cycle of repeat offending…if someone's down there who can't read and write, well it's not their problem, it's ours. It's up to us to find a way to help them overcome that problem. By doing 'Yes, I Can!' program, it says a lot. It speaks for itself. (Murdi Paaki Regional Enterprise Corporation and Bourke LFLF Campaign Coordinator)

However, two interview participants stated that they had not really observed an effect of 'Yes, I Can!' on crime. For example, Interviewee 2 did not believe they had seen any difference between 'Yes, I Can!' students and those who had not enrolled in the campaign in the way they understood court proceedings. Some noted that it was hard to separate out the impacts of different programs such as 'Yes, I Can!', the bail clinic, changes to the *Bail Act 2013* (NSW) and the driving school.

Overall, the 'Yes, I Can!' campaign was credited with great achievements within the Bourke and Enngonia communities. Interviewees believed the campaign had increased access to legal and health services, increased employment, improved community connections and relationships, assisted different service providers to work together, and fostered a sense of personal empowerment and achievement. Support from the community for the 'Yes, I Can!' campaign is ongoing, with many of the interviewees expressing a desire to know when the next campaign would commence.

Discussion

Ultimately, the information emerging from interviews in this study suggests that the 'Yes, I Can!' campaign can enhance community members' lives in myriad ways. However, the focus of this study was initially whether the 'Yes, I Can!' campaign impacted Aboriginal community members' encounters with the criminal justice system in Bourke and Enngonia. This question was difficult to address. Complicating the assessment is the fact that there are many programs operating in Bourke and, to a lesser extent, Enngonia. Regardless, the data provide some preliminary findings which indicate the 'Yes, I Can!' campaign can not only reduce the number of negative encounters with the criminal justice system but also improve the overall experience Aboriginal people have when coming into contact with the criminal justice system, whether as victims, offenders or community members.

This study found that, while concerns exist in Bourke about detrimental relationships with the police, there was a feeling that these bonds were bolstered as a result of the 'Yes, I Can!' campaign and the engagement of the Darling River Commander of the NSW Police Force. Programs such as 'Yes, I Can!', where the police are actively involved in them, have the power to increase public trust in the police. In Bourke, in particular, the police made a commitment to the campaign that, as the interviews indicate, has already started to improve relationships between the police and the wider community.

There was some indication that enrolment in the 'Yes, I Can!' campaign altered individual encounters with the court system. For example, a magistrate said he favourably considered enrolment in the 'Yes, I Can!' campaign when deciding to quash a habitual offender declaration.

The 'Yes, I Can!' campaign can give Indigenous Australian participants the basic literacy skills required to understand and navigate court processes and adhere to the directions of the court. The LFLF National Campaign Manager asserted that the 'Yes, I Can!' campaign enabled students to understand more about the criminal justice system, including their rights and how they should operate within the system.

The interview data from this research identified a number of ways in which the 'Yes, I Can!' campaign enhanced the way community members enrolled in the campaign were able to access legal resources and advocacy. As the 'Yes, I Can!' campaign involved a number of local services, the students were exposed to a number of different agencies operating in the area. This is a real strength of the campaign and it was observed by many interviewees, although some wanted to see more links forged with services, especially once the campaign ended. Furthermore, interview participants commented on how the language of students enrolled in 'Yes, I Can!' had evolved and redefined the way they were accessing services, and also their overall confidence in those services. Their capabilities and confidence in literacy enabled services to respond to, and perhaps better address, the needs of the students.

Some of the participants in this study also saw a shift in the way students responded to official documentation. In the past such documents may have been unacknowledged, leading to further criminal charges. Indeed, Interviewee 8 discussed how Aboriginal people would frequently have further criminal changes laid against them because they did not understand fines or court summonses sent to them and therefore did not respond to them. The 'Yes, I Can!' campaign, many participants believe, empowered individuals to follow up on this official correspondence, even if it was by asking for assistance in translating and understanding the documents. This may result in long-term reductions in individual engagement with the criminal justice system.

Conclusion

Indigenous Australians continue to be over-represented in all facets of the criminal justice system. Existing literature and research data show that illiteracy or limited literacy can contribute to engagement with the criminal justice system. As such, programs that can improve literacy and consequently minimise this over-representation are of paramount policy concern.

Several policy considerations emerged in the course of data analysis. First, increased empowerment and education were frequently attributed to 'Yes, I Can!' participation by service providers and criminal justice practitioners in the communities, and increased empowerment may result in greater confidence in approaching service providers for assistance, as either victims or alleged offenders. However, as there are a number of justice reinvestment programs in Bourke and Enngonia, further longitudinal studies and studies involving campaign participants are required to assess the connection between increased empowerment and education and the 'Yes, I Can!' campaign.

There is some evidence that increased literacy can assist participants in areas such as obtaining their drivers licence, complying with court orders and paying fines. In the long term this may offer a crime reduction strategy for governments in relation to driving offences and breach offences.

Second, the campaign seemed to improve Aboriginal–police relationships. In the interests of extending this progress, the Darling River Commander of the NSW Police Force expressed interest in developing educational programs that promote cross-cultural awareness for new police officers coming into Bourke and being involved in future campaigns.

The participants in this study recognised that, although there may not yet be conclusive evidence that 'Yes, I Can!' reduced contact with the criminal justice system, it seeks to disrupt Aboriginal engagement in the criminal justice system. As literacy levels within communities improve, correspondingly, problems contributing to criminal behaviour can lessen.

The 'Yes, I Can!' campaign gives offenders (and potential offenders) an opportunity to engage in a community based project that offers support and builds skills. The campaign and the partnerships with other agencies have the potential to begin and build on a process of transformation, allowing people to gain more control over their lives and their relationships with the justice system.

Lastly, the campaign has the potential to help offenders and victims through the criminal justice process by giving them the capabilities in literacy necessary to understand and navigate these processes.

Future research could be informed by a more complex model of the pathways and outcomes linked to the activities of the adult literacy campaign. To determine whether the campaign affects the local communities' interactions with the criminal justice system, future studies should evaluate the following:

- any reductions in offences committed by community members, including unlicensed driving;
- any reductions in custodial sentences imposed on community members;
- any reduced fine burdens on community members;
- improved community–police relations;
- improved understanding among citizens of their rights and responsibilities;
- improved access to and use of legal advice and support;
- any increase in community safety;
- any reduction in antisocial behaviour;
- any change in inter-community conflict or social cohesion;
- development and further evolution of locally controlled organisations; and
- the nature of relationships and (culturally appropriate) communications with professionals and service providers in the criminal justice system.

As a next step, the 'Yes, I Can!' campaign should be further evaluated within a longitudinal framework, with data collected before and after the campaign. Ideally, future projects should be of a larger scale, across multiple communities. The studies should seek consent from other community members, including Elders and especially the participants of the 'Yes, I Can!' campaign, for their de-identified data to be linked to publicly available datasets such as police and court records.

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Conflict of interest

The team acknowledge that conflicts of interest arose in the course of this project. First, two of the researchers in this study (Adjunct Professor Jack Beetson and Associate Professor Bob Boughton) are closely connected to the 'Yes, I Can!' literacy campaign. Their presence on the research team provided a richer and more nuanced understanding of the context and was ultimately essential to the success of the research. Second, one of the interviewees in this study (the LFLF National Campaign Manager) is married to Dr Boughton.

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9. Indigenous deaths in custody: 25 years since the Royal Commission into Aboriginal Deaths in Custody

Alexandra Gannoni and Samantha Bricknell

The Royal Commission into Aboriginal Deaths in Custody (RCIADIC) was established in 1987 in response to growing concern over the deaths of Indigenous people in custody. The RCIADIC (1991) found Indigenous people were no more likely than non-Indigenous people to die in custody but were considerably more likely to be arrested and imprisoned. The RCIADIC (1991) recommended an ongoing program be established by the Australian Institute of Criminology (AIC) to monitor Indigenous and non-Indigenous deaths in prison, police custody and youth detention. In response, the National Deaths in Custody Program (NDICP) commenced in 1992. Since then, the NDICP has collected comprehensive data on the extent and nature of all deaths in custody in Australia.

The purpose of this study is to provide a picture of trends and characteristics of Indigenous deaths in prison and police custody in the 25 years since the RCIADIC. A key focus is to describe the circumstances of Indigenous deaths in custody and how these compare with those reported by the RCIADIC and over time.

What is a death in custody?

The final report of the RCIADIC outlined the types of deaths that would require notification to the NDICP (recommendation 41, RCIADIC 1991). They are:

- a death, wherever occurring, of a person who is in prison custody, police custody or youth detention;
- a death, wherever occurring, of a person whose death is caused or contributed to by traumatic injuries sustained, or by lack of proper care, while in such custody or detention;
- a death, wherever occurring, of a person who dies, or is fatally injured, in the process of police or prison officers attempting to detain that person; or
- a death, wherever occurring, of a person attempting to escape from prison, police custody or youth detention.

Deaths in police custody are further divided into two categories:

- category 1: deaths in institutional settings (eg police stations, police vehicles, or in hospitals, following transfer from an institution) and other deaths in police operations where officers were in *close* contact with the deceased (eg most raids and shootings by police).
- category 2: other deaths in custody-related police operations where officers were *not* in close contact with the deceased (eg most sieges, pursuits).

Methodology

Data used in this study were extracted from the NDICP database. The information held in the NDICP database is derived from two main sources: data provided by state and territory police and corrective service agencies; and coronial records (eg autopsy, toxicology and finding reports) obtained via the National Coronial Information System. For more detail on the NDICP and its methodology, see Ticehurst, Napier and Bricknell (2018).

Data were drawn from deaths occurring in prison and police custody across Australia between financial years 1991–92 and 2015–16. Excluded from the analysis are the small number of youth detention deaths recorded during the reference period (n=10) and five cases in which Indigenous status was not recorded. A total of 2,044 deaths in custody were included in the analysis.

Table 1 shows the breakdown of deaths in custody by jurisdiction, custodial authority and Indigenous status. It should be noted that custody populations vary greatly across the jurisdictions, which affects the number and distribution of deaths recorded.

Table 1: Deaths in custody by jurisdiction, custodial authority and Indigenous status, 1991–92 to 2015–16

	Prison				Police				Total			
	Indigenous (n)	Non-Indigenous (n)	Total (n)	Proportion (%) Indigenous	Indigenous (n)	Non-Indigenous (n)	Total (n)	Proportion (%) Indigenous	Indigenous (n)	Non-Indigenous (n)	Total (n)	Proportion (%) Indigenous
NSW	67	410	477	14	26	213	239	11	93	623	716	13
Vic	10	185	195	5	6	131	137	4	16	316	332	5
Qld	57	188	245	23	18	102	120	15	75	290	365	21
WA	58	123	181	32	45	60	105	43	103	183	286	36
SA	18	101	119	15	14	48	62	23	32	149	181	18
Tas	3	35	38	8	2	13	15	13	5	48	53	9
ACT	2	6	8	25	0	9	9	0	2	15	17	12
NT	32	8	40	80	35	17	52	67	67	25	92	73
Cth	0	0	0	0	0	2	2	0	0	2	2	0
Total	247	1,056	1,303	19	146	595	741	20	393	1,651	2,044	19

Source: AIC NDICP 1991–92 to 2015–16 [computer file]

Indigenous deaths in prison custody

There were 247 Indigenous deaths in prison custody over the 1991–92 to 2015–16 period, accounting for 19 percent of all prison deaths (n=1,303; Table 1). Between 1991–92 and 2015–16, the number and proportion of Indigenous prison deaths fluctuated (range: 11% to 30% each year), while the number and proportion of Indigenous people in the prison population increased (from 14% to 27%; ABS 2000–2016). Since 2003–04, the proportion of Indigenous deaths in prison custody has been smaller than the relative proportion of prisoners.

Figure 1 shows prison death rates by Indigenous status. While there has been some variation, the death rate of Indigenous prisoners decreased overall by 85 percent from 1999–2000 to 2005–06 (from 0.34 to 0.05 per 100). Over the same period, the death rate of non-Indigenous prisoners decreased overall by 54 percent (from 0.28 to 0.13 per 100). Death rates of both Indigenous and non-Indigenous prisoners were notably lower in the second half of the reference period (2003–04 to 2015–16), compared with the first half (1991–92 to 2002–03).

The decrease in the death rate of Indigenous prisoners was proportionately greater than the decrease for non-Indigenous prisoners. This resulted in a widening in the gap between Indigenous and non-Indigenous prison death rates. For example, between 1991–92 and 2002–03, the average death rate of non-Indigenous prisoners was 1.1 times the Indigenous rate, increasing to 1.6 between 2003–04 and 2015–16. More recently, there has been a narrowing in this gap, largely due to an increase in the death rate of Indigenous prisoners (up 63% since 2013–14). Despite this, the death rate of Indigenous prisoners has been lower than that of non-Indigenous prisoners since 2003–04.

Figure 1: Deaths in prison custody by Indigenous status, 1991–92 to 2015–16 (rate per 100 relevant prisoners)

Source: AIC NDICP 1991–92 to 2015–16 [computer file]; rates calculated using ABS (2000–2016) prison population estimates

Legal status

Seventy-three percent (n=181) of Indigenous prison deaths between 1991–92 and 2015–16 involved sentenced prisoners, and 27 percent (n=66) involved unsentenced prisoners (Table A1). These proportions were relatively similar for non-Indigenous prison deaths (69% vs 31%).

Death rates by Indigenous status and legal status were calculated using available prison population data for the period 2004–05 to 2015–16 (ABS 2005–2016). Despite considerable variation, from 2004–05 to 2015–16, the death rate of Indigenous unsentenced prisoners decreased overall, from 0.26 to 0.16 per 100, while the death rate of non-Indigenous unsentenced prisoners decreased overall, from 0.37 to 0.17 per 100. On the other hand, from 2004–05 to 2015–16, the death rate of Indigenous sentenced prisoners increased slightly overall, from 0.11 to 0.19 per 100. The death rate of non-Indigenous sentenced prisoners also increased overall, from 0.11 to 0.25 per 100.

Since 2011–12, the death rate of Indigenous unsentenced prisoners has been lower than that of Indigenous sentenced prisoners. In comparison, the death rate of non-Indigenous unsentenced prisoners has generally been higher than that of non-Indigenous sentenced prisoners, with a narrowing in this gap in recent years.

Demographic characteristics

Male prison deaths consistently outnumbered female prison deaths over the 1991–92 to 2015–16 period—96 percent (n=236) of all Indigenous deaths and 96 percent (n=1,018) of all non-Indigenous deaths (Table A1). The over-representation of males in prison deaths is representative of the gender composition of the wider prison population (ABS 2000–2016).

The age profile of Indigenous prison deaths was younger than non-Indigenous prison deaths. This reflects, in part, the younger age profile of Indigenous prisoners, compared with non-Indigenous prisoners (ABS 2000–2016). Over the period 1991–92 to 2015–16, the mean age at death for Indigenous prisoners was 37.8 years, compared with 45.3 years for non-Indigenous prisoners (Table A1). Eighty-nine percent of deaths among Indigenous prisoners occurred before the age of 55, compared with 69 percent of deaths among non-Indigenous prisoners. Almost one in five (18%; n=45) Indigenous deaths involved a prisoner less than 25 years of age.

The mean age at death for Indigenous prisoners increased over the 25-year period, from 27.3 years in 1991–92 to 42.7 years in 2015–16. The mean age at death for non-Indigenous prisoners also increased, from 36.6 years in 1991–92 to 58.6 years in 2015–16. Increases in age at death for prisoners appear indicative of the ageing prisoner population (ABS 2000–2016; Baidawi et al. 2011).

Cause of death

The majority of Indigenous prison deaths from 1991–92 to 2015–16 were due to natural causes (58%; n=140), followed by hanging (32%; n=78; Table A1). Twelve deaths (5%) were due to drugs and/or alcohol and nine (4%) were due to external trauma. For each year from 1991–92 to 2002–03, the leading cause of death among Indigenous prisoners was either natural causes or hanging. For each year from 2003–04 to 2015–16, deaths due to natural causes surpassed hanging deaths. This pattern was similar for non-Indigenous prison deaths.

Deaths from natural causes

Figure 2 shows natural death rates in prison custody by Indigenous status. Between 2003–04 and 2015–16, the natural death rate of Indigenous prisoners varied between 0.08 and 0.15 per 100 each year. The average natural death rate of Indigenous prisoners was 1.5 times the non-Indigenous rate between 1991–92 and 2002–03. From 2003–04 to 2015–16, the pattern reversed, with the average natural death rate of non-Indigenous prisoners 1.4 times the Indigenous rate.

Figure 2: Natural deaths in prison custody by Indigenous status, 1991–92 to 2015–16 (rate per 100 relevant prisoners)

Source: AIC NDICP 1991–92 to 2015–16 [computer file]; rates calculated using ABS (2000–2016) prison population estimates

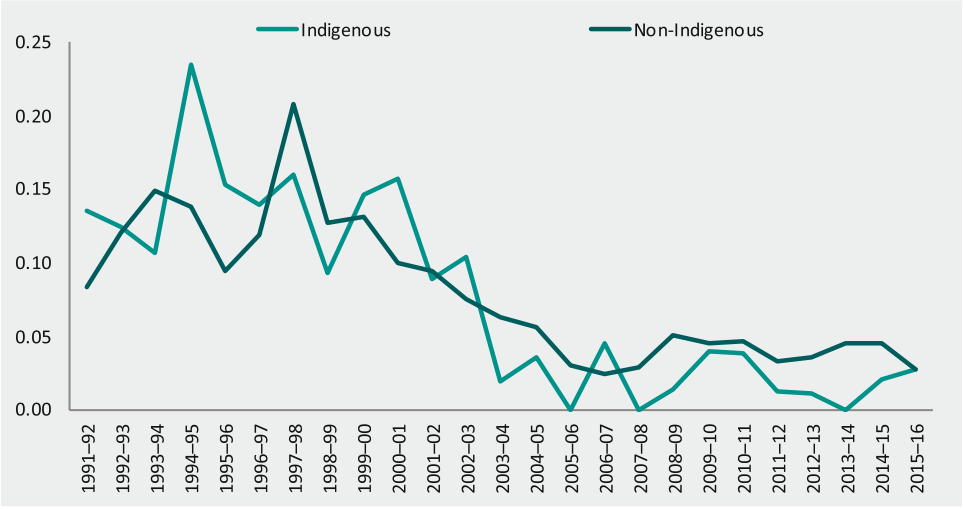
Hanging deaths

As shown in Figure 3, hanging death rates among Indigenous and non-Indigenous prisoners present a very different picture. From 2000–01 to 2005–06, the hanging death rate of Indigenous prisoners dropped from 0.16 per 100 to zero deaths. The hanging rate of non-Indigenous prisoners also decreased during this time, from 0.10 to 0.03 per 100. From 2005–06, the hanging death rate for Indigenous and non-Indigenous prisoners remained at 0.05 or less per 100.

Hanging death rates decreased substantially among Indigenous prisoners, which resulted in changes to the rate ratio of Indigenous hanging death rates. For example, from 1991–92 to 2002–03, the average hanging death rate of Indigenous prisoners was 1.2 times the non-Indigenous rate, while from 2003–04 to 2015–16, the average hanging death rate of non-Indigenous prisoners was two times the Indigenous rate.

Indigenous hanging death rates by legal status were calculated using available prison population data for the period 2002–03 to 2015–16 (ABS 2003–2016). Despite considerable variation, from 2002–03 to 2015–16, the hanging death rate of Indigenous unsentenced prisoners decreased overall by 93 percent (from 0.41 to 0.03 per 100). Hanging death rates of Indigenous sentenced prisoners followed a more stable pattern over the period 2002–03 to 2015–16 (range: 0.06 to 0.00 each year). Since 2011–12, the hanging death rate of Indigenous sentenced prisoners has been similar to that of Indigenous unsentenced prisoners.

Figure 3: Hanging deaths in prison custody by Indigenous status, 1991–92 to 2015–16 (rate per 100 relevant prisoners)



Source: AIC NDICP 1991–92 to 2015–16 [computer file]; rates calculated using ABS (2000–2016) prison population estimates

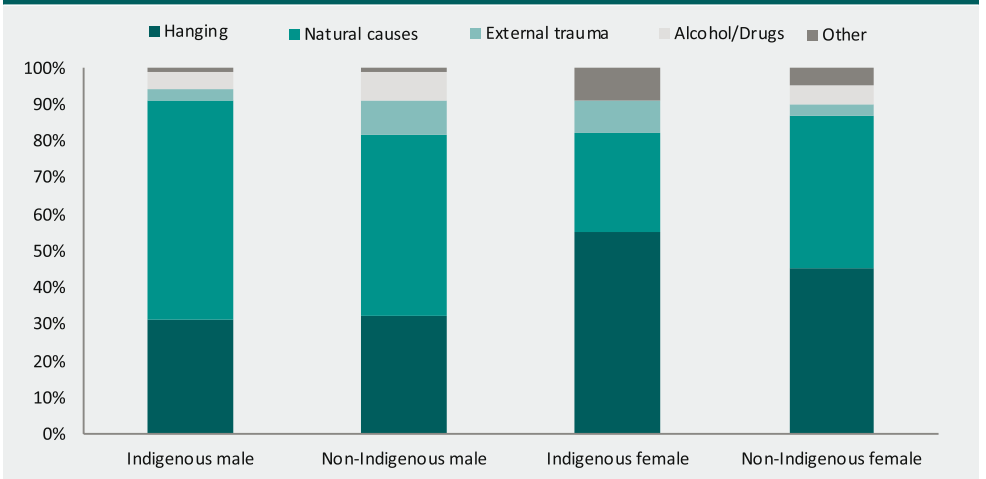
Cause of death by gender

Figure 4 shows the cause of prison death by Indigenous status and gender for the period 1991–92 to 2015–16. Similar proportions of Indigenous and non-Indigenous male deaths were caused by hanging—31 percent (n=72) and 32 percent (n=327) respectively. However, a larger proportion of Indigenous than non-Indigenous male deaths resulted from natural causes—59 percent (n=137) and 49 percent (n=494) respectively. Where the natural cause of death was recorded, Indigenous male deaths were more likely than non-Indigenous male deaths to be due to heart disease (56%; n=74 vs 37%; n=175), but less likely to be due to cancer (16%; n=21 vs 27%; n=128).

A larger proportion of Indigenous female deaths over the 1991–92 to 2015–16 period were due to hanging (55%; n=6 vs 44%; n=17 for non-Indigenous), while a larger proportion of non-Indigenous female deaths were due to natural causes (42%; n=16 vs 27%; n=3 for Indigenous; Figure 4). These differences, however, may only be apparent due to the small numbers of female prisoner deaths.

When comparing these findings with the wider prison population, data obtained from the Australian Institute of Health and Welfare (AIHW 2015) *National Prisoner Health Data Collection* indicate that, in 2015, just over half (51%) of prison entrants ever diagnosed with cardiovascular disease (eg heart disease, stroke, heart failure) reported still having cardiovascular disease, with Indigenous entrants most likely to still have the disease (7 out of 10). A small proportion of prison entrants (3%) were affected by cancer, with non-Indigenous entrants more likely than Indigenous entrants to have ever been told they had cancer (4% and 1% respectively).

Figure 4: Deaths in prison custody by cause of death, Indigenous status and gender, 1991–92 to 2015–16 (%)



Notes: Excludes 10 cases where cause of death was not recorded. External trauma includes head injuries and gunshot wounds
Source: AIC NDICP 1991–92 to 2015–16 [computer file]

Cause of death by age

The leading cause of Indigenous deaths in prison custody varied depending on age. Over the 1991–92 to 2015–16 period, hanging was the leading cause of death among those aged less than 25, accounting for 76 percent (n=34) of such deaths. Among those aged 25 to 39 years, natural causes was the leading cause of death (48%; n=51), followed by hanging (36%; n=38). The majority of deaths among prisoners aged 40 to 54 years (83%; n=57) and those aged 55 years and over (96%; n=26) were from natural causes.

Manner of death

While the *cause of death* refers to the medical cause of the death, the *manner of death* refers to the accountability of the death or how the death came about. For example, if a person dies from natural causes (eg heart attack), the manner of death is also natural causes. If a person dies from other causes of death (eg external/multiple trauma), the manner of death is recorded as one of the following: self-inflicted, justifiable homicide, unlawful homicide, or accidental.

The manner of death in 58 percent (n=140) of Indigenous prison deaths was natural causes, equal to the 58 percent of Indigenous prison deaths *attributable* to natural causes (Table A1). A further 35 percent of deaths (n=86) were self-inflicted. Eight deaths (3%) were accidental, six (2%) were classified as an unlawful homicide, and one (<1%) was a justifiable homicide. For each year from 1991–92 to 2001–02, the leading manner of death was either natural causes or self-inflicted. For each year from 2002–03 to 2015–16, deaths from natural causes surpassed self-inflicted deaths as the leading manner of death. This pattern was similar for non-Indigenous prison deaths.

Self-inflicted deaths

Nearly all self-inflicted deaths among Indigenous prisoners over the period 1991–92 to 2015–16 were due to hanging (90%; n=77). Four were due to external/multiple trauma (5%) and three were due to drugs and/or alcohol (3%). Therefore, trends in self-inflicted deaths largely parallel trends in hanging deaths as described above. Almost half of Indigenous self-inflicted deaths (47%; n=40) during the 1991–92 to 2015–16 period were of persons who had previously attempted suicide, and almost one in three (30%; n=26) were of persons who had been identified as being at risk of self-harm or suicide.

The self-inflicted death rate of Indigenous prisoners decreased from 0.16 per 100 in 2000–01 to zero deaths in 2005–06. Over the same period, the self-inflicted death rate of non-Indigenous prisoners also decreased, from 0.11 to 0.05 per 100. The average self-inflicted death rate of Indigenous prisoners between 1991–92 and 2002–03 was 1.1 times the non-Indigenous rate, while from 2003–04 to 2015–16 the average self-inflicted death rate of non-Indigenous prisoners was 2.4 times the Indigenous rate.

Indigenous deaths in police custody

It should be noted that it is not currently possible to calculate rates of death in police custody, due to the absence of reliable data on the number of people placed in police custody each year and the number of people who come into contact with police in custody-related operations.

There were 146 Indigenous deaths in police custody over the 1991–92 to 2015–16 period, accounting for 20 percent of the total police custody deaths (n=741; Table 1). The number of Indigenous deaths in police custody each year was relatively small, with no clear trend over the reference period. The largest number (n=11) of Indigenous deaths occurred in 2002–03 and 2004–05, and the lowest (n=1) in 2013–14.

Just over half (56%; n=82) of Indigenous deaths in police custody during the 1991–92 to 2015–16 period were classified as category 2 deaths—that is, deaths in which officers were *not* in close contact with the deceased (Table A2). The remaining 44 percent (n=64) were classified as category 1—that is, deaths in which officers *were* in close contact with the deceased. A similar proportion of non-Indigenous deaths in police custody were classified as close and non-close contact deaths (44%; n=262 and 56%; n=333 respectively).

Demographic characteristics

Male deaths in police custody generally outnumbered female deaths in police custody over the 1991–92 to 2015–16 period, with male deaths comprising 86 percent (n=125) of all Indigenous and 95 percent (n=563) of all non-Indigenous deaths (Table A2). While police custody population figures are not available, this gender ratio is likely representative of the gender composition of the arrestee population.

The age profile of Indigenous deaths in police custody was younger than non-Indigenous deaths. Indigenous deaths in police custody most commonly involved those aged less than 25 years (40%; n=59), followed by those aged 25–39 years (38%; n=55; Table A2). Non-Indigenous deaths in police custody most commonly involved those aged 25–39 years (43%; n=256). The mean age at death for Indigenous persons in police custody was 29.9 years, compared with 34.6 years for non-Indigenous persons in police custody.

Cause of death

Over half (51%; n=74) of Indigenous deaths in police custody over the 1991–92 to 2015–16 period resulted from external/multiple trauma (Table A2), the majority of which were due to injuries sustained during motor vehicle pursuits (MVPs; 62%; n=46). Deaths resulting from MVPs accounted for almost one third (32%; n=46) of Indigenous deaths in police custody during the 1991–92 to 2015–16 period. This proportion was similar for non-Indigenous deaths in police custody (30%; n=176).

The next most common cause of Indigenous deaths in police custody over the period 1991–92 to 2015–16 was natural causes (21%; n=30; Table A2). Most of these were due to heart disease or related cardiac ailments (73%; n=22), as was the case for deaths in prison custody. A small number of deaths were due to stroke (13%; n=4), respiratory conditions (7%; n=2) and epilepsy (3%; n=1). Indigenous deaths from natural causes most commonly occurred among those aged 25–39 (43%; n=13) and 40–54 (37%; n=11). A higher proportion of Indigenous compared with non-Indigenous deaths in police custody resulted from natural causes (21%; n=30 vs 8%; n=47).

Less than 10 percent of Indigenous deaths in police custody over the 1991–92 to 2015–16 period were due to hanging (9%; n=13). No Indigenous hanging deaths have occurred since 2008–09. Non-Indigenous hanging deaths decreased, from 20 during the first half of the reference period (1991–92 to 2002–03) to nine during the second half (2003–04 to 2015–16). Similarly, no non-Indigenous hanging deaths have occurred since 2009–10.

The number of Indigenous deaths resulting from gunshot wounds was low over the 1991–92 to 2015–16 period (range: 0–2 per year). Of the total 13 Indigenous deaths resulting from gunshot wounds, eight (62%) were police shootings and five (38%) were self-inflicted. Nine percent of Indigenous deaths in police custody were caused by gunshot wounds, compared with 35 percent of non-Indigenous deaths.

Manner of death

Almost half (47%; n=68) of Indigenous deaths in police custody over the 1991–92 to 2015–16 period were accidental (Table A2), 57 percent (n=39) of which were due to MVPs and 19 percent (n=13) to some other type of pursuit (eg foot pursuit). The next most common manner of death was natural causes (21%; n=31), followed by self-inflicted deaths (19%; n=28). Less than 10 percent were due to justifiable homicide (7%; n=10) and unlawful homicide (5%; n=8).

Conclusion

In 1991, the RCIADIC concluded Indigenous people were no more likely to die in custody than non-Indigenous people but were significantly more likely to be arrested and imprisoned. The same remains true today.

Indigenous people are now less likely than non-Indigenous people to die in custody, largely due to a decrease in the death rate of Indigenous prisoners from 1999–2000 to 2005–06. Since 2003–04, non-Indigenous people have been, on average, 1.6 times more likely to die in prison custody than Indigenous people. More recently, there has been a narrowing in this gap, largely due to an increase in the death rate of Indigenous prisoners from 2013–14. Yet the death rate of Indigenous prisoners has been consistently lower than that of non-Indigenous prisoners since 2003–04. Coinciding with the overall decrease in the death rate of Indigenous prisoners is the decrease in the hanging death rate of Indigenous prisoners, falling below the natural death rate from 2002–03. Since 2003–04, the hanging death rate of Indigenous prisoners has been lower or the same as that of non-Indigenous prisoners. In contrast, the natural death rate of Indigenous prisoners has remained relatively stable across the years. The mean age at death for Indigenous prisoners has been increasing over the years yet remains lower than that of non-Indigenous prisoners. Based on available prison population data from 2004–05 to 2015–16, the death rate of Indigenous unsentenced prisoners decreased overall, while the death rate of Indigenous sentenced prisoners increased slightly.

While less can be said about the trends for Indigenous deaths in police custody (due to the relatively small number of Indigenous deaths in police custody each year) and rates cannot currently be calculated, some clear patterns have emerged. Between 1991–92 and 2015–16, 146 Indigenous deaths in police custody occurred, representing 20 percent of all deaths in police custody. One in every two (47%) Indigenous deaths in police custody were classified as an accident, followed by deaths from natural causes (21%) and self-inflicted deaths (19%). One in two accidental deaths were due to MVPs and one in five were due to some other type of pursuit. The number of Indigenous hanging deaths in police custody was relatively small, with no Indigenous hanging deaths occurring since 2008–09. The number of Indigenous deaths resulting from gunshot wounds was also relatively small, and notably smaller proportionately than non-Indigenous deaths in police custody. As with prison deaths, the age profile of Indigenous deaths in police custody was younger than that of non-Indigenous deaths in police custody.

Acknowledgements

The AIC would like to thank police and corrective service agencies for providing the data that forms the basis of this study. Without their ongoing support, the NDICP would not be possible. In addition, the authors are grateful to Sarah Napier for her input in the earlier stages of this chapter.

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Appendix

Table A1: Deaths in prison custody by Indigenous status, 1991–92 to 2015–16

	Indigenous		Non-Indigenous		Total	
	n	%	n	%	n	%
Legal status						
Sentenced	181	73	724	69	905	70
Unsentenced	66	27	330	31	396	30
Gender						
Male	236	96	1,018	96	1,254	96
Female	11	4	38	4	49	4
Age group (years)						
Under 25	45	18	126	12	171	13
25–39	106	43	342	32	448	34
40–54	69	28	262	25	331	25
55+	27	11	326	31	353	27
Min/max		17/81		17/94		17/94
Mean (median)		37.8 (36)		45.3 (43)		43.8 (41)
Cause of death						
Hanging	78	32	344	33	422	33
Natural causes	140	58	510	49	650	50
External trauma	9	4	97	9	106	8
Alcohol/drugs	12	5	84	8	96	7
Other	4	2	15	1	19	1
Manner of death						
Self-inflicted	86	35	401	38	487	38
Natural causes	140	58	510	49	650	50
Unlawful homicide	6	2	58	6	64	5
Justifiable homicide	1	<1	4	<1	5	<1
Accident	8	3	68	7	76	6
Other	2	1	5	<1	7	1

Notes: External trauma includes head injury and gunshot wounds. Excludes cases with missing data.
Percentages may not total 100 due to rounding
Source: AIC NDICP 1991–92 to 2015–16 [computer file]

Table A2: Deaths in police custody by Indigenous status, 1991–92 to 2015–16						
	Indigenous		Non-Indigenous		Total	
	n	%	n	%	n	%
Category of death						
Category 1	64	44	262	44	326	44
Category 2	82	56	333	56	415	56
Gender						
Male	125	86	563	95	688	93
Female	21	14	32	5	53	7
Age group (years)						
Under 25	59	40	150	25	209	28
25–39	55	38	256	43	311	42
40–54	27	18	142	24	169	23
55+	5	3	46	8	51	7
Min/max		12/69		13/80		12/80
Mean (median)		29.9 (28)		34.6 (32)		33.7 (32)
Cause of death						
Hanging	13	9	29	5	42	6
Natural causes	30	21	47	8	77	10
Gunshot	13	9	207	35	220	30
External trauma	74	51	237	40	311	42
Alcohol/drugs	6	4	43	7	49	7
Other	10	7	28	5	38	5
Manner of death						
Self-inflicted	28	19	199	34	227	31
Natural causes	31	21	47	8	78	11
Unlawful homicide	8	5	6	1	14	2
Justifiable homicide	10	7	110	19	120	16
Accident	68	47	218	37	286	39
Other	1	1	11	2	12	2

Notes: External trauma includes head injury. Excludes cases with missing data. Percentages may not total 100 due to rounding
Source: AIC NDICP 1991–92 to 2015–16 [computer file]

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Youth crime

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10. Where have all the young offenders gone? Examining changes in offending between two NSW birth cohorts

Jason Payne, Rick Brown and Roderic Broadhurst

In their analysis of recent crime trends, Weatherburn and Holmes (2013) describe for New South Wales the extent of the 'crime decline' also widely observed in other countries. They found that between 2000 and 2012 New South Wales experienced a 50 percent decline in the rate of theft and a 33 percent decline in the rate of robbery—declines which Clancey and Lulham (2014) estimate have so far produced a saving of $5.15b to the NSW community. Like most other Australian states and territories (ABS 2013), New South Wales is currently in the midst of the largest and longest decline in crime on record, an experience it shares with New Zealand (Mayhew 2012), the United States (Zimring 2011) and much of Western Europe (Aebi & Linde 2010).

Several explanations have been offered for this widespread decline in crime, although these typically include explanations for changes in violence as well as property crime. As noted by Farrell et al. (2010), for example, only some of these theories have been (at best partially) tested, including the potential influence of demographic changes (Blumstein 2000), increases in immigration (Wadsworth 2010); increased abortion (Donohue & Levitt 2001), increases in the prison population (Langan & Farrington 1998), changes to policing strategies (Zimring 2011), increases in police numbers (Levitt 2004), changes to gun laws (Duggan 2001), changes to drug markets (Levitt 2004) and reductions in childhood exposure to airborne lead pollution (Reyes 2007). Importantly, with the exception of the recent work by Weatherburn, Halstead and Ramsey (2016), none of these ideas have been explored in the context of the crime decline in Australia, which started later and was (at least in the earlier years) limited to property crimes.

In New South Wales and across Australia more broadly, relatively little effort has been made to explore the causes (and consequences) of this phenomenon. In one of the earliest studies, Moffatt, Weatherburn and Donnelly (2005) argued that the decline in crime was most likely the result of a reduction in heroin availability and consumption (the so-called heroin drought), an increase in re-registrations for drug treatment, and improvements in local economic conditions.

Later, Wan et al. (2012) examined the reduction in burglary and suggested that the reduction in this property crime might have also been attributable to higher levels of incarceration and increases in average levels of income. In 2013, Weatherburn and Holmes explored the potential influence of new policing practices, coupled with a shift in local demographic profiles (ageing populations) and improvements in security (widespread use of electronic locks and CCTV) as possible complementary explanations. In recent analyses, Weatherburn, Halstead and Ramsey (2016) conclude that four explanations for the decline in property crime offer reasonable empirical and theoretical support. These are: the fall in heroin use (at least during the early years of the decline), the rise in income, the increased risk of arrest and imprisonment/incapacitation, and the improvement in motor vehicle security (2016: 271).

Notwithstanding the diversity of these explanations, there has been insufficient focus on the crime decline from the perspective of developmental and life-course criminology. Perhaps because of the sudden and abrupt nature of the decline (starting in 2000), coupled with its coincidence with the NSW heroin shortage, many scholars abandoned demographic explanations (decline in high risk youth as a percentage of population) and instead tried to understand the changing nature of crime though the lens of immediate situational, contextual and environmental factors.

Yet, in 2015, Farrell, Laycock and Tilley analysed aggregated arrest data, comparing the composition of the offending population in the United States in 1980, 1990 and 2010. Their findings indicated that the crime decline in the United States was marked by a disproportionate reduction in adolescent offending, offset by higher than average rates of offending among those aged 40 and over. The authors, having replicated earlier findings in Australia (Weatherburn, Freeman & Holmes 2014), tentatively concluded that diminishing criminal opportunities reduced the relative incidence of adolescent offending, while the apparent increase in offending among older people was likely the result of the criminal habituation of a generation when there were plentiful criminal opportunities.

The crime decline through a developmental lens

As a comparative cross-sectional snapshot of crime at three time points, the Farrell, Laycock and Tilley (2015) study was the first to explore in detail the potential impact of intergenerational change on the crime decline in the United States. The finding that fewer crimes were committed by adolescent offenders invited explanations that focused on criminal careers or developmental criminology. Specifically, Farrell and colleagues (2015) argued that a 'debut crime hypothesis' was the causal link between criminal opportunities and the development of criminal careers. The debut crime hypothesis argues that some crime types—in particular, status offences and less serious property crimes—serve as the traditional starting point for criminal careers and that as opportunities to commit these so-called debut crimes diminish, so too might the number of young people having contact with the police, leading to relatively fewer career criminals, or less serious criminal careers.

The research by Farrell, Laycock and Tilley (2015) is a turning point in helping to explain the causes of the crime decline. Although the approach is developmental, a situational crime prevention focus is used to argue that increased securitisation has reduced criminal opportunities and therefore prevented the induction of many young people into a life of crime.

This is, however, just one possible developmental interpretation. For example, many developmental theories place significant emphasis on persistent population heterogeneity to explain differences in crime both between individuals and within individuals. The most notable of these is Gottfredson and Hirschi's General Theory of Crime (1990), which argues that low self-control is the single most important predictor of social failure. Individuals with low self-control, for example, are relatively more likely to engage in antisocial and criminal behaviour because they lack the capacity to resist immediate gratification and relish the satisfaction of succeeding at risky activities. To the extent, therefore, that aggregate crime rates reflect population variability in levels of self-control, the crime decline might be explained by the development of relatively fewer individuals with low self-control.

Although often criticised as 'reductionist', the population heterogeneity thesis of Gottfredson and Hirschi (1990) may not be so difficult to apply to the crime decline if it can be shown that the causes of this heterogeneity have incrementally improved such that the population distribution of self-control has changed to produce lower levels of antisocial and criminal behaviour. For Gottfredson and Hirschi (1990) this likely includes improved parental supervision of children, fewer adverse child–parent relationships, and lower prevalence of unreasonable or excessive punishment, just to name a few. Another developmental approach is Sampson and Laub's (1995) revision of social bond theory, in which they describe the importance of social bonds in preventing crime or facilitating desistence. Criminality, it is argued, can be intimately tied to the strength and relevance of prosocial versus antisocial bonds. Those lacking strong prosocial bonds are more likely to experience social failure. This social failure compounds through the foreclosure of prosocial and non-criminal opportunities.

From Sampson and Laub's perspective, the crime decline might have resulted from two mechanisms—improved prosocial bonding during adolescence (eg higher rates of sporting club and extra-curricular activities, or lower rates of school exclusion and isolation) or the diminishing importance of some antisocial activities (eg experimentation with drug use or informal contact with the police) as mechanisms of prosocial foreclosure.

This brief overview shows developmental criminology has much to offer in interpreting the data emerging about the scale and scope of the international crime decline. The aggregate analysis by Farrell and colleagues (2015) provides a starting point from which developmental criminology could add to our understanding of the crime decline by using longitudinal data and methods.

The present study makes a unique contribution by comparing the developmental trajectories of young offenders from two birth cohorts (1984 and 1994). These cohorts have been selected to represent two distinct periods in New South Wales, and two cohorts for which full (age 10+) criminal history data are available. Born in 1984, the first cohort are members of 'Generation Y'—young people who transitioned through adolescence at a time of sustained year-on-year growth in the rates of drug, property and violent crime. The second cohort are members of 'Generation Z' who, unlike their predecessors, transitioned through adolescence at a time when crime rates were in decline. Although too young to have contributed to the decline in its earliest phases, these young people nevertheless grew up in a contextually distinct period and may have benefited developmentally from an evolving criminal milieu in which there were fewer criminal opportunities and greater investments in early interventions.

The purpose of this study is to identify whether in these different generational contexts there has been any meaningful shift in the prevalence (proportion of the population), frequency and nature (offence types) of the antisocial and criminal trajectories of young people in New South Wales.

Method

Research design

The principal objective of this research is to examine whether the prevalence, frequency and nature of police contact has changed significantly. A longitudinal approach was used to examine the experience of two birth cohorts (separated by 10 years) and their experiences of police contact during adolescence and early adulthood. This analysis adds to the research on the scale and causes of the crime decline—research which has relied on the examination of temporal changes via repeated cross-sectional data.

Data

The data for this study represent offence-level unit records recorded by NSW police for all proven offences committed by offenders born in one of two NSW birth cohorts (1984 and 1994). Consistent with the approach of Hua, Baker and Poynton (2006), the two birth cohorts were identified from the records of the NSW Registry of Births, Deaths and Marriages. The names and dates of birth for each person born in those cohorts were then cross-matched with the Reoffending Database maintained by the NSW Bureau of Crime Statistics and Research. For each individual match, the unit record data were extracted for each offence, together with offence-specific details (ie offence type, date and outcome) and a series of demographic variables (ie gender, age at arrest and Indigenous status).

Counting rules

In this study criminal offending is defined as any unique 'proven offence'. Proven offences are those recorded by the police for which there was an official outcome that substantiated the offence. In most cases this is the recording of a formal conviction, but it may also include formal cautions or diversions where the offence is not disputed. All unique offence counts are included in this study, meaning that where an offender is apprehended and charged with multiple counts of the same offence, these are recorded as separate offences. Finally, crime types are coded using the Australian and New Zealand Standard Offence Classification.

Age-specific and cumulative prevalence rates are calculated relative to the population count in each birth cohort. As extracted from the NSW Registry of Births, Deaths and Marriages, these were:

- 83,328 persons born in New South Wales in 1984; and
- 89,373 persons born in New South Wales in 1994.

At the time of data extraction, it was not possible to identify cohort-specific mortality rates, only annualised age-specific mortality rates in New South Wales for each year since 1984. In the absence of cohort-specific mortality rates and to be consistent with Hua, Baker and Poynton (2006), the population denominators in this study are treated as constant to age 21.

Limitations

While mortality rates have been used to provide adjusted estimates, cohort-specific mortality at the individual level is not available and consequently the probability of death at each age is treated as equal across the population. Mortality rates are likely to be higher among disadvantaged groups and those having more frequent contact with the criminal justice system. As a consequence, the age-specific rates of offending presented are likely to be conservative.

Further, these data do not reduce the denominator to account for individuals who move interstate or overseas, whether permanently or temporarily. Research in the health data field has shown that approximately five percent of individuals in one state have data elsewhere in the country (Boyd et al. 2015). Much consideration has been given to this issue, but to adjust both birth cohorts for migration out would require a number of assumptions which are equally problematic. For example, the analysis would ignore the fact that migration rates are confounded by families who move many times. There is also the possibility that those who migrate out of New South Wales may migrate in at a later time and thus still be eligible for police contact. Without much more detailed analysis of migration pathways, it is unlikely that any aggregate adjustment would be a fair treatment of these data.

Finally, the crime data used in this study are for recorded and proven offences only. A more detailed discussion of the limitations of this study is provided at the conclusion of this chapter.

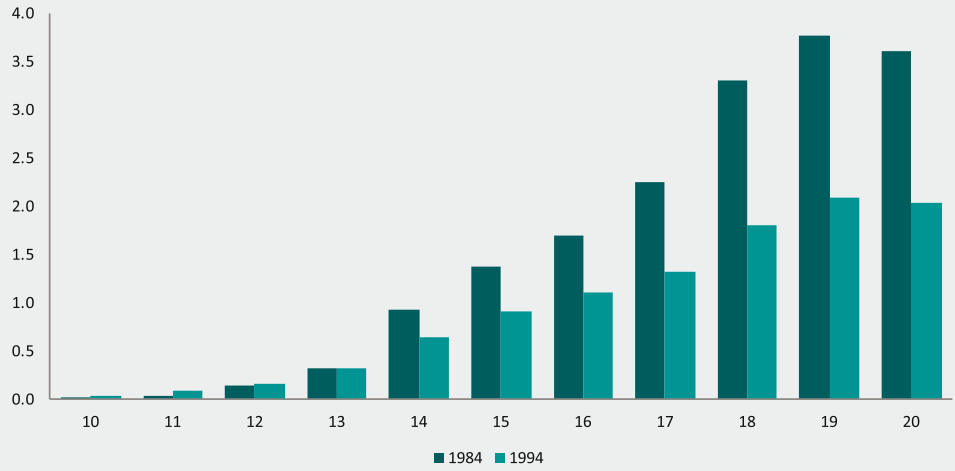
Results

Prevalence

Figure 1 maps the annual prevalence of offending for each age between 10 and 20 years, inclusive. Here, the annual prevalence is the percentage of the population who had recorded at least one proven offence at each age. For both the 1984 and 1994 cohorts the age at which there was the greatest number of active offenders was 19 years. For the 1984 cohort, the peak population prevalence was 3.8 percent, while for the 1994 cohort it was 2.1 percent.

At peak offending (age 19) there were 44 percent fewer members of the 1994 cohort having contact with the police for at least one proven offence. This divergence between the two cohorts is not, however, consistent at all ages. Before age 14, for example, both the 1984 and 1994 cohorts appeared to track along an almost equivalent pathway. After age 14, the annual prevalence of offending among the 1994 cohort increases, but not as quickly as was the case for their peers born in 1984.

Figure 1: Annual prevalence of offending, by age and cohort (%)

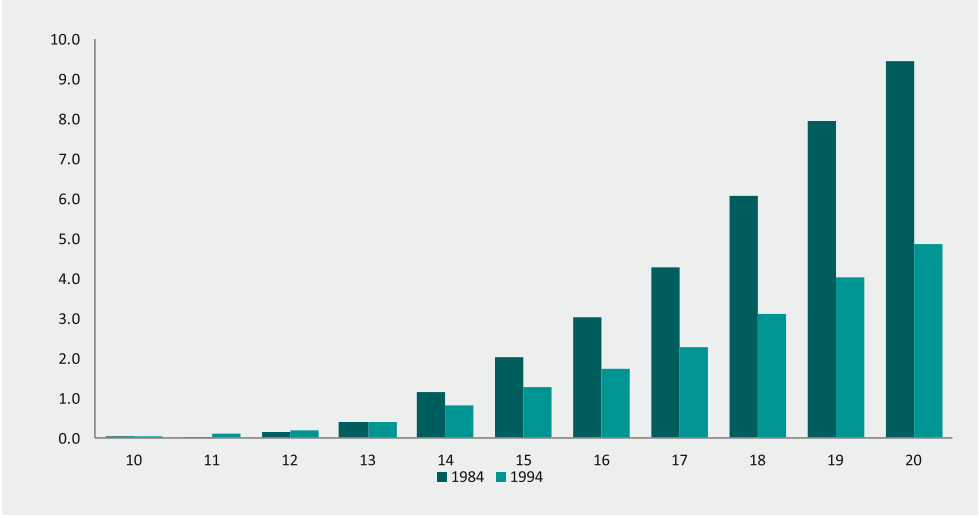


Source: Trajectories of two NSW Birth Cohorts [computer file]

The presentation here of age-specific prevalence rates suggests that, overall, a substantially smaller proportion of the 1994 birth cohort had committed offences prior to age 21. However, since some offenders may have committed offences at more than one age, it is difficult to be sure that the disparity between the two birth cohorts is the result of a fall in population prevalence, and not just a substantial reduction in the frequency of offending for those who are active offenders. In other words, the differences seen in Figure 1 may be the consequence of there being fewer offenders (lower prevalence) committing roughly the same number of offences, or the same number of offenders committing substantially fewer offences, or a mix of both.

To examine this in more detail, Figure 2 presents the cumulative prevalence of offending for both the 1984 and 1994 birth cohorts. It shows that, by age 21 (depicted as the prevalence at age 20), 9.5 percent of the 1984 birth cohort had at least one proven offence. The equivalent estimate for the 1994 birth cohort was 4.8 percent, indicating that proportional to population, almost half (down 49%) as many young people born in 1994 had committed at least one proven offence compared to their peers born 10 years earlier.

Figure 2: Cumulative prevalence of offending, by age and cohort (%)



Source: Trajectories of two NSW Birth Cohorts [computer file]

Table 1 disaggregates these data by offence type and illustrates that for the 1984 and 1994 birth cohorts:

- The prevalence of violent offending was 2.6 and 1.8 percent, respectively—a decline of 32 percent.
- The prevalence of property offending was 3.8 and 1.7 percent, respectively—a decline of 56 percent.
- The prevalence of drug offending was 1.7 and 1.3 percent, respectively—a decline of 22 percent, the smallest of the offence-specific declines.
- The prevalence of disorderly conduct offences was 3.3 and 1.9 percent, respectively—a decline of 42 percent.

Table 1: Cumulative prevalence of offending to age 21, by cohort and offence type						
	1984		1994		Summary	
	n	%	n	%	% difference in prevalence	% change in prevalence
Violent	2,162	2.6	1,571	1.8	–0.8	–32.3
Assault	975	1.2	748	0.8	–0.3	–28.5
Sex	67	0.1	42	0.0	0.0	–41.6
Robbery	319	0.4	196	0.2	–0.2	–42.7
Other violent	1,459	1.8	1,152	1.3	–0.5	–26.4
Property	3,207	3.8	1,512	1.7	–2.2	–56.0
Burglary	1,030	1.2	594	0.7	–0.6	–46.2
Motor vehicle theft	830	1.0	363	0.4	–0.6	–59.2
Stealing	1,934	2.3	1,028	1.2	–1.2	–50.4
Other property	1,283	1.5	559	0.6	–0.9	–59.4
Drug	1,384	1.7	1,163	1.3	–0.4	–21.7
Drink	2,092	2.5	1,135	1.3	–1.2	–49.4
Traffic	2,496	3.0	1,687	1.9	–1.1	–37.0
Disorder	2,748	3.3	1,707	1.9	–1.4	–42.1
Breach	598	0.7	916	1.0	0.3	42.8
Other	935	1.1	709	0.8	–0.3	–29.3
Any	7,900	9.5	4,341	4.9	–4.6	–48.8
Any (excl. breaches)	7,887	9.5	4,332	4.8	–4.6	–48.8
Any (mortality adjusted)	7,900	11.1	4,341	5.4	–5.6	–50.8

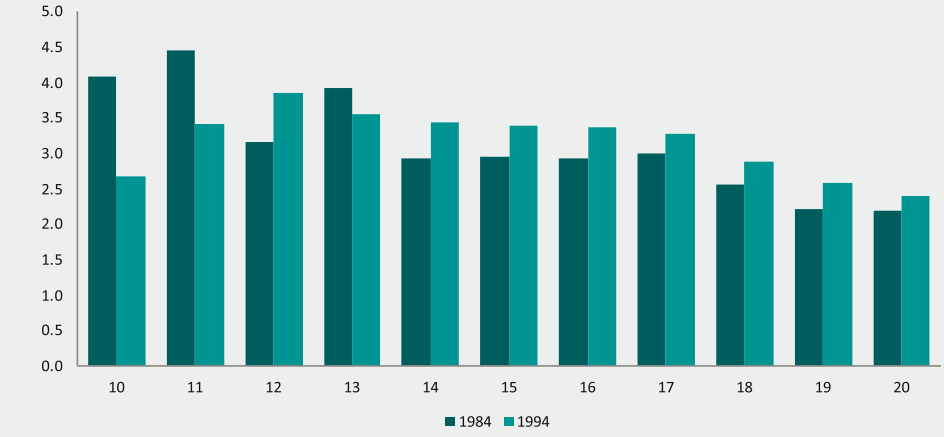
Source: Trajectories of two NSW Birth Cohorts [computer file]

Within the category of violence, the largest declines in cumulative prevalence were seen for robbery and sex offences (down 43% and 42%, respectively). The fall in prevalence was smaller for assault (down 29%) and other violent offences (26%). Among the property offences, motor vehicle and other property theft offences (not elsewhere classified) exhibited the largest decline in prevalence (59% for each).

Frequency

The relative levels of offending at each age are depicted in Figure 3 as the average number of proven offences recorded per active offender at each age. Although in the early years (ages 10 and 11) very few members of either cohort had contact with the police, those in the 1984 cohort who did recorded an average of 4.1 and 4.5 proven offences at each age, respectively. For their peers born in 1994, the average number of proven offences was 2.7 at age 10 and 3.4 at age 11. In both cases, the average rate of offending was higher among early onset offenders in 1984.

Figure 3: Average offence count, by age and cohort (n)



Source: Trajectories of two NSW Birth Cohorts [computer file]

From age 14 onwards, however, the average number of proven offences per active offender was consistently higher for the 1994 cohort. Given the 1994 cohort had considerably fewer offenders, these data suggest a tendency towards the concentration of more active or prolific offenders within the offending population. In other words, the fall in prevalence between 1984 and 1994 was also partly the result of a disproportionate fall in the number of infrequent offenders, leading to an apparent concentration of offenders who, as a group, committed more proven offences each year.

Chronicity

The picture that has so far been painted by these data suggests that considerably fewer individuals of the 1994 birth cohort were formally processed in the criminal justice system, but of those who were, the number of crimes committed was higher.

To consider this issue in more detail, active offenders were classified into one of three possible categories:

- once-only offenders—those who committed only one crime by age 21;
- moderate offenders—those who recorded between two and four crimes by age 21; and
- chronic offenders—those who recorded five or more crimes by age 21.

Table 2 shows that, for the 1984 cohort, once-only offenders comprised 41 percent of the offending population—equal to 3.9 percent of the total birth cohort. The equivalent group from the 1994 cohort represented 35 percent of the offending population and only 1.7 percent of the total birth cohort. The ratio of the proportion of the population of once-only offenders in 1984 compared with 1994 was 0.43.

Moderate offenders (those committing between 2 and 4 offences) accounted for 36 percent of the 1984 offender population and 33 percent of the 1994 offender population (3.4 and 1.6 percent of their respective total birth cohorts). The ratio of the proportion of the population in 1984 compared with 1994 was 0.47.

Chronic offenders (those committing 5 or more offences by age 21) represented one in four (23%) of the 1984 offender cohort, but almost one in three (32%) of the 1994 offender cohort (equal to 2.2 and 1.5 percent of their total populations, respectively). The ratio of the proportion of the population in 1984 compared with 1994 was 0.68.

Table 2: Once-only, moderate and chronic (5+) offenders by age 21 (proportion of population and proportion of offenders)						
	1984			1994		
	n	% of population	% of offenders	n	% of population	% of offenders
1 offence	3,216	3.9	40.8	1,529	1.7	35.3
2–4 offences	2,853	3.4	36.2	1,438	1.6	33.2
5+ offences	1,818	2.2	23.1	1,365	1.5	31.5
Total	7,887	9.5	100.0	4,332	4.8	100.0

Source: Trajectories of two NSW Birth Cohorts [computer file]

These results show a significant reduction in the proportion of once-only offenders in the population of offenders born in 1994 compared with those born in 1984. In fact, proportional to population, the prevalence of once-only offending had more than halved. There also appears to have been a substantial fall in the population prevalence of moderate offending—again, there being less than half the number of moderate offenders in the 1994 birth cohort than there were in the 1984 cohort. Although still in decline somewhat, chronic offenders nevertheless comprise a larger proportion of the offender population born in 1994.

The findings in Table 2 also suggest that chronic offenders are responsible for an increasing share of all the offences committed, given that their share of the offender population increased. To confirm this, Table 3 provides the number of crimes committed by each of the three offender groups, their average rate of offending, and the percentage of all offences for which they were responsible. The results indicate that among those born in 1984 there were 3,216 once-only offenders responsible for nine percent of all crimes recorded by the cohort. Among those born in 1994, there were 1,529 once-only offenders responsible for only six percent of the offences recorded.

For moderate offenders, not only were there fewer actual offenders, but the average rate of offending also declined from 3.0 for the 1984 cohort to 2.7 for the 1994 cohort. As a consequence, moderate offenders born in 1984 were responsible for a higher proportion of crimes than were their peers born 10 years later (23% vs 16% for moderate offenders in the 1994 cohort).

Table 3: Once-only, moderate and chronic (5+) offenders by age 21 (offence rate and proportion of offences)								
	1984				1994			
	Offenders (n)	Offences (n)	Average	% of offences	Offenders (n)	Offences (n)	Average	% of offences
1 offence	3,216	3,216	1.0	8.9	1,529	1,529	1.0	6.4
2–4 offences	2,853	8,480	3.0	23.4	1,438	3,892	2.7	16.4
5+ offences	1,818	24,574	13.5	67.8	1,365	18,380	13.5	77.2
Total	7,887	36,270	4.6	100.0	4,332	23,801	5.5	100.0

Source: Trajectories of two NSW Birth Cohorts [computer file]

In both cohorts, the average number of offences committed by chronic offenders was the same (13.5 offences by age 21), but the relative over-representation of chronic offenders in the 1994 cohort means that chronic offenders were responsible for a higher proportion of the total crime count (77% vs 68% for the 1984 cohort).

As has been demonstrated consistently in other studies (Wolfgang, Figlio & Sellin 1987; Loeber & Dishion 1983), a small proportion of chronic offenders are often responsible for the majority of crime, and these data are no exception to that rule. In fact, the diminishing prevalence of once-only and moderate offending in the 1994 cohort means that chronic offenders, though not offending at higher rates, were nevertheless responsible for a disproportionally greater number of recorded offences than was the case for their peers born in 1984.

Discussion

This study examined the criminal trajectories of two cohorts of individuals born in New South Wales. Members of the first cohort were born in 1984 and reached their teens in an era of rising crime rates. Members of the second cohort, born in 1994, grew up during the now well-documented crime decline—an era when rates of crime in New South Wales and elsewhere in Australia were falling. Although the analysis of the Australian and international crime decline has, to date, focused largely on macro-level factors using repeated cross-sectional or time-series data, this study considers the phenomenon from a developmental criminological perspective, employing a longitudinal design.

The findings of this study have identified some important differences between these two cohorts. Most notably:

- Born 10 years apart, the population prevalence of offending for the 1994 cohort was considerably lower than was estimated for their peers born in 1984. Proportional to population, the number of young people offending by age 21 had almost halved.
- The greatest overall declines in offending were seen for property crime (–56%), drink driving (–49%) and disorder offences (–42%).
- Though fewer people born in 1994 had contact with the police, those who did tended to offend at a higher rate (higher by 20%).
- The proportion of the offenders categorised as ‘chronic’ (on the basis of committing five or more offences by age 21) increased between the two cohorts.

These findings require further explanation. First, the apparent decline in the prevalence of offending highlights the fact that during the crime decline there were far fewer young people ever becoming involved in crime. As a proportion of the population, those committing just one or two offences by age 21 had halved over the 10 years, from 3.9 percent of the population, to 1.7 percent.

Explaining these changes is difficult on these data alone, but it is likely that several factors are at play. The increased securitisation of both personal and public property may also help to explain these changes, especially if the items once targeted by young offenders have become more difficult to steal (because of built-in security), more difficult to on-sell (because there are fewer people to sell to, for less profit) or if theft is more likely to be detected (because of CCTV and other monitoring systems). Increased securitisation in this sense may have made offending more difficult and less rewarding—cardinal principles of crime prevention. Improved in-built product security, improved building design and increased formal surveillance have increased both the effort and risk associated with committing property crime, which may have dissuaded some young people from stealing and being consequently caught up in the criminal justice system. Indeed, interviews with offenders have found that they most commonly cite improvements in security as a reason for the crime drop (Brown 2015).

The debut crime hypothesis (Farrell et al. 2011) may be of some use here, especially to explain why preventing youth property crime (particularly motor vehicle theft) may have contributed to the redirection of potential offenders into non-criminal alternatives (or undetected offences). Of course, these are just a few of the possible explanations, and only alternative data can illuminate further.

The changing nature of routine activities among young people may also help to explain why the prevalence of offending has declined for such a large proportion of the population. There is little doubt that the routine activities of young people have changed, with less time spent in unsupervised circumstances in which opportunistic offending may be more attractive, such as 'hanging out' on the streets with like-minded peers. Increased opportunities for home entertainment through the internet may have increased the prevalence of virtual interactions that limit or undermine opportunities for traditional forms of crime, while at the same time offering opportunities for new forms of crime to emerge which are less easily detected. As we enter the digital age, those native to social media and online social networking may explore antisocial and criminal behaviours online which at present attract far less scrutiny from parents and authorities. Perhaps the significant declines seen in these data, and indeed the crime decline more generally, are the consequence of displacement to other forms of antisocial conduct that for now remain hidden from official statistics.

The large decline in the frequency of offending was seen across the board, cutting across gender and Indigenous status, with most offence types experiencing large reductions (the exceptions being drug and breach offences). This was largely due to the reduction in prevalence, given that the frequency of offending (average offences per offender) rose for most ages and for most crime types in the 1994 cohort. This apparent increase in rates of offending is an artefact of the disappearance of a large group of moderate offenders in the 1994 cohort.

It is notable that the cumulative number of breaches by age 21 rose by 171 percent between the two cohorts, while the average number of breaches per offender increased by 90 percent. This is likely to be a function of the increasing proportion of chronic offenders in the latter cohort, who may be more likely to reoffend and to fail to comply with the requirements of their sanctions. This could have implications for the justice system in terms of the increased likelihood of receiving a custodial sentence following the failure to comply with community based orders—an issue that would be worth further exploration.

Of course, earlier work in New South Wales points to the potentially transformative and important role of improved economic conditions in that state (Weatherburn, Freeman & Holmes 2014), and this cannot be ignored. Indeed, some of the outcomes seen in these data are likely to have also been influenced by these broader societal and economic conditions, which have been favourable to the decline in crime.

Finally, given the explicit developmental and life-course focus of this research, it is important to reflect on the results and their implications for theory and practice in this arena. It is unlikely that the population distribution of self-control (Gottfredson & Hirschi 1990) shifted so dramatically in 10 years that the decline in prevalence resulted from lower propensities to offend. That said, the proliferation of initiatives responding to young children with behavioural or conduct disorders, especially those on the borderline, may have had a role to play in the outcomes seen in this study. The less often that official, punitive and exclusionary responses are used for children exhibiting conduct problems, the less likely it is that those children will accumulate disadvantage and foreclose future opportunities (Sampson & Laub 1995). These issues are explored in more detail elsewhere (Payne, Brown & Broadhurst 2018), but such tentative suggestions require new data.

Conclusion

This study has provided a unique insight into the NSW crime decline. It explores a number of competing hypotheses about youth crime which require a more detailed analysis. Nevertheless, it yields observations which help to guide future research and adjust criminal justice policies in the context of declining rates of crime.

First, not only is there less crime but there are fewer offenders coming into the criminal justice system and, therefore, fewer entering the custodial sector. As with past cohorts, those who remain in the system will likely be among the more serious and potential career criminals. The re-assessment of policies and the criminal justice resources now required by a sustained era of crime decline will be a significant challenge. Government agencies should look to innovate and evaluate criminal justice system programs. Investment in primary prevention, especially through situational crime prevention, could play a significant role in maintaining low levels of crime and further reducing youth engagement in crime.

Second, the displacement of crime and antisocial conduct into the online environment is a real phenomenon, contiguous with the broader social transformation underway. This displacement need not always produce adverse outcomes. For example, if typical once-only and adolescent-limited offenders' online antisocial behaviours have replaced more serious forms of juvenile offending this may be preferable to traditional offending. However, if there is displacement to more serious forms of online antisocial and criminal behaviour, then the resource shifts and policy implications would be significant. Efforts to understand the nature and scale of displacement are critical to informing future criminal justice policies, and the continued monitoring of these NSW birth cohorts is warranted.

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11. Antisocial behaviour during the teenage years: Understanding developmental risks

Kathryn Lynn Modecki, Bep Uink and Bonnie L Barber

Adolescent antisocial behaviour, including delinquency, illegal substance use and violence carry heavy social and economic costs in Australia (Williams et al. 2005). Individuals are far more likely to engage in antisocial behaviour during adolescence than any other period of their life. In fact, in Australia, the offending rate for adolescents is almost three times the rate of all other age groups (AIC 2013). Society's challenges in reducing adolescent antisocial behaviour underscore a fundamental reality: in order to effectively prevent these illegal and dangerous behaviours, we must adequately understand their causes (Moffitt 2005).

Theoretical advances

Recent advances in the psychological sciences point to a convergence of factors that exacerbate risk for initiation and escalation of antisocial behaviour during adolescence (Modecki & Uink 2017). Illustratively, significant up-ticks in problem behaviours during the teenage years may be at least partially attributable to developmental deficits in what psychologists term 'executive function' capacities (Luciana 2013). These capacities are innately tied to decision making, and allow youth control over impulses and behaviour.

Yet adolescents' executive systems can easily become overwhelmed because of the considerable demands placed on these systems. For instance, adolescents are often attracted to novel and risky settings and they identify sizable social and emotional rewards from problem behaviour engagement. More generally, adolescents are susceptible to fluctuating emotions and often wrestle with intense emotional reactivity as they encounter setbacks and challenges. These burdens on adolescents' executive systems, in the form of disproportionate perceived rewards for antisocial behaviour and intense emotions, hamper adolescents' ability to modulate their 'internal traffic'. As described below, this may make it especially difficult for adolescents to rein in their impulses to engage in antisocial behaviours, including behaviours related to delinquency—defined here as illegal and antisocial behaviours of youth under the age of 18 (Luciana 2013; Modecki, Zimmer-Gembeck & Guerra 2017).

Arguably as a result of such burdens, adolescents are more susceptible to acting on their impulses and taking part in aggressive, illegal and risky behaviours, relative to either children or adults (Fine & Sung 2014; Luciana 2013). In environments featuring developmentally novel stressors, adolescents are at a disadvantage, because they lack a repertoire of skills with which they might prosocially navigate challenge. For instance, during the teenage years, critical skills such as decision-making (including optimal weighing of rewards versus risks) and emotional regulation remain under construction (Modecki 2017).

Strain and antisocial behaviour

Because youth with underdeveloped decision-making and less-controlled emotions lack the psychological resources to successfully resolve issues through conventional strategies, these stressful situations can be especially strong catalysts for problems (Simons et al. 2003). As a result, pursuing violence and illegal behaviours may be one way youth cope with the challenges of day-to-day life (Chassin et al. 2010).

Notably, youth living in economically disadvantaged settings experience added strains and stressors as they navigate day-to-day life. Stressors including family difficulties, perceived injustice, neighbourhood disorganisation, and less-effective social institutions, amplify the common developmental challenges with which youth must cope (Uink et al. 2018). These and other cumulative strains may trigger youth to act out in the form of violence and other antisocial behaviours (Agnew 2001; Simons et al. 2003). In fact, criminologists have long pointed to the experience of 'strain' as a salient explanation for crime.

Adolescent antisocial behaviour and heterogeneity

Among adolescents, who are developmentally at risk for criminal engagement, there exists a subset of young people who continue these behaviours into adulthood. These youth, sometimes termed 'life-course persistent offenders,' also tend to begin antisocial activities at a very early age (Moffitt et al. 2002). During the teen years, life-course persistent offenders can be difficult to differentiate from youth whose engagement is limited to adolescence, because their behaviours during this period are relatively similar, except for violence (Moffitt 1993). A body of work has sought to disentangle those who continue to offend from those who do not, and to do so earlier in the life course. Among the distinguishing factors associated with more persistent involvement are negative emotionality at a young age and 'state dependence', in which early involvement in problem behaviour leads to further problems (Nagin & Paternoster 2000). In addition, young people who persist in antisocial behaviours are more likely to come from low socio-economic backgrounds, given the numerous stressors and associated lack of supports endemic to these environments.

Indeed, one of the more intractable risk factors for persistence with crime beyond adolescence is being raised within circumstances of socio-economic adversity (Moffitt et al. 2002). Among other hazards, adverse social environments amplify risks for negative interactions with family, peers and school settings, which can lead young people onto developmental pathways of risk rather than resilience (Aguilar et al. 2000).

Individual characteristics: rewards and negative emotions

That said, scholars have also identified a number of individual risk factors for adolescent involvement in antisocial behaviour which exist across socio-economic gradients but exacerbate the risk associated with situational strains and early disadvantage. In particular, reward perceptions and negative emotions have received growing attention from developmental psychologists, because they are closely linked to teens' involvement in antisocial behaviour and because the development of these characteristics aligns with age–crime trends (eg Steinberg et al. 2009). Indeed, substantial evidence supports what many juvenile justice practitioners already suspect (Modecki 2017)—that a heightened focus on rewards and negative emotionality is associated with antisocial behaviour, and that these factors contribute to youths' crime to a degree that distinguishes them from adult offenders (Scott & Steinberg 2008).

Given that these individual risks—reward-bias and the tendency to experience intense negative emotions—appear to develop over time and are tied to antisocial choices, they represent risk factors that may be modifiable to prevent crime (Modecki 2009). As a result, understanding the development of these factors, and how they relate to involvement in antisocial behaviour across the teenage years, can inform intervention and prevention efforts. This study explores these factors in the context of unique data from Australian youth living in settings of economic disadvantage.

This chapter focuses on two studies which together provide a picture of factors that contribute to escalating problems during the teenage years. These factors are explored among a particularly high-value group for criminologists and policymakers—young adolescents in economically disadvantaged settings, a subset of whom could require significant time and resources due to their risk for engaging in antisocial behaviour. Both studies provide brief snapshots of how changes in these factors are linked with involvement in antisocial behaviour, and suggest novel ways that delinquency might be prevented among high-risk youth.

Study 1: How rewarding is delinquency?

Increasingly, adolescents' disproportionate involvement in antisocial behaviour has been attributed to their heightened sensitivity to rewards. That is, adolescents are more behaviourally disposed towards attaining emotional and social rewards from crime than any other age group (Shulman & Cauffman 2013) and a growing literature has identified the rewards of problem behaviour as having a particularly strong influence on youth delinquency (Modecki 2009; Smith et al. 2011).

Indeed, past research indicates perceived rewards may be a stronger predictor of offending than perceived risks, at least among juvenile offenders (Loughran et al. 2009). In prior research, Loughran and colleagues plotted average perceived rewards over three years, and showed that mean levels of perceived rewards remained relatively stable among incarcerated youth. Importantly, however, reward levels continued to correspond with levels of offending, in that youth who engaged in high levels of offending also perceived high rewards from crime, medium-level offenders perceived moderate rewards, and so on.

That said, previous research has only looked at averages at different points in time, and has not yet mapped developmental trajectories of reward perceptions, nor examined how such changes in reward perception may be linked to delinquency. Further, serious juvenile offenders may experience delinquency as differentially rewarding than community-based youth, because by the time young individuals have become incarcerated, they will have accumulated a broad range of benefits and costs from their crimes.

Thus, previous data do not answer questions about the developmental progression of perceived rewards and delinquency during adolescence, nor do they necessarily generalise to risks specific to youth still living in their communities. With a focus on disadvantaged youth in community settings, Study 1 explores a key question for criminal justice programs and policy: how do rewards drive behaviour (and vice versa) among these youth?

This study addresses some of the methodological challenges inherent in probing the link between perceived rewards and antisocial behaviour, by examining whether early levels of perceived rewards predict changing involvement in delinquency over four years. Importantly, the reverse is also examined: whether high levels of perceived rewards earlier in adolescence predict changes in delinquency over four years. In other words, this approach applies a developmental criminology lens to antisocial rewards and delinquency among low socio-economic status Australian youth during the teenage years.

Sample

Data were derived from multiple waves of a large-scale annual self-report survey of Western Australian youth, the Youth Activity Participation Survey (YAPS), funded by the Australian Research Council. Further details regarding data collection, the range of measures collected, and samples over time can be found in Modecki, Barber and Vernon (2013); Modecki, Barber and Eccles (2014); and Drane, Modecki and Barber (2017). Among YAPS participants, longitudinal data on antisocial rewards were available for one cohort of youth across four years (from grades 9–12, corresponding approximately with ages 13–18 years); see Table 1.

YAPS recruited schools across the state which covered a range of the socio-economic index computed annually by the Western Australian Department of Education. The Index of Community Socio-Educational Advantage (ICSEA) is calculated with data from the Australian Bureau of Statistics, based on the addresses of all students attending each school. This study includes students with average or below ICSEA, representing the bottom half of the spectrum of educational background (n=480). Thus, Study 1 draws on a sample of youth from average to extremely educationally disadvantaged backgrounds and uses annual longitudinal self-report data to examine perceived rewards and delinquency over time.

Measures

Perceived antisocial rewards were assessed using items from a valid construct which has successfully measured decision-making in adolescents (Parsons, Seigel & Cousins 1997). Youth were presented with the following:

> Below is a list of behaviours that are illegal and/or dangerous. Some people might think that they have advantages or benefits. We are interested in whether you think they have advantages or benefits.

Four items were used to assess the perceived benefits of four illegal behaviours, such as shoplifting and illegal drug use. Youth responded on a Likert scale ranging from 0 (no benefits), to 4 (moderate benefits) to 8 (a lot of benefits). Internal reliability in this sample was good, and ranged from α=0.78–0.94 across waves. This construct is referred to as 'antisocial rewards' or 'perceived antisocial rewards' throughout this chapter.

Delinquency was measured with a reliable (α ranged from 0.77–0.91 across waves) and valid construct that was adapted from a larger delinquency scale (Modecki, Barber & Vernon 2013) to assess key behaviours of interest, including damaging public property, police contact, physical fighting, and stealing. An example item includes:

> In the past 6 months, how often have you gotten in a physical fight with another person?

Items were measured on an eight-point scale from 1 (none) to 8 (31 or more times).

Pubertal timing was also controlled in these analyses, given its links to the development of antisocial behaviours (eg Modecki, Barber & Eccles 2014). Pubertal timing was assessed using one item, taken from Dubas, Graber and Petersen (1991). This item assessed self-reported physical development relative to peers, with responses ranging from 1 (much later) to 5 (much earlier).

Table 1: Demographic characteristics of Study 1 participants

Age at grade 9: M(SD)	14.42 (0.38)
Gender (% female)	57.3
School(s) socio-economic range (ICSEA)	815–1,000

Source: YAPS collection 2011 [data file]

Analyses

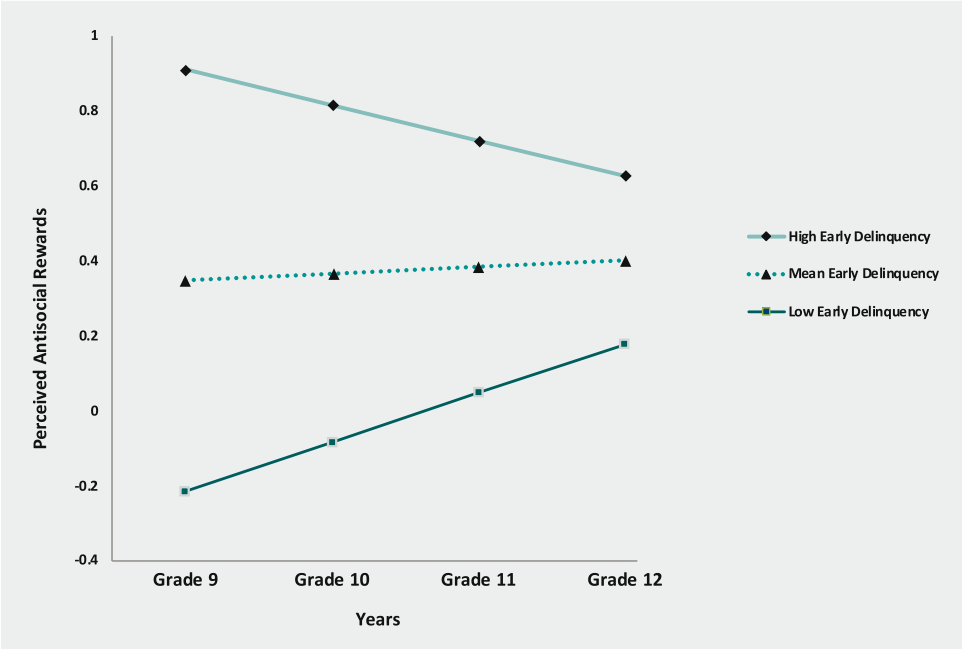
Analyses involved modelling an unconditional latent growth curve of perceived antisocial rewards across grades 9–12, followed by a conditional model in which covariates (gender, pubertal timing) and predictors (early, grade 9 delinquency) were added. Next, the same models were run with delinquency as a latent growth curve and early (grade 9) perceived rewards as the predictor. All models were run in Mplus version 7.1 both with maximum likelihood estimation and then with Bayes estimation. For more detailed analyses and comparisons with alternative analytic approaches, see Modecki and Uink (2018).

Results

First, perceived rewards were relatively stable across grades 9–12; however there was significant inter-individual variation in early levels of rewards in grade 9. Adding covariates and predictors to the model showed high early perceived rewards was associated with higher early delinquency involvement (intercept, p<0.001). Importantly, other factors were also associated with subsequent change in perceived rewards over four years.

That is, early puberty was associated with subsequent increases in antisocial rewards (intercept, p=0.04) and high levels of early delinquency involvement were associated with subsequent declines in rewards (linear slope, p<0.001). As described in Figure 1, this effect of delinquency on rewards represents a 'bouncing back' effect, as youth who engaged in high levels of delinquency early on appear to experience a ceiling effect. Even so, these youth with high levels of early delinquency involvement still perceived antisocial behaviour as most rewarding, at a rank-level, across the four years. Even by the end of high school, the different categories of youth failed to converge in their perceived antisocial rewards.

Figure 1: Interaction between maturation (time) and delinquency engagement predicting perceived rewards



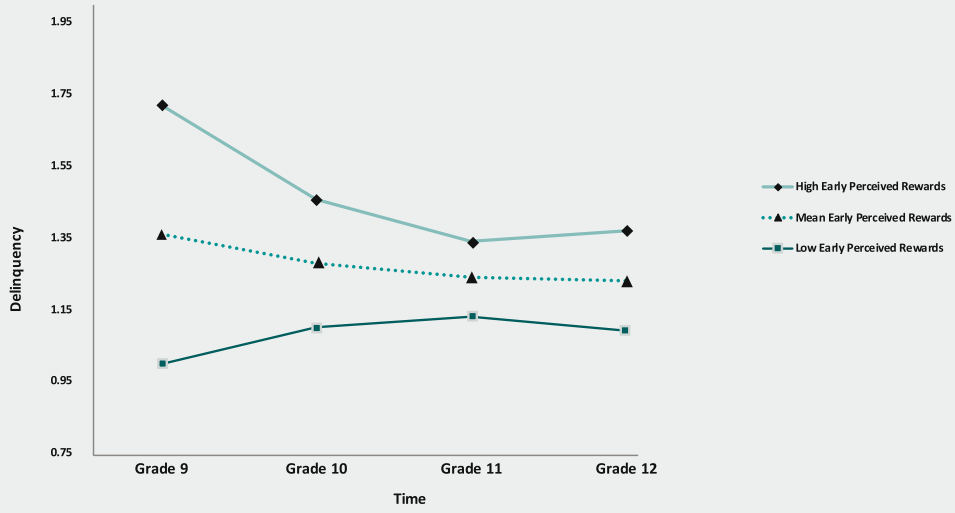
Source: YAPS collection 2011 [data file]

Second, delinquency underwent curvilinear change across four years, following a u-shaped curve. There was also significant inter-individual variation in early levels of delinquency in grade 9. Adding covariates and predictors to the model showed high early perceived rewards were associated with high early levels of delinquency involvement (intercept, p<0.001).

High levels of perceived antisocial rewards were also associated with subsequent declines in delinquency over the first few years (linear slope, p<0.001) followed by increases over the last few years (quadratic slope, p<0.001).

Figure 2 demonstrates the interaction between maturation (time) and early perceived rewards predicting delinquency involvement. Youth who perceived high levels of antisocial rewards early on, were already engaging in high levels of delinquency. These youth declined in their delinquency involvement over the next few years of high school, followed by a slight upturn in grade 12. Again, despite declines in delinquency over four years of high school, the sub-set of youth who perceived many rewards from crime in 9th grade remained the most delinquency involved, at a rank-level, across all years.

Figure 2: Interaction between maturation (time) and perceived rewards predicting delinquency involvement



Source: YAPS collection 2011 [data file]

Overall, Study 1 findings highlight that early adolescents' perceptions of delinquency's rewards are not necessarily enduring. Rather, for those adolescents whom police and justice personnel are most likely to encounter (who are already engaging in relatively high levels of delinquency early in adolescence), these rewards diminished over time. That is, for these youth, perceived rewards appeared to hit a ceiling by 9th grade. This suggests that delinquency may 'lose its shine', and these young people gradually desist from antisocial behaviour. Indeed, adolescents high in early perceived rewards also reported rapid declines in delinquency from grade 9–11, such that grade 9 represented a developmental peak for engagement in antisocial behaviours. Although these young people were the most frequent offenders at each time point, this subset of adolescents are likely to be largely representative of 'adolescent-limited' offenders, given their overall pattern of desistance. That said, early offenders represent a high-value target for law enforcement. As described further in the conclusion, addressing anticipated benefits from crime as a preventive strategy early on (prior to the transition to high school) could prove useful.

For youth low in early delinquency, however, perceived rewards tended to increase over time, perhaps a reflection of perceived ties between social status and rule-violating behaviours (Rebellon 2006). Although adolescents did not nominate specific perceptions related to the benefits of illegal behaviour, previous work suggests that impressing peers is indeed a salient identified reward from crime (Modecki 2009). Those adolescents who were low in early perceived rewards reported increased delinquent behaviour across the remainder of high school, reflective of a developmental norm of at least some low level problem behaviour engagement (Modecki 2017). That said, these adolescents remained lowest in delinquency—in terms of rank—at each time point, so that early low levels of perceived reward as well as early low levels of delinquency involvement appear to characterise youth on a fairly auspicious developmental trajectory, at least in terms of averting crime involvement.

Study 2: Are emotional responses and adolescent delinquency linked?

Not only are rewards of crime especially salient to adolescents' antisocial decisions, but emotion also plays a role. The emotional variability of adolescence is well documented and this developmental period is characterised by relatively poor emotional control (Cauffman & Steinberg 2000). However, significant variability between young people also exists. That is, some adolescents are better able to temper their emotions than others are and some youth are less emotionally reactive than others when encountering setbacks and challenges (Uink, Modecki & Barber 2017). More specifically, adolescents who are delinquency-involved tend also to be distinguished by especially intense emotional responses to aggravations and annoyances, and can show large deviations (in terms of highs and lows) in their emotions (Plattner et al. 2007; Uink et al. 2018).

Indeed, previous survey research shows that adolescents who are better able to temper their emotions also make fewer antisocial decisions and engage in fewer delinquent acts (Cauffman & Steinberg 2000; Modecki 2008, 2009). Moreover, among juvenile offenders, developmental improvements in emotional control are associated with subsequent decreases in and desistance from antisocial behaviour (Chassin et al. 2010; Monahan et al. 2009).

This link between emotional control and delinquency is important for a number of reasons. Understanding young people's responses to strains and hassles is highly germane to delinquency prevention, because these can trigger emotional and behavioural responses associated with 'acting-out'. Thus, learning to be less reactive to aggravations may help to diminish adolescents' aggressive and antisocial reactions to setbacks. More broadly, if at-risk youth are to steer away from involvement in the justice system, they will need the skills necessary to successfully navigate challenges in day-to-day life.

Sample

Study 2 takes a different approach to understanding antisocial behaviour during the teenage years, and examines a second developmental risk—emotional valence, here in relation to stress. Taking advantage of existing data from an intensive ecological momentary assessment (EMA) study with at-risk youth, this study examines how changes in emotions relative to typical daily emotions are linked to delinquent behaviour. By describing how delinquent youth (fail to) temper their emotional responses in the real world, findings provide practical insight for delinquency prevention and intervention programs and services (Modecki & Mazza 2017).

Thus, the second approach was to use intensive EMA data from cohort 1 of the Young and Well Cooperative Research Centre supported 'How do you feel?' study. Data were collected via smartphones from 109 low socio-economic status Australian youth (see Uink, Modecki & Barber 2017 for details of the study; see Table 2 for 'How do you feel?' cohort 1 participant details). Youth were texted five times a day for seven days and asked to provide their current emotion and whether they had experienced a recent hassle, among other details. Before and after EMA, the participants reported their recent delinquency involvement and completed other wellbeing indices to provide a picture of overall mental health.

Table 2: Demographic characteristics of 'How do you feel?' cohort 1 participants

Age: M(SD)	14.7 (0.92)
Gender (% female)	66.9
Socio-economic range (ICSEA)	900–1,000

Source: 'How do you feel?' data collection cohort 1 2013–14 [data file]

Measures

Delinquency was measured before and after EMA using 15 items that assessed how often participants had engaged in antisocial or aggressive behaviour and substance use. This measure has been used in previously published research on adolescent antisocial behaviour (Fredricks & Eccles 2006), and example items include: 'About how often in the last 6 months have you used drugs?' and 'About how often…have you gotten in a physical fight with another person?', where responses ranged from 0 (none) to 7 (31 or more times). Internal reliability at before and after EMA was excellent (α=0.85, α=0.90) and test-retest reliability was high (r=0.88). Participants' scores from both surveys were averaged to create an antisocial behaviour score.

Daily hassles were measured during the EMA portion of the study by asking participants via smartphones, 'Since you were last messaged has anything bad happened to you?' at each sampling moment. The format of this question meant that participants reported on events that had occurred within the last two to five hours. A dummy variable was created based on this information, coded so that 0 means no bad events (hassles) that day, and 1 means one or more moderate to severe hassle(s) that day. Emotion was also measured during the EMA portion of the study, by asking via smartphones 'Right now, how are you feeling?' Participants rated how angry (among other emotions) they were feeling on a five-point scale, from 1 (not at all) to 5 (very much). Emotion was averaged across the day for this study.

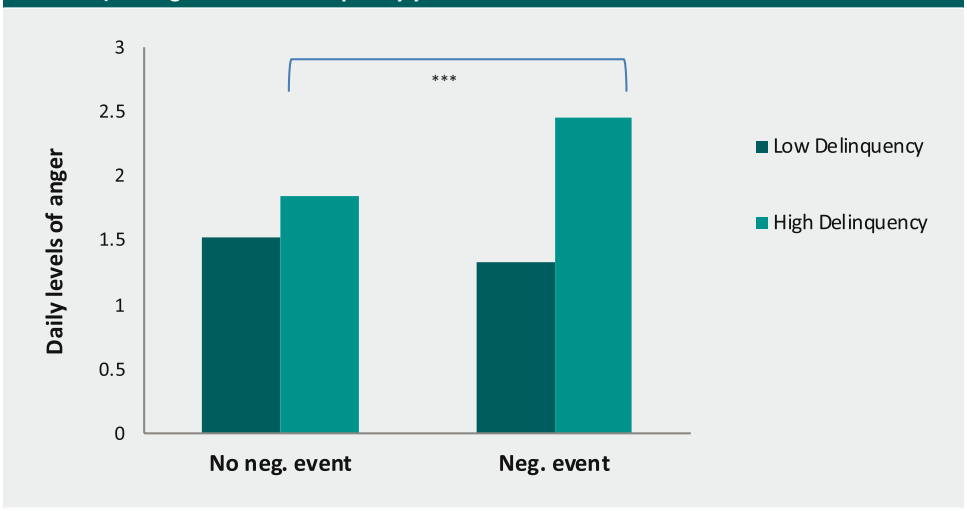
Analyses

Cross-level random slopes models were run within a hierarchical linear modelling framework in Mplus version 7.0, with delinquency at level 2, daily hassle (yes/no) as the level 1 predictor and day-level anger as the level 1 outcome variable.

Results

There was a significant cross-level interaction of hassles × delinquency for anger. As Figure 3 illustrates, youth who engaged in high levels of delinquency reported surges in anger on days they experienced a hassle (b=0.614, p<0.001). But low-delinquency youth did not change in their relative anger on days they ran into a hassle (b=–0.176, p>0.05). Thus, as expected, youth delinquency involvement was tied to surges in anger in relation to hassles.

Figure 3: Relations between experiencing of a hassle and daily level of reported anger (ranging from 1–5) for high and low delinquency youth



Source: 'How do you feel?' data collection cohort 1 2013–14 [data file]

That adolescents who engage in high levels of delinquency experience surges in anger on days when they experience a roadblock or challenge is not surprising at an intuitive level. But empirical support for this phenomenon represents useful evidence for researchers and practitioners alike. Daily links between experience of strain and surges in anger for young people who engage in delinquency mean that helping adolescents to better navigate hassles and strains may represent an important mechanism for improving resilience and coping. Importantly, too, high reactivity to strain suggests that these adolescents require better 'life skills' for effectively responding to stress. Given that adolescence is a critical developmental period for accumulating these skills, helping youth to improve emotional control and decision-making in response to difficulties should contribute to reductions in antisocial behaviours and more positive functioning overall (Modecki, Zimmer-Gembeck & Guerra 2017).

Conclusions

All told, findings across these two studies describe key developmental features of delinquency that could be further targeted in intervention and prevention programs to reduce adolescent crime. First, programs and policies should work to reduce the salience of rewards for teenagers. One way to do so would be to highlight the temporary nature of antisocial rewards (such as impressing peers and an emotional 'rush'), while simultaneously highlighting crime's serious and long-term negative consequences (Modecki 2016, 2009). That said, efforts to counter teens' reward perceptions should be deployed early on, well before 9th grade (age 14), because by this stage youth appear to have already identified crime as especially rewarding.

Second, programs and services should focus on emotion regulation and anger control in particular, to improve young people's resilience and prevent delinquency (Landenberger & Lipsey 2005). Holistic approaches may be best suited to improving self-regulation and coping skills, including approaches that balance law enforcement with assisting youth and reconnecting them with supports from families, schools and communities.

These types of supports may be most effectively delivered in partnership with respected community members, by offering a range of support services, and by offering these within an open-door framework. In all, because offending among those in mid to late adolescence tends to be especially costly for society (Piquero, Jennings & Farrington 2013), these types of front-end interventions to divert youth from antisocial pathways early on should reap monetary and social benefits.

Acknowledgements

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12. Parental offending and children's conduct problems

Stacy Tzoumakis, Melanie Burton, Vaughan J Carr, Kimberlie Dean, Kristin R Laurens, Melissa J Green

Intergenerational transmission is defined as the continuity of a pattern of behaviour over subsequent generations—that is, the similarity between children's behaviour patterns and those of their parents (Boyd et al. 1999; Thornberry 2009). The intergenerational transmission of antisocial behaviour and criminality is well established in the criminological literature (Farrington & Welsh 2007; Loeber & Stouthamer-Loeber 1986; van der Rakt, Nieuwbeerta & de Graaf 2008). However, the mechanisms underpinning these patterns are not yet well understood (Flynn, Van Dyke & Gelb 2017).

One possible explanation, albeit debated, is assortative mating (Beaver 2013; Farrington 2011). According to this explanation, people tend to seek 'like' partners, such that people with delinquent tendencies seek delinquent partners, exposing their children to a higher risk of delinquency via both genetic and environmental factors. Farrington and colleagues found evidence of assortative mating, whereby the majority (61%) of women with convictions had children with men who also had convictions (Farrington, Barnes & Lambert 1996). This underlines the importance of accounting for the offending histories of both parents in understanding the intergenerational transmission of antisocial behaviour.

Historically, criminological studies have tended to focus on the antisocial behaviour or criminality of men, because criminal behaviour occurs less frequently in women (Lauritsen, Heimer & Lynch 2009). However, studies have increasingly examined the role of mothers (and daughters), revealing a relationship between mothers' antisocial behaviour and their children's outcomes in different developmental periods: early childhood physical aggression (Tzoumakis, Lussier & Corrado 2012); diverse cognitive, social, emotional-behavioural, physical and communication skills (Laurens et al. 2017b); childhood behaviour problems (Raudino et al. 2013; Rhule, McMahon & Spieker 2004; Smith & Farrington 2004; Thornberry, Freeman-Gallant & Lovegrove 2009); juvenile delinquency (Bijleveld & Wijkman 2009); and violent offending (Frisell, Lichtenstein & Långström 2011).

Research on the intergenerational transmission of antisocial behaviour and offending has often used only an aggregate measure of offending (ie 'any' offending), which includes a diverse range of behaviours (eg burglary, assault, fraud). However, van de Weijer, Bijleveld and Blokland (2014) proposed that focusing on specific types of crime, which might require certain skills and characteristics, may be useful in understanding how crime is transmitted from one generation to the next. A study conducted in the Netherlands using criminal record data across five generations found the intergenerational transmission of offending from fathers to sons was greater for violent offending compared to non-violent offending (van de Weijer, Bijleveld & Blokland 2014). Other studies have also made a distinction between violent and non-violent offences, with findings suggesting some specificity in the transmission of violent criminal offending (Besemer 2012; Kendler et al. 2015) and sexual offending (Långström et al. 2015). The findings from these studies suggest that considering specific types of offences may reveal different patterns in the intergenerational transmission of offending.

Few intergenerational Australian studies to date have included data on antisocial behaviour or offending in parents and children. An early qualitative study of 16 known criminal families in Tasmania found that 50 percent of second-generation family members had a criminal record (Davies and Dax 1974; Dax 1983). To examine the intergenerational transmission of offending, Goodwin and Davis (2011) further identified six extended families in Tasmania with known criminal offending histories across several generations. They found that minor offending in parents was not associated with offspring convictions, while more serious parental offending increased the likelihood of offspring conviction. Moreover, paternal conviction history was more important than maternal convictions (Goodwin & Davis 2011); however, it is possible that the analyses were unable to detect associations for mothers due to the small sample.

Another study, which used data on a birth cohort of 2,399 participants from the Mater-University of Queensland Study of Pregnancy, examined the relationship between fathers' arrests and imprisonment and the behaviour problems of their children at age 14 (Kinner et al. 2007). However, the prevalence of paternal arrest and imprisonment in this study was low (7.6% and 5.7% respectively), which is likely due to the way it was measured (maternal report of paternal offending at the children's age 14 assessment). The authors found that unadjusted associations were statistically significant, but after adjusting for social and family factors there was no relationship between paternal arrest and imprisonment and behaviour problems among their male or female children (Kinner et al. 2007).

More recently, a study in Western Australia examined early childhood developmental vulnerabilities in the five-year-old children (n=19,071) of parents who had either spent time in prison or served community orders (Bell et al. 2018). Children with a convicted parent were at higher risk of vulnerability across all developmental domains (including emotional maturity, which measured aggressive behaviour). The increase in risk ranged from 31 to 63 percent for children with a parent who had served a community order and 68 to 115 percent for those with a parent who had been incarcerated.

Another recent study examined aggression at age five, using data on over 69,000 children from the first wave of the New South Wales Child Development Study (NSW-CDS; Tzoumakis et al. 2017). Findings from this study showed that maternal and paternal offending histories were associated with early childhood aggression after accounting for individual and family risk factors. The association with aggression was stronger for parental histories of violent and frequent offending than for minor or infrequent offending (Tzoumakis et al. 2017).

The current study set out to determine the relationship between parental offending histories and childhood conduct problems in a large population of Australian children, focusing on outcomes in middle childhood (age 11), a key developmental period for intervention and prevention of antisocial behaviour and aggression. Determining whether and to what extent maternal and paternal offending influences childhood behaviour prior to formal involvement with the criminal justice system will help to inform early preventative interventions among at-risk young people. Firstly, the prevalence in the cohort of different types of maternal and paternal offending (eg violent, non-violent) will be established. Secondly, the extent to which offending co-occurs among mothers and fathers will be determined. Thirdly, associations between parental offending type and children's conduct problems in middle childhood will be examined.

Method

Data were drawn from the NSW-CDS (http://nsw-cds.com.au/), a state-wide longitudinal, intergenerational, population-based study. The NSW-CDS links records from multiple sources (eg health, crime, welfare and education) and combines information from two cross-sectional surveys. An independent agency, the Centre for Health Record Linkage (http://www.cherel.org.au), linked the records using probabilistic methods, in accordance with strict privacy protection protocols. Children's and parents' records were linked using names, dates of birth, residential addresses and gender. All data received by the research team were de-identified. Parents were identified via the children's birth registration records from the NSW Registry of Births, Deaths and Marriages, limiting analysis to those children whose births were registered in New South Wales.

The first wave of record linkage for the NSW-CDS was conducted in 2014. It brought together pre-birth records and those from when the children were approximately five years old (Carr et al. 2016). This first record linkage was defined by the 2009 Australian Early Development Census, a census of 99.7 percent of children entering their first year of formal schooling in the state of New South Wales in 2009 (n=87,026; Brinkman et al. 2014). The second wave of record linkage was conducted in 2016 and brought together records from pre-birth up to the age of 13 years (Green et al. 2018).

A key feature of this second record linkage is the addition of the Middle Childhood Survey (MCS), a cross-sectional assessment of the mental health and wellbeing of a subset of the sample. The aim of the MCS was to follow up with as many of the 87,026 children in the initial Australian Early Development Census cohort as possible. The MCS was an online self-report survey of 116 items that was administered to students in Year 6 (the final year of primary school in New South Wales) during class time (Laurens et al. 2017a). All New South Wales schools (government and non-government) with Year 6 enrolments (n=2,371) were targeted for participation, and 829 administered the survey. A total of 27,792 children completed the MCS (31.4% of eligible children). The representativeness of the MCS to the New South Wales population was demonstrated on a range of demographic indices (Laurens et al. 2017a). Analyses in the current study are based on 21,956 children whose mothers and fathers could be identified via New South Wales birth records, and who had complete information for the outcome of this study (ie conduct problems).

Ethical approval for the NSW-CDS was obtained from the NSW Population and Health Services Research Ethics Committee (HREC/15/CIPHS/21), with data custodian approvals granted by the relevant government departments. Ethical approval for the MCS was obtained from the University of New South Wales Human Research Ethics Committee (UNSW HREC reference HC14307).

Measures

Parental offending

Parental offending data were obtained from the NSW Bureau of Crime Statistics and Research's Reoffending Database (1994–2009), which provides information on each parent in the NSW-CDS who was convicted of a criminal offence in New South Wales and data on their subsequent criminal court appearance. A binary indicator reflecting any maternal and paternal offending was created for children with a mother or father with a history of offending, respectively. To create mutually exclusive types of parental offending, maternal and paternal indicators were also coded based on most serious type of offence, using the following hierarchy:

(0) none—no offences;

(1) minor—at least one minor offence (eg traffic and vehicle offences, public health, and safety offences);

(2) non-violent—at least one non-violent offence (eg theft, burglary, fraud, drug offences); and

(3) violent—at least one violent offence (eg homicide, assault, aggravated robbery, sexual assault).

Children's conduct problems

The outcome measure used in this study was the conduct problems scale of the Strengths and Difficulties Questionnaire (SDQ; Goodman 1997), as assessed within the MCS (Laurens et al. 2017a). The SDQ is widely used in longitudinal research on child development and its psychometric properties are well established internationally (Goodman 2001). The SDQ conduct problems scale includes the following five items:

(1) I get very angry and often lose my temper;

(2) I usually do as I am told (reverse scored);

(3) I fight a lot;

(4) I am often accused of lying or cheating; and

(5) I take things that are not mine from home, school or elsewhere.

These items were measured on the following three-point scale: 'not true' (scored 0), 'somewhat true' (scored 1) and 'certainly true' (scored 2). The five items were summed to create a total score ranging from zero to 10. Internal consistency of the conduct problems scale in the MCS was high (ordinal α=0.80; Laurens et al. 2017a). Normative categories were then created based on United Kingdom population-based norms as follows: 'normal' (defined as ~80% of the population: a score of 0 to 3), 'borderline' (~10%: a score of 4) and 'abnormal' (~10%: a score of 5 to 10; Goodman 1997).

Children's demographic characteristics

Children's age and gender were obtained from the MCS. Their socio-economic status was calculated using Pink's (2013) Socio-Economic Index for Areas (SEIFA) and their residential postcodes, obtained within the MCS. The SEIFA is derived from census information and measures the average income and employment status for each postcode in Australia. As such, it indicates collective socio-economic status (relative disadvantage) and is likely to misclassify some individuals (Pink 2013). A binary socio-economic status indicator was created by recoding the national quintiles into the most disadvantaged (quintile 1) and those less disadvantaged (quintiles 2 to 5).

Analysis

Firstly, the demographic characteristics of the sample were analysed. Secondly, a cross-tabulation and chi-square test was used to determine the co-occurrence of maternal and paternal offending. Thirdly, multinomial regression models were used to examine the association between parental offending type and offspring conduct problems. Multinomial regression Model 1 examines the relationship between maternal offending type (ie 'minor', 'non-violent' and 'violent', or no offending), and conduct problems, as measured by the SDQ (ie 'borderline', 'abnormal' or 'normal'). Multinomial regression Model 2 adjusted for two demographic variables (the children's gender and socio-economic status) and, considering the high co-occurrence of maternal and paternal offending, paternal offending ('any'). Results of the multinomial regression analyses were considered statistically significant if the 95 percent confidence intervals did not cross 1. Analyses were conducted using SPSS version 24 (IBM 2016).

Table 1: Demographic characteristics of the sample		
	Number	Percent
Gender		
Male	11,089	50.5
Female	10,867	49.5
Age		
<12 years	12,793	58.3
≥12 years	9,163	41.7
Socio-Economic Index for Areas		
Quintile 1 (Most disadvantaged)	3,918	17.8
Quintiles 2 to 5	18,038	82.2
SDQ conduct problems		
Normal	18,291	83.3
Borderline	1,684	7.7
Abnormal	1,981	9.0
Maternal offending		
Any	2,158	9.8
Type of maternal offending		
None	19,798	90.2
Minor	568	2.6
Non-violent	966	4.4
Violent	619	2.8
Paternal offending		
Any	6,229	28.4
Type of paternal offending		
None	15,727	71.7
Minor	1,747	8.0
Non-violent	2,153	9.8
Violent	2,322	10.6

Results

The demographic characteristics of the sample are presented in Table 1. Approximately half of the sample was male, 58 percent were under 12 years (mean age=11.9 years, standard deviation=0.4) and 18 percent of the sample was in the most disadvantaged SEIFA quintile. Based on the SDQ, nine percent of children were categorised in the 'abnormal' category, eight percent in 'borderline' and 83 percent in the 'normal' category. Nearly 10 percent of mothers in the cohort had been involved in offending, compared to 28 percent of fathers. Approximately three percent of mothers had a history of at least one violent offence, compared to almost 11 percent of fathers. Four percent of mothers and 10 percent of fathers had been involved in at least one non-violent offence.

Table 2: Co-occurrence of maternal and paternal offending histories

Any paternal offending	Any maternal offending	
	No	Yes
	n (%)	n (%)
No	15,082 (76.2%)	644 (29.9%)
Yes	4,716 (23.8%)	1,513 (70.1%)
Chi-square test	$\chi^2(1)=2{,}051.86$, $p<0.001$, $\phi=0.31$	

Note: Within column frequencies and percentages are reported

Results of a chi-square test to determine the co-occurrence of offending among the mothers and fathers in the cohort are presented in Table 2. The co-occurrence of paternal offending in the sample was high for maternal offending: 70 percent of children whose mothers had a history of offending also had a father with an offending history. The chi-square test was statistically significant, and the strength of the association was moderately strong ($\phi=0.31$). The cross-tabulation for fathers (not shown) was lower: 24.3 percent of children whose father had a history of offending also had a mother with an offending history.

Table 3: Associations between mothers' offending type and their children's conduct problems

	SDQ conduct problems			
	Borderline		Abnormal	
	OR	(95% CI)	OR	(95% CI)
Model 1: Unadjusted				
Maternal offending				
Minor	1.41	(1.05–1.88)*	1.96	(1.54–2.50)*
Non-violent	1.63	(1.32–2.02)*	2.11	(1.75–2.53)*
Violent	2.01	(1.56–2.60)*	3.43	(2.80–4.19)*

Table 3: Associations between mothers' offending type and their children's conduct problems				
	SDQ conduct problems			
	Borderline		Abnormal	
Model 2: Adjusted				
Maternal offending				
Minor	1.23	(0.91–1.65)	1.55	(1.21–1.98)*
Non-violent	1.36	(1.09–1.69)*	1.54	(1.27–1.86)*
Violent	1.64	(1.26–2.14)*	2.41	(1.95–2.97)*
Child is male	1.70	(1.53–1.88)*	1.88	(1.71–2.07)*
Socio-economic disadvantage	1.21	(1.07–1.37)*	1.36	(1.21–1.52)*
Any paternal offending	1.41	(1.26–1.58)*	1.81	(1.64–2.01)*

Note: Reference category for SDQ conduct problems is 'normal'. Reference category for the maternal offending type is no offending. OR=odds ratio, CI=confidence interval. Results considered statistically significant if the 95% CIs do not cross 1, as indicated by an asterisk (*)

Results from the multinomial regression analyses are provided in Table 3. The unadjusted associations (Table 3, Model 1) showed that the strongest association was between maternal violent offending and children being classified in the 'abnormal' category for SDQ conduct problems (OR=3.43; 95% CI=2.80–4.19). Overall, the odds ratios (ORs) for 'borderline' conduct problems were lower than the ORs for the 'abnormal' category. The strength of the associations observed between maternal offending type and conduct problems increased in line with the seriousness of offending. These patterns held when adjusting for the demographic covariates and paternal offending (Table 3, Model 2), although the ORs decreased in magnitude. In the adjusted model, maternal history of 'minor' offending was not statistically significant for 'borderline' conduct problems. Associations between child gender (male) and socio-economic status (most disadvantaged quintile of SEIFA) with 'abnormal' and 'borderline' conduct problems were statistically significant, and the strength of the association was low (ORs<2). Paternal offending history was also associated with both conduct problem categories. As with maternal offending, the ORs tended to be higher for 'abnormal' (OR=1.81; 95% CI=1.64–2.01) compared to 'borderline' (OR=1.41; 95% CI=1.26–1.58) conduct problems. In the adjusted model, the strongest association was again between maternal 'violent' offending and children's 'abnormal' conduct problems (OR=2.41; 95% CI =1.95–2.97).

Additional multinomial regression analyses (not shown; see Tzoumakis et al. 2019) were conducted to examine the association between paternal offending type and children's conduct problems, adjusting for maternal offending ('any'). The results were similar; the strongest association was between paternal violent offending and children being classified in the 'abnormal' SDQ conduct problems category. Again, the strength of the associations increased with the seriousness of the fathers' offending. After adjusting for demographic indicators, the magnitude of the associations decreased, but all types of paternal offending remained statistically significant. The adjusted ORs for paternal offending type were similar in magnitude to those found for maternal offending type.

Discussion

The findings from the current study are consistent with the international literature showing that having a parent involved in antisocial behaviour or offending increases a child's likelihood of conduct problems (Raudino et al. 2013; Rhule et al. 2004; Smith & Farrington 2004). By using data from a large sample of over 21,000 Australian children and their parents, it was possible to examine maternal offending type, which showed that maternal history of violent offending had the greatest association with child conduct problems, followed by non-violent offending.

Findings also revealed high levels of assortative mating for mothers. That is, 70 percent of mothers with a history of offending also had a partner with a history of offending. This finding was consistent with past studies, which also uncovered moderate to strong assortative mating for offending (Farrington, Barnes & Lambert 1996), antisocial behaviour (Krueger et al. 1998) and violent offending (Frisell et al. 2012). This type of assortative mating can significantly impact children in multiple ways, since they are at risk of inheriting genetic risk from parents as well as being subjected to the social and environmental risk associated with antisocial behaviours (Beaver 2013). However, as the present study did not examine genetics, it was not possible to account for genetic risk owing to assortative mating. Few intergenerational studies have included sufficient numbers of offending mothers and fathers to be able to examine the role of assortative mating in the intergenerational continuity of antisocial behaviour. Therefore, further research should be conducted on assortative mating and how this might influence parents' offending trajectories and their children's development.

The NSW-CDS has the largest sample of Australian children for which successive waves of record linkage are being undertaken longitudinally. Major strengths of the study's design are that it avoids recall bias and minimises selection and attrition biases. Importantly, its large sample size allows examination of relatively rare exposures and outcomes such as female offending and violent offending. However, the NSW-CDS uses data from administrative records that were not collected for research purposes, which means that misclassification errors may have occurred when the records were created. In addition, the use of official data underestimates offending by failing to capture uncharged offences, although evidence suggests that official and self-report offending measures over the life course are similar (Payne & Piquero 2016). The study is also limited by the absence of other important covariates such as parenting practices, parental contact with children, individual-level socio-economic status, and genetic information.

Overall, findings from this study demonstrate that the intergenerational transmission of antisocial behaviour begins early, highlighting the importance of disrupting this transmission prior to young people's contact with the criminal justice system. Moreover, intervention should target mothers as well as fathers. Findings also suggest that maternal and paternal offending had similar associations with children's conduct problems. Analyses using a larger subset of the NSW-CDS cohort have indicated that mothers involved in offending faced greater adversity than non-offending mothers—for example, they were younger at their child's birth and experienced higher rates of mental illness and socio-economic disadvantage (Tzoumakis et al. 2017). As mothers involved with the criminal justice system often experience multiple and compounding disadvantages, there is compelling evidence of the need to devise gender-specific support strategies for them. These interventions are therefore a worthy subject of development and evaluation, given that rates of incarceration in Australia have been steadily increasing in the last 10 years, with the number of female prisoners growing at a faster rate than the number of male prisoners (Australian Bureau of Statistics 2017). Policymakers should therefore consider developing and targeting programs for mothers involved in offending, considering their importance in the early transmission of conduct problems in children.

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Serious and organised crime

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13. Exploring the relationship between organised crime and volume crime

Rick Brown and Russell G Smith

Introduction

Organised crime seldom operates in a vacuum. It often relies on other forms of crime, such as theft, fraud and extortion to raise funds and on violence and money laundering to achieve successful criminal outcomes. This chapter explores the complex interaction between organised crime and other forms of crime, sometimes described as 'volume crimes' because of their widespread incidence. In particular, it shows how the commission of organised crime, or the involvement of those engaged in organised crime, can entail or lead to volume crime offences. This is important because it both highlights how tackling organised crime can reduce the extensive harm caused to the community through other, more common forms of crime and offers alternative means of disrupting organised criminal groups (OCGs) by targeting the more mundane offences in which they engage. We can recall the case of Al Capone, who in Chicago in 1931 was convicted of tax evasion, rather than for his organised criminal activities (*New York Daily News* 1931). This chapter forms the basis of a program of research that will examine in greater detail the various dimensions of the organised crime – volume crime nexus.

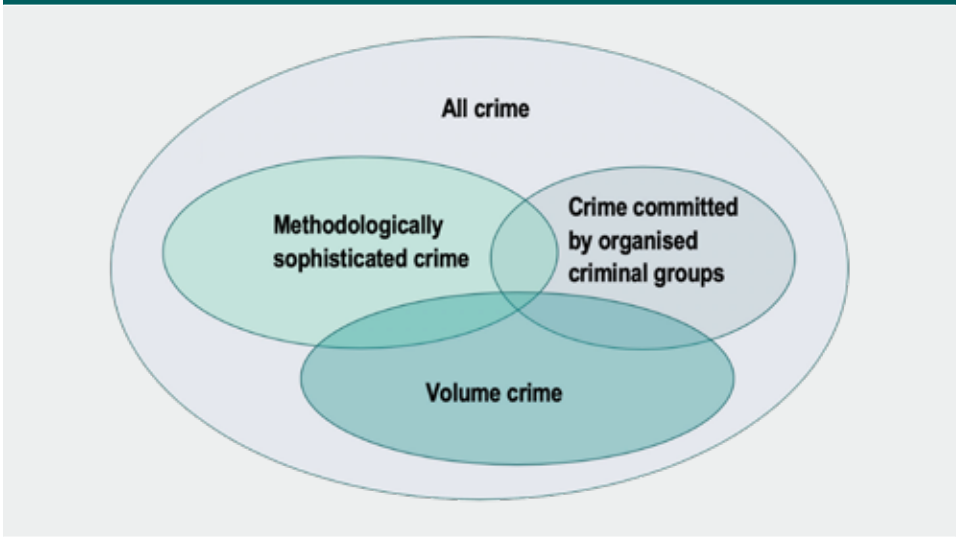
Defining organised crime

Considerable academic effort has been expended on defining organised crime, with no clear agreement on how it should be defined, or what benefit is derived from using such a concept.

Definitions typically focus either on crime types and criminal activities, or on the constitution and composition of organised criminal groups (Paoli & Vander Beken 2014). For example, prior research has examined hierarchically structured groups such as the Italian mafias (Sergi 2017), and other groups that have developed online to commit offences such as child exploitation or credit card fraud (Broadhurst et al. 2014). Reflecting a lack of definitional agreement, Klaus von Lampe collected over 150 different definitions of organised crime, including seven from Australia (von Lampe 2017).

Perhaps the most fundamental distinction in the taxonomy of organised crime is between crime that is organised in its methodology, and crime that is committed by members of organised criminal groups (who may or may not be involved in methodologically sophisticated crime). In understanding the relationship between organised crime and volume crime, this distinction is critical. On the one hand, volume crime can be organised through deliberate efforts by criminals who use complex methodologies to maximise their reach and impact. Mass-marketed consumer fraud is a case in point. On the other hand, members of organised criminal groups may perpetrate volume crime simply to generate profits, without necessarily adopting sophisticated methodologies. In this latter sense, the crimes are not organised but are perpetrated by organised criminal groups. For the purposes of this chapter, the term 'organised crime' includes both types—methodologically sophisticated crime and volume crime committed by members of organised criminal groups. These relationships are shown diagrammatically in Figure 1, with the intersections between volume crime and the other two forms of crime (methodologically sophisticated crime and crime committed by organised criminal groups) representing the focus of this chapter.

Figure 1: The relationship between organised crime and volume crime



The present study employs inclusive definitions of both crime that is organised and organised criminal groups. The latter definition draws on the *Australian Crime Commission Act 2002* (Cth), which describes 'serious and organised crime' as an offence that involves two or more offenders and substantial planning and organisation, that typically involves sophisticated methods and techniques, that is typically committed in conjunction with other similar offences and that involves one of a number of specified offences. The term 'serious crime', as opposed to 'organised crime', includes organised crime perpetrated by individuals, such as the case involving Bernard Madoff, in which one man established and ran the world's largest Ponzi investment scheme (Lewis 2015). Similarly, online sharemarket manipulation and many mass-marketed cybercrimes can be committed by individuals who make use of anonymous networked computers (botnets). The focus of the present study is, however, on organised crime perpetrated by more than one person.

The Australian Criminal Intelligence Commission (ACIC 2017—formerly the Australian Crime Commission) categorises serious and organised crime into various themes as follows:

- enablers—money laundering, the use of technology and professional facilitators, misuse of personal information (identity crime), corruption, violence and intimidation;
- illicit commodities—precursor chemicals, proscribed drugs, illicit tobacco and firearms;
- serious financial crime involving revenue, superannuation, payment transactions, financial markets and involving information and communications technologies;
- crimes against the person such as child sexual exploitation and human trafficking and slavery; and
- other crime types such as migration fraud, environmental crime and intellectual property crime.

The seriousness of these offences is such that they can attract prison terms of at least three years under Australian law. This definition takes account of both the organisation and types of criminal activity commonly involved in organised crime, reflecting the two dimensions by which organised crime tends to be conceptualised (Paoli & Vander Beken 2014).

Other useful definitions of organised crime can be found in the Council of the European Union's (1997) checklist of organised crime features, which includes, among others:

- the use of some form of discipline and control;
- operation at an international level;
- the use of violence or other means suitable for intimidation; and
- a focus on the pursuit of profit and/or power.

These descriptions (both from Australia and Europe) should be treated as a general guide for conceptualising 'organised crime' for the purposes of this chapter and are not intended to be a precise definition of the concept. For discussions of the difficulty of defining organised crime, see Finckenauer (2005), Paoli and Vander Beken (2014) and Levi (2012).

Defining volume crime

While organised crime has been defined in national legislation and international conventions, the term 'volume crime' has received less formal attention. It has been defined as 'any crime which, through its sheer volume, has a significant impact on the community and the ability of the local police to tackle it' (Association of Chief Police Officers 2009: 8). The offences encapsulated by volume crime often have low clearance rates (Brå 2013) but can rate highly as a police priority among members of the public (Criminal Justice Inspection Northern Ireland 2006).

Volume crime is typically defined as the categories of crime that account for the largest proportion of crime recorded by the police. These have variously included robbery, burglary (both domestic and commercial), theft, theft of vehicles, theft from vehicles, receiving stolen goods, criminal damage, drug possession (where linked with acquisitive crime), assault and fraud (Association of Chief Police Officers 2009, 2002; Brå 2013; Criminal Justice Inspection Northern Ireland 2006; Drugs and Crime Prevention Committee 2009; Jansson 2005; New Zealand Government 2010).

Analysis of published police crime statistics from the eight Australian states and territories identified six volume crime categories that accounted for between 54 percent (in the Northern Territory) and 89 percent (in Western Australia) of police recorded crime. These included burglary (including both domestic and commercial), theft (including vehicle related theft), criminal damage, drug possession, assault and fraud. These categories were used as the definition of volume crime for the purposes of this study.

A limitation of this definition is that it excludes some newer forms of crime committed in high volumes—especially cybercrime (Cartwright & Bones 2017). Indeed, crimes such as the production, distribution and storage of child exploitation material are high-volume offences that fall outside of the current definition. However, some large-scale forms of cyber-enabled crime such as debit/credit card fraud are included in the definition used here.

Measuring the link between organised crime and volume crime

At the outset, it is important to understand the challenges associated with measuring the link between organised criminal activity and volume crime. The principal difficulty arises from the fact that official crime statistics rarely include the number of offenders, or their level of organisation, as a variable. As a result, it is not possible to review official crime statistics to determine the proportion of specified volume crimes that are committed by members of organised criminal groups.

In addition, crimes such as revenue fraud, sharemarket manipulation, environmental crime and many forms of cybercrime occur covertly and are not regularly reported to police. They are often committed by non-conventional criminal organisations or networked individuals, occasionally of high social standing. These crimes entail substantial losses, large numbers of offences and mass victimisation but rarely result in criminal justice action. They are often committed across

jurisdictional borders, by white collar criminals, using professional facilitators and employing elaborate structures to prevent detection and to disguise the proceeds of criminality.

The other difficulty in establishing a relationship between organised crime and volume crime lies in the fact that the two categories are, by their definition, mutually exclusive. Organised crime, as defined in this chapter, must entail serious offending by multiple offenders, employing sophisticated planning. Volume crime, however, generally entails offences attracting low penalties, often committed by individuals alone, and usually occurring on 'the spur of the moment'. It is usually only because volume crimes come to the attention of the police in large numbers that they take on some level of importance.

In 2015, the ACC published research, carried out in collaboration with the AIC, that sought to estimate the cost of serious and organised crime in Australia (ACC 2015a, 2015b). In addition to counting and costing the crimes that have a clear and direct link with serious and organised criminals (such as illicit drug trafficking, human trafficking, organised financial crime and money laundering), it examined other crimes, called 'consequential serious and organised crimes'. These are:

> …conventional crimes that generate funds used to support involvement in serious and organised crime related activities (in particular illicit drug users who engage in crimes to finance illicit drug purchases), crimes that result from being involved in serious and organised crime related activities (for example violence, sexual assaults, burglaries etc committed by those using illicit drugs), or conventional crimes committed by organised crime groups (for example organised shop theft) or committed in order to facilitate serious and organised criminal activities (e.g. the use of violence to intimidate businesses, identity crime enabling financial fraud etc.). (ACC 2015b: 16)

Smith (2018) used this methodology to produce an updated estimate of the cost of serious and organised crime in 2016–17. Consequential serious and organised crime cost $6.5b, of which 82 percent ($5.4b) involved volume crimes: assault ($0.243b), burglary ($1.021b), vehicle theft ($0.328b), other theft ($0.127b), and conventional fraud ($3.642b) (Smith 2018: 22). These estimates provide one indication, based on dollar values, of the involvement of organised crime in volume crime in Australia in 2016–17.

This chapter focuses solely on the latter categories highlighted by the ACC—conventional crimes committed by members of OCGs and those that are committed in order to facilitate serious and organised criminal activity. In doing so, it ignores offences that are a consequence of organised crime activity, such as family and domestic violence resulting from drug misuse, or acquisitive property crime committed to fund the purchase of drugs. These are omitted because the focus of concern in this chapter is the *purposes* for which those involved in organised crime directly engage in volume crime.

Typology of links between organised crime and volume crime

Four purposes have been identified for those involved in organised crime to engage in volume crime. These include:

- commercialisation of volume crime—in which organised criminals engage in methodologically sophisticated forms of volume crime, or conduct volume crime in a more efficient or productive way;
- business protection—in which some types of volume crime (particularly violence) are used as a means of protecting illicit operations;
- income generation to support organised criminal activity; and
- way of life—in which volume crime offending by members of organised crime groups is unrelated to their organised criminal activities.

Note that each of these lie at the intersection of volume crime, methodologically sophisticated crime and crime committed by members of organised crime groups shown in Figure 1.

These four purposes for committing volume crime can be considered ideal types with a significant degree of variation within categories. They are not mutually exclusive, as members of an organised criminal group may engage in volume crime for multiple purposes, either simultaneously or over time.

Commercialisation of volume crime

The commercialisation of volume crime refers to those cases in which an OCG either engages in conventional volume crime in a more organised way, or provides services that allow others to commit volume crime more professionally. Commercialisation can come in a variety of forms, including the professional organisation of conventional volume crime, the commission of methodologically sophisticated forms of crime, the use of covert business practices, the provision of a service assisting others to commit volume crime and the brokerage of volume crime services. Each of these is discussed further.

Professional organisation of volume crime

In these cases, OCGs engage in volume crime to generate profits that might not be available to an offender working alone. As a result of their access to individuals with the specific skills and experience needed to conduct the crime, and their access to markets that demand the goods or services available, these groups are able to perpetrate volume crime in a more efficient and scalable way that generates profits for the group. Examples of this form of direct OCG involvement in volume crime have included, among others, vehicle theft (Interpol 2014; Sullivan 1989), retail theft (Palmer & Richardson 2009) cargo theft (Mayhew 2001), pharmaceutical theft (Savona & Riccardi 2015) and credit/debit card fraud (ACIC 2017). In each case an OCG is likely to profit from repeat offending involving a similar modus operandi, perfected through repetition.

Professional organisation can also extend to the use of violence. Hobbs (2013) described how some of those involved in football hooliganism in the United Kingdom in the 1980s capitalised on their reputation for violence by taking control of security in pubs and clubs, thereby monetising their propensity for violence.

Methodologically sophisticated volume crime

While some forms of volume crime can be committed by lone offenders or OCGs, other forms of volume crime are so methodologically sophisticated that they can only be perpetrated using a significant degree of organisation. Examples include the 2015 burglary of a safe-deposit centre in London's Hatton Garden (Clarkson 2016) and the 2012–13 theft from ATMs in over 20 countries made possible by hacking an Indian credit card processing company (Santora 2013). Both would be counted under the definition of volume crime used here—as burglary and fraud respectively. However, both could be committed only by bringing together a team of individuals with different specialist roles.

There are also various forms of fraud (covered by our definition of volume crime) that require significant planning and expertise. These often require the cover of a corporate entity to provide the semblance of legitimacy, as in the case of long firm frauds (where a large order is purchased from suppliers on credit, the stock is sold to customers and then the company is wound up or disappears without repaying suppliers (Levi 2010)). Another form of methodologically sophisticated volume crime is carousel fraud—a methodology associated with rebates on value added tax, common in Europe (Levi 2010).

Covert business practices

OCGs may be involved in what appear to be legitimate business activities (Savona & Berlusconi 2015; Savona & Riccardi 2015), but which are means of committing volume crime. In some ways, these crimes could also be classed as methodologically sophisticated, but here the volume crime is mediated through legitimate activities rather than committed directly. These covert business practices can take a number of forms that extend from entirely legitimate enterprises, such as professional advisory services provided by lawyers, accountants and consultants, who rarely engage in serious financial criminality themselves (see Smith 2013), to businesses that facilitate various types of criminal conduct. The control of waste-management services by mafia-affiliated businesses in parts of Italy is an example of one such enterprise. Operating as legitimate companies, such enterprises have been reported to accept toxic industrial waste and then dump it illegally in sites unprepared to receive such waste (Winfield 2016).

Another example can be found in vehicle salvage businesses, where stolen vehicles might be accepted as part of the inventory, or vehicles may be stolen to order for dismantling (Brown and Clarke 2004). In each case, the covert business practices reduce the costs of operating the business and thereby increase profits. The connection with volume crime lies in the various forms of property crime, such as theft or fraud, that are committed by the corporate entity or associated organised crime figures.

Service provision

OCGs may also offer services to other criminals who may directly or indirectly engage in volume crime offences. For example, acquisitive property crime conducted professionally is likely to require access to one or more 'fences' who can on-sell stolen goods at a profit, thereby allowing property offenders to focus on acquisition rather than distribution (Klockars 1974; Steffensmeier 1986; Walsh 1977; Wright & Decker 1994). These are different to professional facilitators who provide legal and financial services, who allow the proceeds of crime to be laundered by integrating them with legitimate funds (ACIC 2017). These facilitators are excluded from the current analysis as they represent services that support organised crime, rather than generate volume crime.

Another example of an OCG service generating volume crime is organised cybercrime. OCGs have been developing online tools to make cybercrime easier to commit, expanding the pool of users from those with the necessary technical skills to unskilled novices. For example, a Russian crime syndicate sells packages of email templates with tried and tested scripts for use in romance scams, supported by a call centre staffed by individuals who pretend to be the sender of the emails (Scambusters.org nd). In other cases, malware services, designed to make hacking easier, have been packaged and marketed as 'exploit kits'. In each case, forms of cybercrime that once required knowledge and resources have been simplified, allowing novices to commit fraud and theft (Ablon, Libicki & Golay 2014). At present, however, the exact extent of OCG involvement in the creation and dissemination of malware and cybercrime tools is unknown, although anecdotally some detected cybercriminals have the hallmarks of organised crime (Broadhurst et al. 2014; Smith, Grabosky & Urbas 2004).

Brokerage

Brokerage describes the circumstances in which an OCG neither commits the volume crime itself, nor provides a service that directly causes volume crime. Instead, the OCG acts as an agent for others who may facilitate, or directly engage in, volume crime (or indeed organised crime) in return for a fee. Cryptomarket websites on the dark web, such as the former Silk Road site, play this brokerage role by providing a marketplace for vendors of illicit substances (Bartlett 2014, *The Economist* 2016, Martin et al. 2018).

The proprietors of cryptomarket websites provide a means of matching criminal producers with consumers, without necessarily engaging in the criminal activity themselves—apart from by providing the brokerage service, which may itself be illegal. However, cryptomarket operators have been described as being more like loose networks of individuals rather than members of OCGs (see Choo & Smith 2008).

Business protection

OCGs may commit volume crime to protect their illicit business operations. This can involve the use of violence both within and between groups (Cara 2015). Violence is recognised as a common feature of OCG activity because of the lack of recourse to legitimate avenues of dispute resolution, such as police, courts or tribunals (Andreas & Wallman 2009; Reuter 2009). Such violence can result from territorial disputes or disputes over business transactions. Indeed, Friman (2009: 286) described the use of violence in the operation of drug markets as a 'selective tool of market regulation' in the absence of state-sanctioned dispute resolution. Such violence can also be an opportunistic response to an OCG being the subject of law enforcement activity, with a competitor seeking to capitalise on their adversary's misfortune by taking over their business, thereby filling the void left in the market. This may be met with retaliation from the incumbent supplier (Friman 2009). Indeed, a systematic review of the effect of drug law enforcement on drug market violence found there was a significant association between law enforcement intensity and violence (Werb et al. 2011).

Violence within OCGs can occur as a means of maintaining discipline, deterring informants, collecting debts, determining hierarchy within the group, maintaining personal reputation and deterring competition for leadership positions (Cara 2015; Desroches 2007; Hobbs 2013). Indeed in some OCGs, such as outlaw motorcycle gangs, the propensity for violence is recognised as an attribute essential for membership (Smith 2017; Veno 2002; Wolf 1991).

There can also be a close association between territory-based street gangs and OCGs—at least in the United States (Hauck & Peterke 2010). Such gangs will often be involved in retail distribution of drugs at the street level on behalf of OCGs, or will become OCGs as a result of their involvement in the illicit drug trade (Decker & Pyrooz 2014). These gangs will often demarcate their territory, and therefore their business location, through graffiti (Decker 1996; Ley & Cybriwsky 1974), which, as a form of criminal damage, is volume crime.

Income generation

In some cases, OCGs will participate in volume crime as a means of generating income to fund forms of organised crime that require capital investment. For example, they might commit acquisitive property crime (eg robbery, burglary, theft) to fund the wholesale purchase of drugs for subsequent retail, or to purchase vehicles to transport illicit commodities/people. In an international study of motor vehicle crime, Interpol (2014) reported that four countries identified vehicles being stolen to fund the purchase of drugs.

Way of life

OCG members may be involved in volume crime that is unconnected with their organised criminal involvement. Smith (2017) described the pathways into organised crime that sometimes develop from experience in committing volume crimes, or being in contact with others who commit volume crime. This may arise out of a disorganised, chaotic way of life led by some offenders, which results in a range of offences being committed within a short space of time. Hobbs (2013) described how an overarching entrepreneurial spirit with a focus on the free market has created a class of individuals in London who support the illegal economy by engaging in any activity where there is a profit to be made. They will come together temporarily as a 'community of practice' (2013: 231), forming loose, informal networks when collaboration is required for a particular illicit purpose.

Similarly, in a study from the Netherlands, Kleemans and de Poot (2008: 88) described how offenders can 'develop into versatile, locally rooted illegal entrepreneurs' involved in a range of local opportunities for making a profit that may include legal and illegal activities. They described a case study in which members of an OCG were engaged in varied offences including drug production and supply, extortion and illegal lotteries, while also engaging in theft and public order offences. A study of the criminal careers of organised crime offenders in the United Kingdom found little evidence of specialisation compared with the general population of offenders (Francis et al. 2013). Further, among a group described as 'versatile and very prolific', accounting for almost a quarter of organised crime offenders, 71 percent had committed violence against the person and 70 percent had committed theft and handling of stolen goods in the previous five years (Francis et al. 2013).

The *way of life* category may also include those who transition over time from volume crime to organised crime and continue to commit volume crime during the transition period. This may include those who, for example, move from property crime (eg theft, burglary) into drug supply, but it may also include those who develop a specialty that they can exploit in an organised way as a result of their earlier, disorganised entry into that crime type (notwithstanding the general lack of specialisation found in the UK study described above). Kleemans and de Poot (2008) described a case in which a group of friends involved sporadically in car and motorcycle theft as part of a party lifestyle developed the activity into a full-time occupation by specialising in motorcycle theft. This example demonstrates an overlap with the *professional organisation* category described above.

Discussion

Based on existing literature, this chapter has identified eight ways in which the organised crime – volume crime nexus can be conceptualised. Some of these categories depict a very direct association between the two types of crime. In the case of *income generation*, *professional organisation*, *way of life*, *business protection* and *covert business practices*, members of organised criminal groups directly participate in volume crime. *Brokerage* and *service provision* represent quite different types of relationship. In these cases, members of organised criminal groups are still engaged in illicit revenue generating activity, but this involves facilitating others to engage in crime—either directly (in the case of service provision) or indirectly (in the case of brokerage).

Overlap between categories

Across the typology there is a significant degree of overlap between categories. Involvement in organised crime as a way of life is particularly connected with other categories, which marks it as different to the others. Indeed, those involved in all the other categories may do so as a general way of life that could involve multiple forms of both organised and volume crime. Professional motor vehicle theft is a useful example for demonstrating this difference. A group may start out by stealing cars for enjoyment, then progress to selling stolen cars for profit as they become more proficient and move towards a general life of criminality, thereby characterising the way of life and the professional organisation categories. Alternatively, a group may be involved in the legitimate vehicle maintenance and repair business and become involved in rebirthing or stripping for parts as a lucrative supplement to the business, thereby characterising the professional organisation and covert business practices categories (but not the way of life category).

Scale of crime involved

There are currently few actual data on how much volume crime can be attributed to each of the eight categories. This is partially a question of measurement. Examined from the offender perspective, many members of OCGs are likely to have volume crime offences in their criminal records. However, many offences are unlikely to be detected, and therefore not recorded officially.

Examined from the perspective of victimisation, it will often be difficult to determine whether an offence was linked to organised crime. For example, it may not be possible to determine whether a burglary was committed by someone with professional organisation or was simply an opportunistic crime with no link to organised criminal groups.

It is likely that some of the categories in this typology generate much more volume crime than others and determining how much crime will require further exploration. A related question concerns the impact, both financially and personally, of organised crime involvement in volume crime. In the case of cybercrime and identity misuse, the level of harm is likely to be great—for businesses as well as for individuals. For criminals, the profits likely to be generated by this form of volume crime are correspondingly high.

Conclusion

This chapter has developed a preliminary conceptual framework of the relationship between organised crime and volume crime. Eight discrete yet overlapping categories have been identified to explain the varied ways in which organised crime may generate or be associated with volume crime. In some cases, volume crime is the focus of OCG activity, while in other cases it is a by-product.

This typology establishes the basis for a program of research that will aim to explore in further detail the organised crime – volume crime nexus. This will include further articulation of individual categories in the typology and will attempt to estimate the scale of volume crime generated by organised criminal activity.

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14. Criminal histories of Australian organised crime offenders

Georgina Fuller, Anthony Morgan and Rick Brown

Organised crime is one of the most persistent and complex threats currently affecting Australia and was estimated to have cost up to $47.4b in 2016–17 (Smith 2018). While the nature of organised crime offending is well understood (Australian Criminal Intelligence Commission (ACIC) 2017), much less is known about the criminal histories of those who engage in such offending.

Research into organised crime in Australia has been limited by a lack of publicly available data and adequate samples for study. International research, particularly from the United Kingdom and the Netherlands, has provided valuable insight into the nature of organised crime and its members. However, the extent to which the findings of international research about the nature, frequency and seriousness of organised crime are relevant to Australia is unclear.

Australian law enforcement and criminal intelligence agencies have been collecting information on organised crime offenders and threats for many years. These intelligence collections provide a valuable opportunity to profile Australian organised crime offenders and inform ongoing prevention and disruption strategies.

The current research examined data from the Australian Criminal Intelligence Commission's National Criminal Target List (NCTL) and National Police Reference System (NPRS). Its aim was to provide an aggregate profile of the criminal histories of a sample of offenders associated with organised crime groups, to help inform proactive government and law enforcement strategies.

Prior research

'Organised crime' is an umbrella term that describes an array of different crime types, illicit behaviours and offender group configurations (see ACC 2015; Albanese 2000; Edwards & Levi 2008; Hobbs 2013; van Koppen & de Poot 2013). The *Australian Crime Commission Act 2002* (Cth) adopts a broad definition and describes serious and organised crime as an offence that involves two or more offenders and substantial planning and organisation, that typically involves sophisticated methods and techniques, that is typically committed in conjunction with other similar offences, and that involves one of a number of specified offences.

Organised crime groups are heavily involved in domestic and global illicit drug markets, as well as fraud, smuggling (goods and people), violence and intimidation, corruption, money laundering, firearms offences, cybercrime, and environmental crime (ACIC 2017; Brown & Smith 2018). These offences can be highly sophisticated, so organised crime groups rely on trusted networks to plan and implement their crimes. These networks may comprise multiple individuals fulfilling different roles. Such offenders may therefore vary in their skills, knowledge and specialisation (Hobbs 2013; Kleemans & de Poot 2008; National Crime Agency 2016; van Koppen, de Poot & Blokland 2010; van Koppen et al. 2010).

International studies have explored the patterns and types of offending by individuals involved in organised crime groups with the aim of identifying potential intervention points (Francis et al. 2013; Kleemans & de Poot 2008; Pedersen 2018; Savona et al. 2017; van Koppen et al. 2010). Several studies from the United Kingdom and the Netherlands have compared organised crime offenders with non-organised crime offenders to understand the similarities, differences and overlap between these two groups. A study by Kleemans and de Poot (2008) was one of the first to explicitly examine organised crime offenders' criminal careers.

They drew on information from the Dutch Judicial Documentation System and closed police investigations to identify and analyse a sample of 979 offenders. Later Dutch studies by van Koppen and colleagues used similar datasets to examine organised crime offenders' criminal career trajectories (van Koppen et al. 2010) and to compare this group with non-organised crime offenders (van Koppen, de Poot & Blokland 2010).

More recently, Francis et al. (2013) conducted a comprehensive study of UK organised crime offenders' criminal careers. Using the Police National Computer (a registry of all offenders sanctioned in England and Wales), over 4,100 individuals were identified as being involved in organised crime based on the types of offences they had committed and the sentences they had received. This sample was then matched with two comparison groups of similar sizes: serious offenders and non-serious, non-organised, volume crime offenders.

These international studies provide valuable insights into the unique characteristics of organised crime offenders. Organised crime offenders were found to be overwhelmingly male—upwards of 90 percent of the UK, Dutch and Italian samples (Francis et al. 2013; Kleemans & de Poot 2008; Savona et al. 2017; van Koppen et al. 2010; van Koppen, de Poot & Blokland 2010). Organised crime offenders, compared with volume crime offenders, were also found to start their criminal careers later in life; however, age of onset varied between studies. Organised crime offenders in the three Dutch studies were aged, on average, between 24 and 27 years at their first judicial contact (Kleemans & de Poot 2008; van Koppen et al. 2010; van Koppen, de Poot & Blokland 2010). UK organised crime offenders were younger: aged, on average, 19 years at the time of their first police sanction (Francis et al. 2013). Despite these differences, these findings contrast with previous literature on the age of onset for volume crime offenders. Prior research indicates the majority of volume crime offenders begin offending in mid-adolescence and desist in their early 20s (see Moffitt 1993; Weatherburn, Freeman & Holmes 2014). In comparison, the Dutch and UK studies suggest organised crime offenders begin their criminal careers at the age when volume offenders' careers typically finish.

Van Koppen et al. (2010) and Francis et al. (2013) also examined the frequency of offending by organised crime offenders. These studies counted the number of contacts with the judicial system and number of police sanctions recorded between an offender's first contact/sanction and their inclusion offence (the organised crime offence for which they were included in the relevant study). Findings varied between the Dutch and UK samples. Van Koppen et al. (2010), for example, found Dutch organised crime offenders had, on average, seven judicial records prior to their inclusion offence. In contrast, Francis et al. (2013) found British organised crime offenders had received 21 sanctions, on average, prior to their inclusion offence, compared with an average of seven sanctions among volume crime offenders. This substantial variation between studies may be explained by methodological differences. These studies therefore present a mixed picture of the frequency of offending by organised crime offenders.

Organised crime offenders also appear to commit more serious offences than non-organised offenders. Van Koppen, de Poot and Blokland (2010) measured the seriousness of offenders' criminal histories by calculating the average number of years each individual had served in prison. They found organised crime offenders committed more serious crimes than general offenders. In particular, organised offenders committed greater numbers of organised frauds and drug offences—crimes which typically result in more severe penalties. Blokland et al. (2017) found outlaw motorcycle gang (OMCG) members had more convictions than average Dutch motorcyclists, including convictions for serious and violent crimes. Similarly, Pederson (2018) found OMCG members in Denmark were more likely to commit a violent offence as their first offence and had a criminal history with more violence than a matched group of non-gang members. These findings suggest the criminal histories of organised crime offenders are characterised by more serious crimes.

Organised crime offenders also tend to be generalists rather than specialists. Francis et al. (2013) examined the extent to which the organised criminals in their UK sample were specialist offenders who tended to commit the same type of offence throughout their criminal career. Specialisation was determined by calculating the proportion of an offender's criminal career attributable to each crime type. Only 12 percent of organised crime offenders were considered specialists compared with 19 percent of non-organised crime offenders (Francis et al. 2013). Savona et al. (2017) found similar low levels of specialisation among Mafia members in Italy. This suggests that the majority of organised crime offenders engage in multiple crime types, including crime types not related to organised criminal activity, throughout their career.

To date, there have been no similar attempts to examine the criminal histories of Australian organised crime offenders. International research suggests serious and organised crime offenders are older than volume crime offenders and have different offending patterns. Interventions developed to prevent the onset of offending among offenders generally may therefore not be relevant to, nor have the same impact on, organised crime. Examining Australian organised crime offenders' criminal histories will not only determine the extent to which international research findings are relevant but also inform government and law enforcement strategies to disrupt and prevent organised criminal activity.

Method

Research questions

The current study explored the criminal histories of a sample of individuals identified by law enforcement as being associated with an organised crime group. This study aimed to address the following research questions:

- At what age do individuals associated with organised crime groups first come into contact with the criminal justice system?
- How does the prevalence, incidence and severity of offending vary over time?
- How does the age of first offence and prevalence of offending vary between different offence types, particularly those more likely to be associated with organised crime groups?

Sample

The current research examined the criminal histories of 2,172 offenders identified as being affiliated with an organised crime group. This sample was created by matching records from two ACIC intelligence databases: the National Criminal Target List and the National Police Reference System.

National Criminal Target List

The NCTL is an intelligence tool that holds information on active and nationally significant serious and organised crime targets who have been reported to the ACIC as operating in or affecting Australia. It was developed in 2010 and is shared with state and territory law enforcement agencies, the Australian Federal Police, other relevant government agencies and international partners. Targets added to the NCTL are assessed for the level of risk associated with their criminal activity and their real or potential impact on the Australian community.

National Police Reference System

The NPRS holds current and detailed national police information designed to assist operational police throughout Australia in dealing with and responding to persons of interest.

The system contains offender information including names and photographs; information on warnings, warrants and wanted persons; apprehension and offence history; protection orders; history of firearm ownership or use; and information relating to the child protection register. Offences listed on the NPRS are not limited to crimes for which a person has been convicted. Rather, the system contains information on offences for which they have been apprehended by police. All state, territory and Commonwealth law enforcement agencies have used the NPRS since the early 1990s, and the ACIC has administrative oversight of the system.

Data linkage and sample selection

Figure 1 outlines the data linkage and sample selection process. The ACIC's Data Analytics team generated an initial sample by matching individuals who have been added to the NCTL with their criminal histories on the NPRS, using their name, date of birth and residential address at the time of the offence. A total of 7,343 offenders were successfully linked between these two systems. This initial sample was then de-identified before being transferred to the Australian Institute of Criminology. The dataset contained seven variables: a unique identifier, the offender's year of birth, the offender's gender, offence type (Australian and New Zealand Standard Offence Classification, or ANZSOC), the year the offender was processed for the offence, the current status of the offence, and the year the offender was added to the NCTL.

Figure 1: Data linkage and sample selection

a: Offenders were excluded for a variety of reasons including being born prior to 1980, missing year of birth, or because they had only committed minor traffic offences
Source: AIC organised crime offender database, 2017 [computer file]

The criminal histories of 115 offenders contained insufficient detail, so these offenders were removed from the sample. The research team then applied inclusion criteria to ensure the sample was comparable and consistent. A total of 5,056 offenders were subsequently removed from the sample because they had only committed minor traffic offences such as speeding, their year of birth was not recorded, or they were born before 1980. Exploratory analysis of offence histories indicated that the NPRS did not capture information on offences for all Australian jurisdictions until the early 1990s. Offenders born before 1980 may have been apprehended for offences that were not recorded in the NPRS. The final sample was therefore limited to offenders born in or after 1980, and included all offences committed up to and including 2016. Limiting the sample to this group ensured the entirety of each offender's recorded criminal history was included in the data. The final sample comprised 2,172 offenders who collectively committed 37,689 offences. Ninety-two percent (n=1,994) of offenders in the sample were male and six percent (n=141) were female. The gender of two percent (n=37) of offenders was unknown.

Limitations

The final sample was limited to individuals who have been identified by law enforcement as being affiliated with an organised crime group and who have a criminal offence history in Australia. Individuals may be listed on the NCTL despite having no known or recorded criminal history in Australia; however, these people would have been excluded during the initial matching process because there was no corresponding apprehension data in the NPRS. It is acknowledged that not all individuals involved in organised crime, particularly those who are successful at evading detection, will have been arrested or have a criminal record (Francis et al. 2013). If they do have one, it may be for offences committed in another country, meaning a small number of offenders may appear to be first-time offenders when in fact they have an extensive criminal history (Francis et al. 2013; van Koppen, de Poot & Blokland 2010). Further, it was not possible to account for the time spent in custody due to the absence of custodial data, which may be significant given the seriousness of offences committed by the sample.

Limiting the sample to those offenders who were born in 1980 or later means the findings may not be generalisable to the wider population of offenders included on the NCTL. This is particularly true for older offenders, including those who did not commit their first offence, or were not apprehended, until relatively late in life (older than 36 years). While there have been some notable findings relating to this older cohort in studies conducted in the United Kingdom and the Netherlands, Australian national criminal history data are limited to the last two decades, and international research shows there remains significant value in understanding patterns in offending before the mid-30s. In both the UK and Dutch research, the adult onset group included offenders of similar ages to those captured in the current study (see Francis et al. 2013; Kleemans & de Poot 2008; van Koppen et al. 2010; van Koppen, de Poot & Blokland 2010).

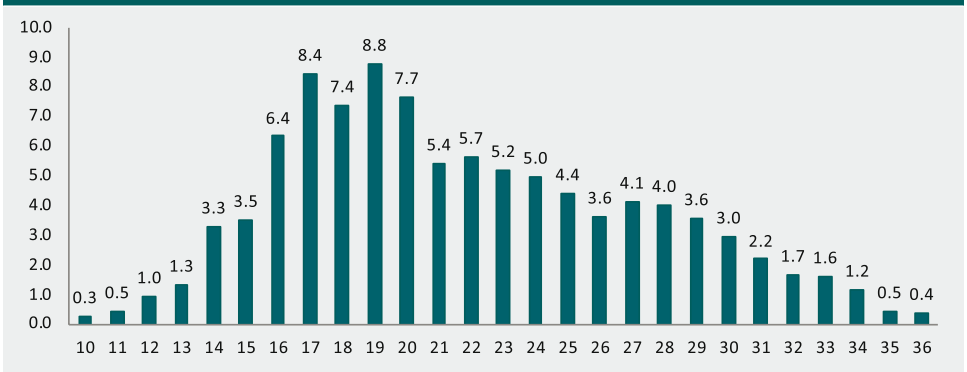
Limitations aside, these data provide the first opportunity to explore and understand organised criminal offending in Australia. Prior international research encountered similar limitations associated with recorded crime data, but nevertheless provided valuable insight into the crimes committed by organised crime offenders.

Results

Age at first offence

The majority of organised crime offenders committed their first criminal offence, or were first apprehended, as adults. Twenty-five percent (n=535) recorded their first offence before turning 18. Fifty-nine percent (n=1,275) were aged 20 years or over at the time of their first offence, 30 percent (n=656) were aged 25 years or over and 10 percent (n=226) were aged 30 years or over (Figure 2). The average age of first-time offenders was 21.8 years (median=21.0).

Figure 2: Age at first offence (%)

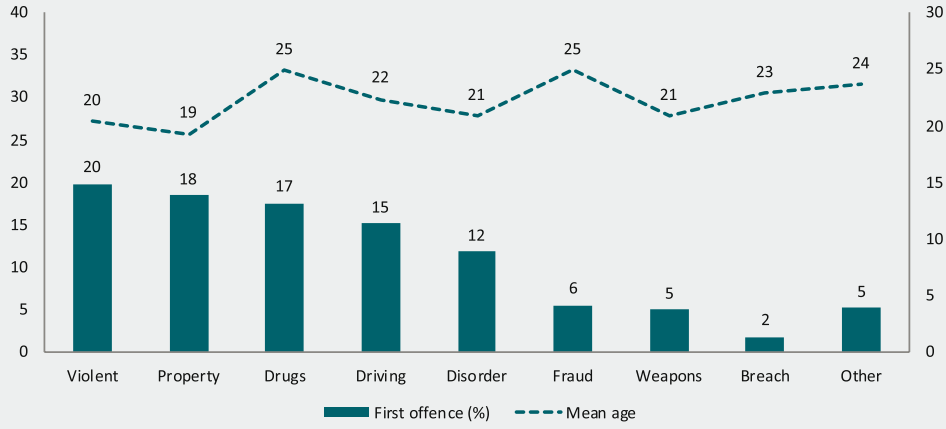


Source: AIC organised crime offender criminal histories database, 2017 [computer file]

In the current study, the first offence was defined as the most serious offence recorded in the first year of an offender's criminal history, because information on the date of each offence was limited to the year of the offence. First offences were most commonly violent offences (20%, n=430), followed by property offences (18%, n=400) and drug offences (17%, n=379) (Figure 3). Offenders whose first offence was a violent offence were most often apprehended for a serious assault resulting in injury (34%, n=146) followed by common assault (27%, n=117). Similarly, the most common first property offence was receiving and handling the proceeds of crime (30%, n=120) followed by theft from retail premises (23%, n=94). Forty-three percent (n=164) of those offenders whose first offence was a drug offence were arrested for dealing or trafficking offences, while a further 24 percent were arrested for possession (n=90).

The age profile of first-time offenders varied by offence type. The mean age of first-time offenders whose first offence was a violent or property offence was 20.3 and 19.2 years, respectively. The mean age of first offence for drug and fraud offenders, however, was much higher at 24.9 years. A Kruskal-Wallis test showed a statistically significant association between offence type and the age of first offence ($\chi^2(8)=336.7$, $p<0.001$). Post hoc tests revealed that first-time drug and fraud offenders were significantly older than violent and property offenders ($z=16.1$, $p<0.001$).

Figure 3: Mean age at first offence, by major offence type



Note: First offence defined as the most serious offence recorded in the first year of an offender's criminal history. Where multiple offences occurred within the same year, offences were ranked by seriousness according to the Australian Bureau of Statistics' National Offence Index (ABS 2011)
Source: AIC organised crime offender criminal histories database, 2017 [computer file]

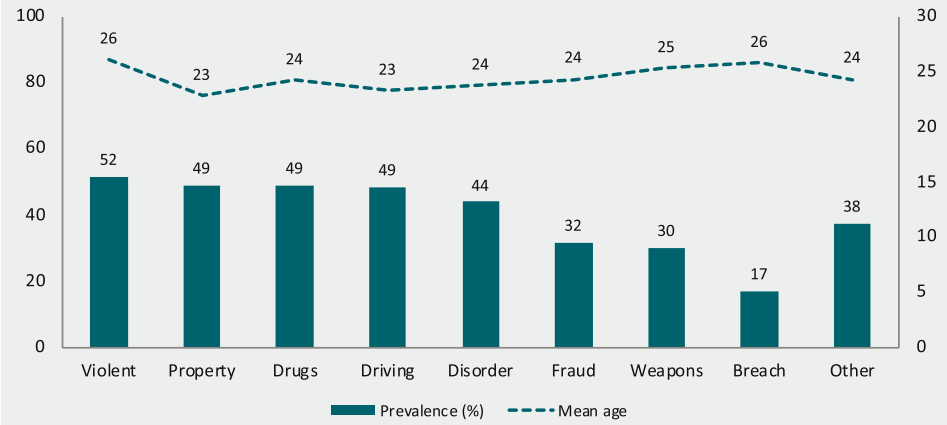
Prevalence and incidence of offending

Overall, half of the offenders in the sample had a recorded drug (52%, n=1,121), property (49%, n=1,069), driving (49%, n=1,068) or disorder (49%, n=1,055) offence at some point in their criminal history (Figure 4). Forty-four percent had a violent offence (n=959), while one-third (32%, n=687) had a recorded breach offence, indicating a significant proportion had a history of non-compliance with criminal justice orders. Offences associated with organised criminal activity—weapons offences (30%, n=657) and fraud offences (17%, n=368)—were also common within the sample.

The age at which offenders were apprehended also varied by crime type. The mean age of offenders for each major category of offence ranged from 22.9 years to 26.1 years of age, and the average age for all offences was 24.2 years. The mean age of offending was highest for drug (26.1 years), fraud (25.9 years) and weapons (25.4 years) offences and lowest for property offenders (22.9 years). Again, there was a statistically significant difference between offence types in the age of offenders at each offence ($\chi^2(8)=1{,}067.2$, $p<0.001$).

Estimates of the overall prevalence of offending—the proportion of the sample who committed at least one offence—and the mean age of offenders, disaggregated by offence type, are useful in understanding the offence history of offenders involved in organised crime. However, these estimates do not take into account the fact that offenders in the sample were followed for different periods.

Figure 4: Prevalence and mean age of offending, by major offence type

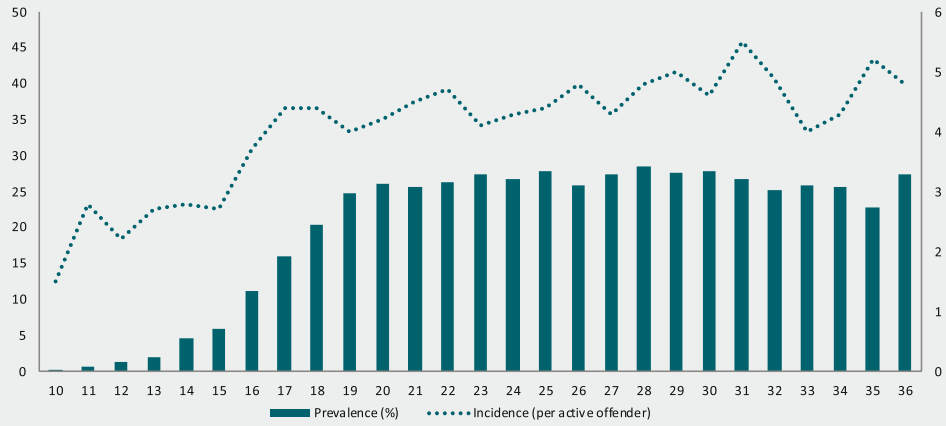


Note: Where an offender recorded multiple offences within the same ANZSOC group in the same year, only one offence was used to calculate the mean age of offenders
Source: AIC organised crime offender criminal histories database, 2017 [computer file]

Offending was most prevalent (and relatively stable) throughout organised crime offenders' 20s and early to mid-30s (Figure 5). This was based on the total population of offenders observed at each age to account for the variable follow-up period. Offending increased substantially between 15 years (when only 6 percent of the population were active) and 19 years (when 25 percent of the population was active). On average, one-quarter of offenders were active between the ages of 20 and 36 years. The prevalence of offending fell below 25 percent only at age 35. The incidence of offending—the average number of offences per active offender—gradually increased throughout this period, peaking at 5.5 offences per active offender aged 31 years.

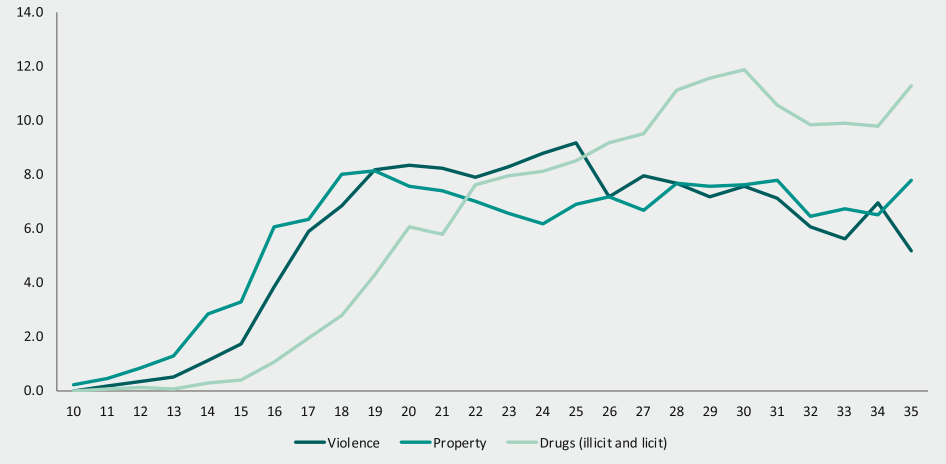
The prevalence of offending at each age varied by offence type. Drug offences, for example, were more common than violent or property offences among offenders in their late 20s and beyond (Figure 6). The prevalence of property offending increased sharply during the late teens, with eight percent of offenders committing a property offence at age 19, and remained relatively stable throughout the 20s and 30s. There was a similar trend in violent offending, which increased sharply during the late teens before peaking at age 25 (9%). The prevalence of drug offending increased gradually from the mid-teens and did not peak until age 30 (12%).

Figure 5: Prevalence and incidence of offending, by age of offender



Source: AIC organised crime offender criminal histories database, 2017 [computer file]

Figure 6: Prevalence of offending, by offender age and major offence type (%)

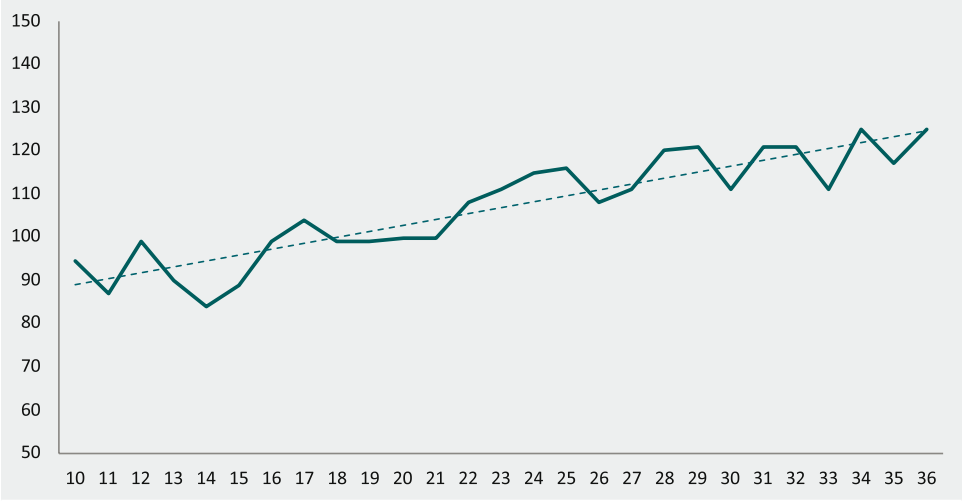


Note: Excludes offending at age 36 due to small numbers
Source: AIC organised crime offender criminal histories database, 2017 [computer file]

Seriousness of offences

Older offenders tended to commit more serious offences. Offence seriousness was measured using the Australian Bureau of Statistics' (2009) National Offence Index (NOI), a ranking of all ANZSOC categories based on their perceived seriousness. The NOI ranking was inverted so that more serious offences received a higher ranking. The most serious offence committed by each offender at each age was identified, and the median NOI ranking for all offenders who offended at each age was then calculated, revealing that the median NOI ranking increased with offender age (Figure 7).

Figure 7: Seriousness of most serious offence, by age of offender (median NOI ranking, inverted)



Source: AIC organised crime offender criminal histories database, 2017 [computer file]

Specialist and generalist offenders

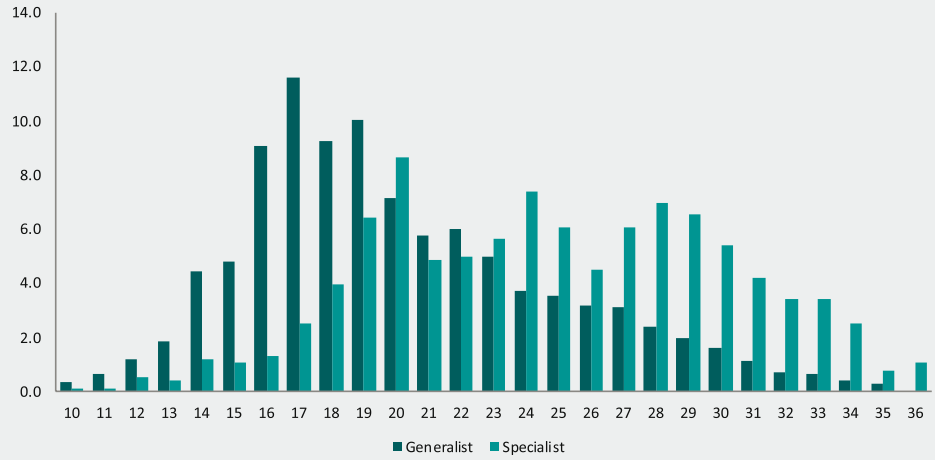
Finally, the majority of this cohort was found to be generalist offenders. There were, however, notable differences between specialist and generalist offenders in both their age at first offence and their prevalence of offending at different ages. Offending specialisation was measured using the same diversity index Francis et al. (2013) used in their study of UK organised crime offenders, and the bias-correction method used by Francis and Humphreys (2016). This score is calculated using the number of offences committed by an offender in each of the nine categories of offences. A score closer to zero indicates greater specialisation, while a score closer to one indicates more diverse offending. As with Francis et al., offenders with a score of 0.4 or below were classified as specialist offenders. The bias-correction method controls for instances where a small number of offences have been committed across the criminal career (Francis & Humphreys 2016).

Thirty-five percent (n=761) of offenders in the sample were classified as specialist offenders. When offenders who had been apprehended for just one offence were excluded, this reduced to 20 percent (n=346). The mean diversity score for specialist offenders was 0.03 (0.06 excluding offenders with only one offence), compared with 0.76 for generalist offenders. The overall mean diversity score was 0.50 (0.62 excluding offenders with only one offence).

An important limitation of this approach is the fact that the more offences an offender has committed, the greater the likelihood that offences will fall in multiple categories. In the current study, offenders who started offending relatively late in life and continued offending beyond the follow-up period would be classified as specialist offenders, when in fact they went on to commit a diverse range of offence types.

Generalist offenders tended to offend for the first time at a younger age (Figure 8). Thirty-five percent (n=476) of generalist offenders committed their first offence before the age of 18, compared with just seven percent (n=59) of specialist offenders. Conversely, 45 percent (n=358) of specialist offenders committed their first offence after the age of 25, compared with 15 percent (n=202) of generalist offenders. The mean age at first offence for specialist and generalist offenders was 24.7 and 20.0, respectively—a statistically significant difference ($z=18.9$, $p<0.001$). Similar patterns were observed when offenders who had only one recorded offence were removed from the analysis ($z=14.2$, $p<0.001$).

Figure 8: Age at first offence, specialist and generalist offenders (%)



Source: AIC organised crime offender criminal histories database, 2017 [computer file]

Not surprisingly, the prevalence of offending among generalist offenders was also significantly higher than for specialist offenders. The prevalence of offending among generalist offenders increased sharply in adolescence, peaking in the early 20s and remaining relatively stable thereafter. There was a consistent, gradual increase in the prevalence of offending by specialist offenders throughout the observation period, peaking in the early to mid-30s.

Discussion and conclusion

This study represents the first analysis of the criminal histories of Australian organised crime offenders. Similar studies have been conducted in the Netherlands and United Kingdom, but the organised crime offenders in those studies were identified on the basis of their recorded offending. The current study combined intelligence holdings with recorded crime data to produce a more complete picture of the criminal histories of individuals known to be affiliated with organised crime groups.

This study is largely descriptive in nature; however, it is possible to draw several important conclusions. The overwhelming majority of offenders associated with an organised crime group were male. The average age of first-time offending was 22 years and the majority of individuals associated with organised crime groups committed their first criminal offence—or were first apprehended—as adults. This finding aligns with international organised crime studies (see Francis et al. 2013; Kleemans & de Poot 2008; van Koppen et al. 2010; van Koppen, de Poot & Blokland 2010), and reinforces the different age profiles of organised crime offenders and volume crime offenders (see Moffitt 1993; Weatherburn, Freeman & Holmes 2014).

Literature suggests this difference may be the result of the types of crimes organised offenders commit. Offences traditionally associated with organised crime include drug trafficking, fraud, weapons offences, and other crimes more sophisticated and complex than volume crimes. The knowledge and skills needed to commit such crimes may only come with life experience (see Kleemans & de Poot 2008). Alternatively, social opportunity theory suggests organised crimes may rely more on efficient criminal networks, which require a high degree of trust and collaboration (see Kleemans 2014). This level of trust may take years to establish and may therefore contribute to the older age of onset among this cohort.

The cohort of organised crime offenders showed a level of persistence in offending from the age of 20 that is not characteristic of volume crime samples (see Weatherburn, Freeman & Holmes 2014). Not all offenders were active in each year they were observed, but nearly one-third of offenders were active at any given age. Further, the frequency of offending gradually increased with age, as did the seriousness of the offending. This may reflect their growing involvement in organised crime activity, and the effect of increased surveillance and detection by law enforcement. Future research could examine how seriousness of offending varies at an individual level, and between groups of offenders, to better understand this escalation over time.

Age profiles of offenders, including their age at first offence and the prevalence of offending at each age, varied by offence type. Offenders who committed a drug or fraud offence as their first offence, for example, were significantly older than offenders who committed volume offences. Offenders who committed a drug, fraud or weapon offence were also older than those who committed other offence types; for example, those who committed drug offences tended to be older than those who committed either violent or property offences.

This may partly be a function of the nature or sophistication of each crime type. Some crimes require a specific level of prior knowledge, skill or opportunity that may not be available to younger offenders (Kleemans & de Poot 2008; Levi 2014). Fraud, for example, may require prior knowledge of financial systems and processes, which takes time to acquire. Similarly, a significant proportion of the drug offences committed by organised crime offenders were distribution offences, which require the formation of trusted networks that can only develop over time. An important avenue for further research to more thoroughly examine is the relationship between the age of onset, type of first offence and subsequent organised criminal career. This would provide a greater understanding of the pathways into organised crime offending.

Finally, the majority of organised crime offenders were found to be generalists, as opposed to specialist offenders, meaning they tended to have committed different offence types throughout their criminal career. Only around a third of organised crime offenders could be classified as specialists and, when limited to offenders with multiple offences, this proportion declined to around a fifth. This may be a consequence of the limited criminal history data available for older offenders, including those who started offending later in life. However, international research has produced similar findings. Francis et al. (2013), for example, concluded that 12 percent of UK organised crime offenders showed evidence of specialisation—a smaller proportion than in the current study. It is widely accepted that specialised offenders or facilitators exist within organised crime groups (ACIC 2017; Albanese 2000; National Crime Agency 2016; van Koppen, de Poot & Blokland 2010; Zhang & Chin 2002), but a growing body of empirical research now shows that the majority of offenders who engage in organised crime are not specialists.

There were limitations with the data sources used for the current study, and limitations associated with using recorded crime data more generally, which need to be acknowledged. Nevertheless, these results provide new insights into the offending pathways of a seriously under-researched cohort of offenders. Further research will examine certain aspects of these pathways, drawing on international research, including identifying and understanding different groups of offenders within the data and examining certain types of offenders in more detail.

Disrupting and preventing serious and organised crime is a challenging but vital goal for government and law enforcement. Combating this pervasive issue requires harnessing the combined knowledge and skills of research, law enforcement and intelligence. Only a multifaceted approach will address the current knowledge gap while also supporting the development of innovative, evidence-led approaches to respond to organised crime in Australia.

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15. Estimating the dark figure of human trafficking and slavery victimisation in Australia

Samantha Lyneham, Christopher Dowling and Samantha Bricknell

Introduction

Governments, researchers and the general public have long desired to know the size of the crime problem affecting the community. Each year, substantial effort is directed at collecting data, producing statistics and analysing trends to better understand the amount of crime that is occurring and who it is affecting. In the case of modern slavery—encompassing human trafficking, slavery and slavery-like practices such as forced marriage and forced labour—there has been sustained interest in its nature and extent since criminalisation in Australia in 2005. The aim of this study is to estimate the prevalence of human trafficking and slavery in Australia, using the statistical method of multiple systems estimation (MSE).

Between 2004 and 2017, 841 possible cases of human trafficking and slavery were reported to the Australian Federal Police, resulting in 350 victims being referred to the Support for Trafficked People Program and 21 offenders being convicted. Since 2013, Australian Federal Police referrals reveal a substantial downward trend in the number of sexual exploitation cases at the same time as a substantial increase in the number of forced marriage cases, while reported cases of labour exploitation remained stable (Table 1).

Table 1: Human trafficking and slavery referrals to the Australian Federal Police, 2013–14 to 2016–17

	2013–14		2014–15		2015–16		2016–17	
	n	%	n	%	n	%	n	%
Forced marriage	11	16	33	28	69	41	70	47
Sexual exploitation	31	44	34	29	39	23	20	13
Labour exploitation	22	31	33	28	36	21	38	25
Other	6	9	19	16	25	15	22	15
Total	70		119		169		150	

Note: Percentages may not total 100 due to rounding
Source: Interdepartmental Committee on Human Trafficking and Slavery forthcoming

Numerous Australian parliamentary inquiries have concluded that prevalence is contested, particularly regarding the extent to which different industries are affected, and that estimates are affected by the lack of comprehensive and accurate data (see, for example, Parliamentary Joint Committee on Law Enforcement 2017).

Enhancing our knowledge of human trafficking and slavery victimisation can therefore contribute to a more informed evidence base to orient policy, service provision and law enforcement activities; target interventions and initiatives; develop tools and training; and estimate costs of crime.

Measuring the prevalence of crime

Determining the prevalence of any crime is difficult—even more so for crimes that are clandestine in nature. For this reason, the unknown volume of crime is often referred to as the 'dark figure' (Coleman & Moynihan 1996). Different methodologies have been employed to reveal more accurate figures of crime affecting the Australian community, each with its own strengths and limitations. Criminal justice statistics (ie recorded crimes) have long been used as a measure of prevalence, but they do not always offer a true representation of the extent of many crime problems. Officially recorded incidents reflect only the known part of the true volume of crime (van Dijk & van der Heijden 2016). Many crimes do not come to the attention of authorities, and may not be recorded even if reported. Criminal justice statistics are therefore influenced by reporting and recording practices. This is compounded in the case of modern slavery, where the collection of statistics is affected by the clandestine nature of these crimes, low reporting due to mistrust in authorities and fear of deportation, affected individuals not identifying as victims, and victims not being correctly identified as such by the professionals who encounter them (Richards & Lyneham 2014; Silverman 2014).

Household surveys, victimisation surveys and surveys of representative samples of crime victims can supplement officially recorded crime statistics and reveal the extent of unreported incidents. Surveys are therefore effective for enumerating many crime types (Silverman 2014). However, modern slavery is not suited to quantification through surveys because victims may still be in a situation of exploitation and therefore unable to participate, they are likely to leave the country once they have left their exploitative situation, they may not view themselves as victims and will not report as such, or they may not be comfortable providing accurate answers to sensitive questions about their experience (Silverman 2014; van Dijk & van der Heijden 2016). Surveys are also expensive to administer and may not be appropriate for estimating modern slavery in developed countries, where locating participants can be very difficult.

The global scale of modern slavery

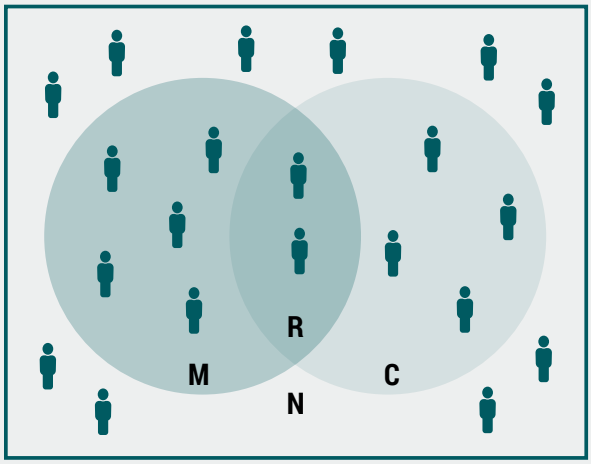
Internationally, significant effort has been directed at better understanding the nature and scale of modern slavery. For example, the Global Report on Trafficking in Persons (by the United Nations Office on Drugs and Crime, or UNODC), the Global Estimates of Modern Slavery (by the International Labour Organization and Walk Free Foundation in partnership with the International Organization for Migration), and the Global Slavery Index (by the Walk Free Foundation) have employed varied methodologies to contribute to the global picture of modern slavery victimisation. The UNODC's *Global report on trafficking in persons* provides data on detected victims supplied by United Nations member states via a questionnaire (completed by 136 countries for the most recent edition). It is able to disaggregate victim data by age, gender and form of exploitation. The Global Estimates of Modern Slavery were produced using a combined methodology of national probabilistic surveys (for 54 countries) and analysis of International Organization for Migration administrative data on the number of victims assisted. The Global Slavery Index also draws upon data from these national probabilistic surveys, combined with vulnerability modelling. Each has reported victimisation numbers ranging from 63,251 detected victims (UNODC 2016) to 40.3 million estimated victims (Walk Free Foundation 2016) worldwide. These reports also indicate that the profile of modern slavery victimisation is changing, particularly with the inclusion of forced marriage in both detected and estimated populations.

What is multiple systems estimation?

Multiple systems estimation (MSE) is a statistical technique ideal for estimating hidden or hard-to-observe populations. It estimates the unknown or 'dark figure' based on the overlaps that can be observed across multiple samples of a population. It does so by applying a capture-recapture method to individual members of a population who are detected and recorded within independent recording systems (called 'lists') (Bird & King 2018). Individuals are matched across lists to count the various combinations in which they appear.

The formula for calculating the unknown figure is N=(M×C)/R, where M is the number of individuals contained in one list, C is the number of individuals contained in another list, and R is the number of individuals who appear in both lists (see Figure 1). The number of possible combinations expands with more lists. The smaller the overlap, the greater the total population is estimated to be, and vice versa.

Figure 1: Capture-recapture estimation using two lists



Source: Adapted from Green 2013

There are four assumptions that underpin capture-recapture analysis (Green 2013; van Dijk & van der Heijden 2016):

- the overlap between lists can be correctly identified (ie individuals can be matched across lists);
- the population of interest does not change during measurement (ie it is a closed system);
- each individual has an equal probability of being captured; and
- the lists are independent (ie capture in one list does not affect the probability of capture in another list).

Where three or more lists are used, the validity of the last three assumptions has less impact on the results and can be accounted for in the analysis.

MSE has been used extensively in the field of ecology to estimate the size of wildlife populations but has more recently been used in human rights, social justice and criminal justice contexts to estimate the numbers of conflict deaths, homeless persons, drug users, and victims of human trafficking (Bird & King 2018; Fisher et al. 1994; Kruger & Lum 2015; Lum, Price & Banks 2013; Silverman 2014; UNODC 2018a, 2018b, 2018c; van Dijk & van der Heijden 2016).

Applying multiple systems estimation to modern slavery

MSE overcomes some of the challenges associated with other approaches to quantifying modern slavery. The first application of MSE to estimate a population of modern slavery victims was undertaken in the United Kingdom in 2014 using a sample of 2,744 victims appearing across five lists (Silverman 2014). The study estimated that the actual victim population size was 11,300 (range of 10,000 to 13,000), suggesting that 20–30 percent of victims were being detected. The next applications of MSE to modern slavery were developed in fulfilment of the United Nations Sustainable Development Goals adopted in 2015, which call on member states to report the number of victims of human trafficking per 100,000 population, by gender, age and form of exploitation (Indicator 16.2.2; UNODC 2018d). Through a partnership with UNODC and the Walk Free Foundation, an estimate for the Netherlands was reported in 2016 (van Dijk & van der Heijden 2016), and estimates for Ireland, Romania and Serbia were reported in 2018 (UNODC 2018a, 2018b, 2018c). The results of the studies reveal that in 2016 there were approximately 17,800 victims in the Netherlands, 200 victims in Ireland, 1,200 victims in Romania and 970 victims in Serbia. Victimisation rates were higher for females, and child victims were less likely to be detected than adults.

Aim and method

Estimating modern slavery victimisation in Australia

Australia is the sixth country to produce an estimate of modern slavery victimisation using MSE. Unlike other countries where MSE has been used to estimate the prevalence of modern slavery victimisation, Australia does not have a central national database for collating victim information. Rather, victim information is held by a range of organisations that may come in contact with victims for various reasons. Some of these organisations are independent from one another, while others have a referral function. Victim lists were obtained from five of these organisations.

A total of 414 potential victims were recorded across the five lists. Most victims appeared on only one list—for example, 198 victims appeared on List C only and 100 victims appeared on List D only. Victims were unlikely to be recorded on more than two lists, although a small number appeared on up to four of the lists. The count of observed victims appearing in various combinations across the four lists is presented in Table 2.

As there was one list that did not overlap with any other, this list was combined with a similar list. Combining these lists did not impact the overall results. One list approached dependence with another list, meaning that victims on one particular list were likely to also appear on another. However, the dependent list was retained for the purpose of analysis because the independence of lists is not critical when there are more than two lists.

Table 2: Count of observed victims

List A				X			X	X	X		X	X	X
List B			X		X	X	X		X	X	X	X	
List C	X		X		X		X	X			X		
List D		X			X					X	X	X	X
Count	198	100	36	34	15	13	6	4	3	2	1	1	1

Source: Estimating modern slavery victimisation using MSE, 2015–16 to 2016–17 [AIC computer file]

Analysis of the four lists aimed to address the following questions:

- What is the total number of presumed victims in Australia?
- What is the ratio of detected to undetected victims?
- What is the rate of victimisation per 100,000 population?

The results estimate the prevalence of modern slavery in Australia. The findings should be treated with caution because the model is based upon assumptions that apply to the natural world that cannot be easily verified for data involving humans. Also, a linkage key was used to de-identify the victim data and matching was then undertaken using the linkage key. All due care was taken to accurately match the data, but there are inherent limitations with this process.

Results

The estimated number of modern slavery victims in Australia over the two-year period from 2015–16 to 2016–17 was 1,567 victims (including the 414 observed victims). Accounting for a five percent margin of error, the number of actual victims is between 1,342 and 1,897.

The results indicate that 26 percent of victims are being detected, with a lower estimate of 20 percent and an upper estimate of 30 percent. This equates to a ratio of 1:4. That is, there are estimated to be four undetected victims for every detected victim in Australia. The dark figure of modern slavery victimisation was therefore estimated to be 1,153 victims, meaning that between 928 and 1,483 victims remain undetected.

Figure 2: Estimated ratio of detected to undetected victims

For every victim detected,
four go undetected

The victimisation rate was found to be approximately 3.3 per 100,000 population per year. This was calculated using the total Australian population, although it should be noted that the majority of observed victims are adults.

The details of the fit for this model are presented in Table 3.

Table 3: Details of model fit

Abundance	95%CI	Standard error	Deviance	Degrees of freedom	AIC	BIC
1153	928–1483	138.2	134.87	9	198.738	222.894

Note: CI=confidence interval; AIC=Akaike information criterion; BIC=Bayesian information criterion
Source: Estimating modern slavery victimisation using MSE, 2015–16 to 2016–17 [AIC computer file]

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Illicit drugs

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16. Prescription opioid use among Australian police detainees

Tom Sullivan, Andrew Ticehurst and Samantha Bricknell

Prescription opioid use has risen markedly across Australia. Among the general Australian population, there has been an increase in prescription opioid dispensing and non-medical use of these drugs (AIHW 2017a; Islam et al. 2016). Hospitalisations related to prescribed opioids, and accidental opioid overdose deaths, have also increased (Blanch, Pearson & Haber 2014; Roxburgh & Burns 2017). Recent wastewater analysis described 'elevated' consumption of oxycodone and fentanyl across Australia, particularly in regional areas of Australia (ACIC 2017: 16), and the media have drawn attention to the criminal attainment and abuse of prescription opioids (see, for example, Bonini 2017).

The use of prescription opioids can play an important role in the management of acute and chronic pain, and opioid dependence. However, when individuals use medications outside guidelines for safe and effective use, adverse effects are more likely (Degenhardt et al. 2008). 'Diversion' refers to the illegitimate supply of a prescription drug from legal sources to illicit markets. It includes doctor shopping, fabricating medical history or feigning current symptoms to doctors, buying or receiving drugs from friends or family, altering medical prescriptions, or stealing from surgeries or pharmacies (ACIC 2016; Vrecko 2015). The diversion of prescription opioids is rising in Australia and overseas (Roxburgh et al. 2011).

In addition to the problem of diversion, prescription opioids can be used for non-medical purposes. Non-medical use is defined as:

> …the taking of prescription drugs, whether obtained by prescription or otherwise, other than in the manner or for the reasons or time period prescribed, or by a person for whom the drug was not prescribed. (UNODC 2011: 1)

A recent Australian Institute of Health and Welfare survey found that almost five percent of Australians had used pharmaceuticals, including opioids, for non-medical purposes in the last 12 months (AIHW 2017b). The survey also found that opioid analgesics were the most common group of pharmaceuticals recently used for non-medical purposes (AIHW 2017a). However, relatively little is known about the characteristics of people who divert or use prescription opioids for non-medical purposes, the methods they use to acquire the drugs, or their patterns of use.

Aims

Forthcoming research shows that a fifth of Australian police detainees divert or engage in non-medical use of prescription drugs, including opioids (Patterson, Sullivan & Ticehurst 2018). Police detainees can provide an insight into the illicit market for prescribed opioids as they are more likely than the general population and incarcerated offenders to have had recent and close contact with illicit drugs. As such, this study aims to address the following questions:

- How prevalent is non-medical prescription opioid use among Australian police detainees?
- What are the characteristics of non-medical and prescription opioid users?
- Which prescription opioids are most commonly diverted and used for non-medical purposes?
- How frequently are detainees engaging in non-medical use of prescription opioids?
- Which methods of diversion are used?
- Are there relationships between the non-medical use of prescription opioids and the use of other illicit drugs?

Methodology

This study draws on data from the Drug Use Monitoring in Australia (DUMA) program, which collects information about social and demographic characteristics of police detainees and their criminal offending and drug use histories. Under the program, police detainees are interviewed quarterly at selected police stations and watch houses. Detainees are also asked to voluntarily provide urine samples to enable testing for selected drugs. From January to February 2016, police detainees were interviewed at the Adelaide, Brisbane, Perth and Sydney (Surry Hills) sites.

Data for this study were derived from a specially-designed addendum on prescription drug use. Detainees (n=389) were asked a series of questions about their use of prescription drugs and their involvement, as source or recipient, in the non-medical use of these drugs. Non-medical use is defined in this study as the use of a prescription opioid without a valid prescription or the diversion of it to illicit markets.

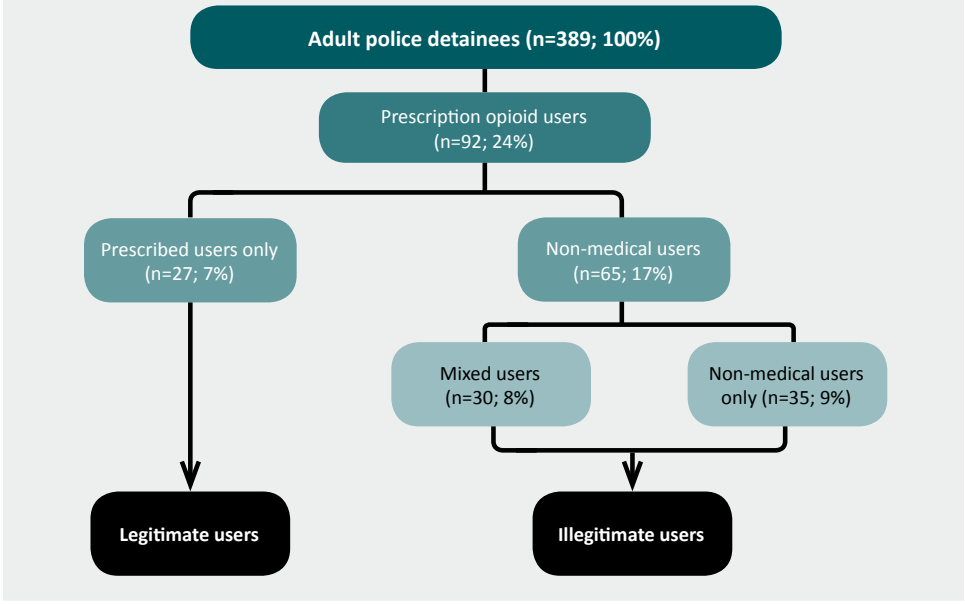
Although the addendum focused on various prescription drug types, the current study analysed prescription opioids because of an ongoing increase in opioid use and related harms in Australia and evidence of opioid diversion and non-medical use among detainees (Blanch, Pearson & Haber 2014; Patterson, Sullivan & Ticehurst 2018). The opioids analysed were buprenorphine, fentanyl, methadone, morphine and oxycodone. This chapter analyses data from detainees who reported prescription opioid use, legal or illegal, in the last 12 months (n=92), hereafter referred to as 'recent opioid users'.

Results

Prescribed, non-medical and mixed opioid use

One-quarter of detainees (24%; n=92) reported prescription opioid use in the last 12 months. This included detainees prescribed opioids ('prescribed users only'), those who obtained or diverted at least one type of opioid illegitimately ('non-medical users'), and those who reported both prescribed and illegitimate use of prescription opioids ('mixed users'; see Figure 1).

Figure 1: Prescription opioid use in the last 12 months among adult police detainees, 2016



Note: All percentages were calculated from the total number of adult police detainees in the sample (n=389). Excludes 2 respondents where data were missing

Seven percent of detainees (n=27) were prescribed users only. A larger proportion engaged in non-medical use by obtaining a prescription opioid through illegitimate means or diverting it (17%; n=65). Nine percent of detainees (n=35) had exclusively used opioids non-medically, while eight percent (n=30) had engaged in a mix of medical and non-medical uses. Of the 92 prescription opioid users, 71 percent (n=65) had sourced or diverted at least some of their opioids illegitimately. At all data collection sites, the proportion of non-medical users was greater than the proportion of prescribed users.

Characteristics of prescribed and non-medical opioid users

Table 1 shows that the mean age of non-medical opioid users was 33.6 years, slightly higher than the mean age of prescribed opioid users (32.7 years) and users of other illicit drugs (31.8 years). The most common age category was 36 years or over for both non-medical users (40%; n=26) and prescribed users (41%; n=11). Of the 75 recent male opioid users, 76 percent reported non-medical use (n=57), compared with 47 percent of female opioid users (n=8). Comparable proportions of male and female detainees used other illicit drugs (male users: 83%; n=351 vs female users: 81%; n=76). The proportions of Indigenous (75%; n=15) and non-Indigenous (69%; n=50) detainees reporting recent non-medical use of opioids were similar, but less than the proportions of Indigenous and non-Indigenous detainees reporting recent use of other illicit drugs (Indigenous: 86%; n=122 vs non-Indigenous: 81%; n=305).

Table 1: Characteristics of prescribed and non-medical opioid users, 2016

	Prescribed-only users		Non-medical users		Total
	n	%	n	%	n
Gender					
Male	18	24	57	76	75
Female	9	53	8	47	17
Median age	32 (mean=32.7)		32 (mean=33.6)		32 (mean=33.3)
Indigenous status					
Indigenous	5	25	15	75	20
Non-Indigenous	22	31	50	69	72

Source: AIC DUMA collection quarter 1, 2016 [computer file]

Types of prescription opioids used

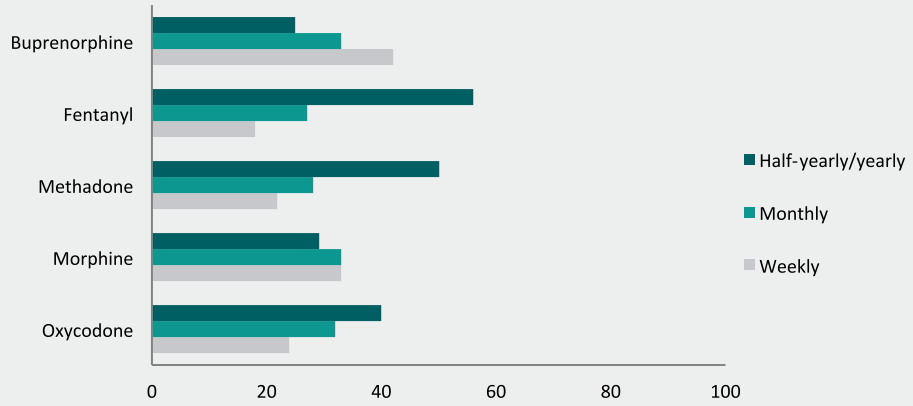
Buprenorphine was the prescription opioid most commonly used in the last 12 months (47%; n=43), followed by oxycodone (41%; n=38), morphine (36%; n=33), methadone (35%; n=32) and fentanyl (14%; n=13). Buprenorphine use was driven by non-medical use (88%; n=37). Fentanyl users had the second highest percentage of non-medical use (85%; n=11) and methadone had the lowest percentage of non-medical use (59%; n=19).

Most prescription opioid users had used only one type of opioid in the past 12 months (60%; n=55). However, 22 percent (n=20) had used two types of opioids and 19 percent (n=17) had used three or more types.

Frequency of non-medical opioid use

Forty-four percent of recent non-medical users had consumed a prescription opioid weekly (n=28). The next most common level of frequency was half-yearly or yearly (30%; n=19), followed by monthly (27%; n=17). Frequency of non-medical use varied between the drug types. Oxycodone, fentanyl and methadone were most frequently used once a year or every six months. In contrast, buprenorphine was most frequently used weekly, and morphine was most frequently used weekly or monthly (see Figure 2).

Figure 2: Frequency of non-medical opioid use by drug type (%)



Source: AIC DUMA collection quarter 1, 2016 [computer file]

Sixty-nine percent of non-medical users (n=44) had used an opioid in the 30 days prior to their detention. Non-medical users reported using opioids on an average of five days out of 30. On average, methadone was the most frequently used opioid in the previous 30-day period (mean=5 days per month), while fentanyl was the least frequently used (mean=1 day per month).

Illegitimate sources of prescription opioids

Detainees were asked to rate the ease of obtaining a prescription opioid without a prescription on a scale from one (extremely hard or impossible to get) to 10 (readily available or over-abundant). On average, detainees rated the availability of each opioid a six or seven out of 10, indicating that prescription opioids were easy to obtain without a prescription. Detainees rated methadone (mean=7.18), buprenorphine (mean=7.07) and oxycodone (mean=6.71) as the easiest to obtain, and fentanyl (mean=6.35) and morphine (mean=6.61) as the most difficult opioids to obtain. These findings may help to account for data showing that methadone was the most frequently used opioid and fentanyl was the least frequently used.

The most common method recent opioid users used to obtain these drugs was to receive them from a family member or friend without paying (45%; n=41). This was consistent for every type of opioid. Other common methods were purchasing from a street dealer (24%; n=22) and buying from a family member or friend (21%; n=19). No detainees reported purchasing a prescription opioid via the internet. Of those detainees who were mixed users, 21 percent (n=6) reported doctor shopping and 14 percent (n=4) reported lying to a doctor. Ten percent of opioid users (n=9) had sold and/or given away a drug prescribed to them by a doctor in the last 12 months.

Prescription opioids and illicit drug use

Seventy-four percent of non-medical users (n=48) reported having been dependent on illicit drugs in the last 12 months, compared with 44 percent of prescribed users (n=12) (see Table 2). The illicit drugs on which opioid users most commonly reported dependence were heroin (57%; n=26) and amphetamine (44%; n=30), both of which also had the highest dependence levels among detainees who had used other illicit drugs in the last 12 months. The opioid users most likely to report dependence on cannabis, heroin, ecstasy or methamphetamine were those who had used buprenorphine (81%; n=35) and methadone (78%; n=25); these drugs are commonly used for the management of opioid dependence (Degenhardt et al. 2008). For detainees who reported using buprenorphine, the proportion of non-medical users reporting dependence was greater than the proportion of prescribed users (87%; n=33 vs 40%; n=2). For those reporting methadone use, the proportion of non-medical users reporting dependence was similar to the proportion of prescribed users (79%; n=15 vs 77%; n=10).

Of the recent opioid users, 96 percent reported illicit drug use in the last 30 days (n=88). Most of the recent opioid users also reported consumption of an illicit drug in the last 48 hours (70%; n=64). Non-medical users were slightly more likely than prescribed users to have used an illicit drug in the last 30 days (97%; n=63 vs 93%; n=25) and 48 hours (72%; n=47 vs 63%; n=17). Prescribed methadone users (56%; n=5) and non-medical methadone users (83%; n=20) were more likely than users of any other prescription opioid to have consumed an illicit drug in the 48 hours prior to detention.

The illicit drugs that recent prescription opioid users most commonly reported using in the last 12 months were methamphetamine (75%; n=69), cannabis (74%; n=68) and heroin (50%; n=46).

Table 2: Prescription opioids by illicit drug use

	Prescribed-only users		Non-medical users	
	n	%	n	%
Drug dependency				
Yes	12	44	48	74
No	15	56	17	26
Illicit drug use in last 30 days				
Yes	25	93	63	97
No	2	7	2	3
Illicit drug use in last 48 hours				
Yes	17	63	47	72
No	10	37	18	28

Source: AIC DUMA collection quarter 1, 2016 [computer file]

Discussion

One-quarter of detainees had used prescription opioids in the last 12 months and 71 percent of these users had sourced or diverted at least some of their opioids illegitimately. This high level of non-medical use is consistent with previous analyses of detainees' use of prescription drugs in Australia (McGregor, Gately & Fleming 2011; Ng & Macgregor 2012; Patterson, Sullivan & Ticehurst 2018). Detainees who reported recent non-medical use of prescription opioids were more likely to be male and were, on average, slightly older than those reporting prescribed-use only and those reporting use of other illicit drugs. Buprenorphine was the opioid most commonly used in the last 12 months, which accords with data suggesting that between 2010–11 and 2014–15, the number and rate of dispensed prescriptions for buprenorphine rose substantially (AIHW 2017a). Research suggests the extent to which particular types of opioids are diverted and used for non-medical purposes can depend on factors such as their potency, availability, ease of injection and the degree to which adverse effects occur following injection (Degenhardt et al. 2008).

The data also showed that about four in 10 users had used more than one type of prescription opioid in the past 12 months and most reported using other illicit drugs. These indications of polydrug use among this population are consistent with earlier studies (McGregor, Gately & Fleming 2011; Sweeney & Payne 2011). Australian research shows that polydrug use is a risk factor for death and is associated with receiving income from drug dealing and other illegal sources (Kinner et al. 2015; Sweeney & Payne 2011). This study's findings of polydrug use may provide valuable further information to health professionals and law enforcement agencies confronting these problems.

For all types of opioids, the most common method of obtaining the drugs was to receive them from a family member or friend without paying. Law enforcement may have limited capabilities to target these types of illicit activities. However, drug preparations and formulations that reduce the potential for non-medical use or injection of prescription opioids may continue to be effective in deterring diversion. For example, the 2014 introduction of an abuse-deterrent sustained-release oxycodone formulation in Australia was associated with a reduction in injection of the drug and no clear switch to other drugs (Degenhardt et al. 2015).

Almost all recent opioid users reported illicit drug use in the last 30 days and more than two-thirds reported consumption of an illicit drug in the last 48 hours. About three-quarters of non-medical users reported having been dependent on illicit drugs in the last 12 months, compared with almost half of prescribed users only. This aligns with the high levels of dependency found in an earlier study of detainees who were non-medical users of prescription drugs (McGregor, Gately & Fleming 2011).

Policy related to the supply and control of opioids must strike a balance between preventing illegal diversion of the drugs and ensuring their medical availability (World Health Organisation 2000). Achieving this balance may be complicated by evidence that opioid misuse can occur among chronic pain patients with comorbid mental health and drug use problems (Degenhardt et al. 2008). This chapter builds on earlier opioid use research by showing that almost all detainees who had engaged in non-medical use of prescription opioids had used illicit drugs in the last 30 days and most were dependent on these drugs. The findings reinforce the importance of regulatory responses that can (a) limit access to prescription opioids to those with a legitimate need, (b) track cases where control over this access is compromised and (c) minimise the effect of these controls on legitimate medical practice (Degenhardt et al. 2008).

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17. Polydrug use among police detainees

Eileen Patterson, Tom Sullivan and Samantha Bricknell

Polydrug use is the consumption of two or more drug types within a defined period of time. It may be limited to illicit drugs, or may include illicit drugs and legal drugs such as alcohol and tobacco. The Australian Institute of Health and Welfare (AIHW) found that in 2016 three percent of the general Australian population aged 14 years and over reported risky drinking, daily smoking and illicit drug use in the previous 12 months (AIHW 2017). Six percent of the population reported both risky drinking and recent illicit drug use (AIHW 2017). The proportion using two or more illicit drugs is currently unclear. This study aims to contribute to this under-reported area.

Polydrug use is common among young adults and widespread among specific populations, such as people who regularly inject drugs, users of ecstasy or other illicit psychoactive substances, and police detainees (Quek et al. 2013; Stafford & Breen 2017a, 2017b; Sweeney & Payne 2011). The high rate of polydrug use among police detainees is relevant to law enforcement agencies, in part because detainee surveys have found polydrug use to be linked to a higher rate of acquisitive crime and the receipt of income from drug dealing and other illegal sources (Bennett & Holloway 2005; Sweeney & Payne 2011).

The Drug Use Monitoring in Australia (DUMA) program is the nation's longest running survey of police detainees, collecting demographic information as well as information about their offending and drug use history. Recent DUMA data have shown changing patterns in drug use, such as a steady increase in methamphetamine use and a decline in heroin use. Understanding how these changes are reflected in patterns of polydrug use would assist with training, program design and policy development for health professionals and law enforcement. This study seeks to update Sweeney and Payne's 2011 examination of polydrug use among Australian police detainees, explore recent trends in illegal polydrug use among detainees and identify which combinations of drugs are used most frequently by this group.

Methodology

This study drew on data collected in 2016 as part of the DUMA program, run by the Australian Institute of Criminology (AIC). DUMA collects information on the drug use and offending habits of police detainees across Australia. Participation is voluntary, anonymous and confidential. In 2016, data were collected from 2,199 adult detainees in Adelaide, Brisbane, Perth and Sydney (Bankstown and Surry Hills) police stations and watch houses. Overall, 1,180 police detainees provided a urine sample and 918 (78%) tested positive to at least one drug. This study compared urinalysis results with reported use in the last 48 hours for all drugs, although it is acknowledged that the presence of different drugs can be detected via urinalysis for different time periods (Makkai 2000).

Results

The extent of polydrug use among detainees

The extent of polydrug use reported by police detainees was measured across three time periods: the last 12 months, last 30 days and last 48 hours. Polydrug use was defined as the use of two or more illegal drugs. The drugs could be illicit substances—cannabis, heroin, methamphetamine, ecstasy, cocaine and hallucinogens—or inhalants or prescription drugs such as benzodiazepines, opiates, antipsychotic medications and anabolic steroids obtained without a prescription. To make the data comparable with Sweeney and Payne's (2011) analysis, only detainees who had used prescription drugs non-medically were included. Alcohol was excluded from this analysis.

Sixty percent (n=1,328) of all detainees reported using two or more illegal drugs in the last year (see Table 1). Forty-one percent (n=896) reported using two or more illegal drugs in the 30 days before detention and 15 percent (n=329) reported using two or more illegal drugs in the previous 48 hours. The proportion of detainees who reported using two or more illegal drugs in the 30 days before detention increased from 30 percent in 2009 (Sweeney & Payne 2011) to 41 percent in 2016.

Of those reporting polydrug use in the 30 days before detention, 59 percent (n=532) had used two drugs, 21 percent (n=192) had used three drugs, 12 percent (n=108) had used four drugs and seven percent (n=64) had used five or more drugs (Table 1).

Table 1: Prevalence of reported polydrug use, 2016

	Last 12 months		Last 30 days		Last 48 hours	
	n	%	n	%	n	%
Two drugs	510	38	532	59	251	76
Three drugs	325	24	192	21	57	17
Four drugs	209	16	108	12	19	6
Five or more drugs	284	21	64	7	2	1
Two or more drugs	1,328		896		329	

Note: Percentages may not total 100 due to rounding. Base is the number of detainees using two or more drugs in relevant time period
Source: AIC DUMA collection 2016 [computer file]

These results can also be expressed as proportions of the drug-using detainee population, which Sweeney and Payne (2011) note is perhaps a more relevant measure for criminal justice programs targeted at drug offenders. Among the detainees who reported using drugs:

- 74 percent (n=1,328) had used two or more different drugs in the past 12 months (up from 64% in 2009);
- 58 percent (n=896) had used two or more different drugs in the past 30 days (vs 49% in 2009); and
- 34 percent (n=329) had used multiple drugs in the past 48 hours (vs 29% in 2009).

Reported versus detected polydrug use

As these reported drug use data have shown, polydrug use is common among police detainees. However, people in a custodial setting can under-report recent drug use, despite assurances of confidentiality (Harrison 1997; Wish, Hoffman & Nemes 1997). As such, urinalysis data may more accurately measure the extent of recent polydrug use among the detainee population.

Of the 1,180 detainees who provided a urine sample in this study, 501 (42%) tested positive for two or more drugs. However, only 41 percent of this group (n=205) reported using two or more drugs in the last 48 hours. The remaining 296 detainees reported they had used one drug or no drugs in the last 48 hours, suggesting an under-reporting of recent drug use.

Table 2 shows the concordance in reported use and test positives for polydrug use. The number of detainees who tested positive to the same number of drugs they reported using is shown in the unshaded cells, the number of detainees who tested positive to more drugs than they reported using is in cells shaded green, and the number of detainees who used fewer drugs than they reported is in cells shaded grey.

Overall, 556 detainees (47%) reported using fewer drug types than were detected in their urine. Of the 580 detainees who did not report any drug use in the previous 48 hours, 34 percent (n=199) tested positive to one drug and 22 percent (n=125) tested positive for two or more drugs.

Table 2: Comparison of urinalysis results and reported drug use by adult detainees, 2016 (n)

Urinalysis test positives[b]	Reported use (last 48 hours)[a]				
	Did not use	1 drug	2 drugs	3 or more drugs	Total
No test positives	256	11	1	1	269
1 drug	199	196	15	0	410
2 drugs	93	117	94	9	313
3 or more drugs	32	54	61	41	188
Total	580	378	171	51	1,180

a: Calculated from detainees who reported using cannabis, cocaine, benzodiazepines, heroin, prescription opiates, methamphetamine or ecstasy

b: Urinalysis screening was conducted for five classes of drugs—amphetamines, benzodiazepines, cannabis, cocaine and opiates. A secondary screening test was conducted for methadone and buprenorphine

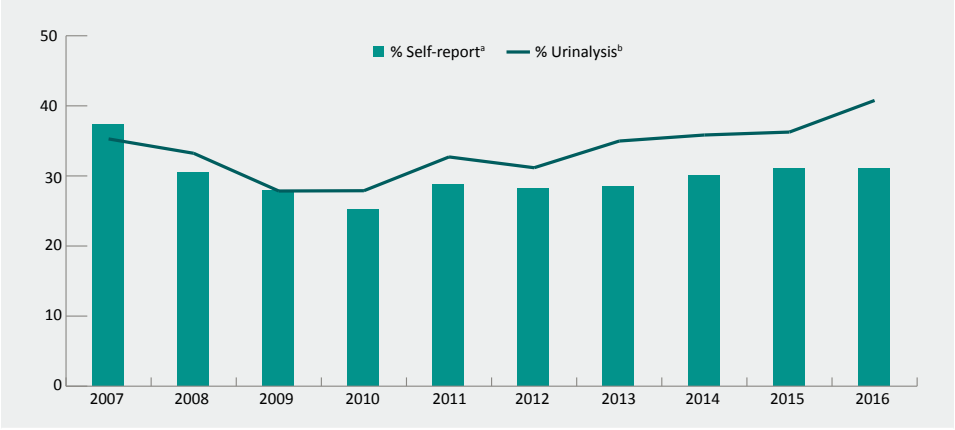
Note: Includes sites in Adelaide, Bankstown, Surry Hills, Brisbane and Perth

Source: AIC DUMA collection 2016 [computer file]

The data show that most detainees who tested positive for cannabis (63%, n=334), heroin (56%, n=42) or methamphetamine (53%, n=321) reported having used these drugs in the last 48 hours. The urinalysis results of detainees who reported using only cannabis, only heroin or only methamphetamine in the 48 hours before detention were examined to ascertain the extent of misreported use among those reporting recent use of different drugs. Of the 177 detainees who reported using only cannabis in the 48 hours before detention and gave a urine sample, 57 percent (n=101) tested positive to cannabis and at least one other drug. On the other hand, of the 146 detainees who gave a urine sample and reported using only methamphetamine in the 48 hours before detention, about one in three (31%, n=45) tested positive to at least one other drug. Finally, all detainees who gave a urine sample and reported using only heroin tested positive to heroin and at least one other drug (n=5). These findings suggest detainees who report using only cannabis or heroin have a greater tendency to under-report their drug use than those who report using only methamphetamine. This suggests that, although users of heroin and cannabis are reporting their recent use, they may be more reluctant to identify that they are also using other drugs.

The study also compared trend data for urinalysis results and reported polydrug use. Figure 1 shows the proportion of detainees who reported polydrug use, compared with the proportion of detainees who provided a urine sample who tested positive to more than one drug. After a decline between 2007 and 2010, the proportion of detainees reporting polydrug use in the previous 48 hours has been stable. The proportion of detainees testing positive to more than one drug showed a slight upwards trend.

Figure 1: Trends in urinalysis results and reported polydrug use, 2007 to 2016 (%)



a: Self-report calculated from detainees who reported using two or more of the following drugs in the 48 hours before detention: cannabis, cocaine, benzodiazepines, heroin, prescription opiates, methamphetamine, and ecstasy. Percentages expressed as a proportion of all detainees

b: Urinalysis calculated from detainees who tested positive to two or more of: cannabis, cocaine, benzodiazepines, heroin, opiates other than heroin (eg methadone, buprenorphine), methamphetamine and ecstasy. Percentages expressed as a proportion of detainees who voluntarily provided a urine sample

Note: Includes four DUMA sites—Adelaide, Bankstown, Brisbane and Perth

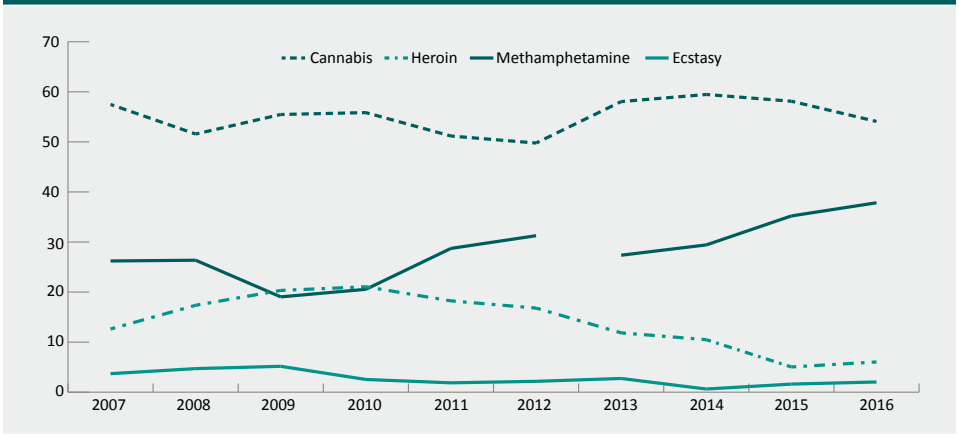
Source: AIC DUMA collection 2007–16 [computer file]

Primary and secondary drug use

Findings from the DUMA program have recently identified changes in single drug use among police detainees. From 2010 to 2016, the proportion of detainees using heroin decreased from 10 percent to three percent, while those using amphetamines, including methamphetamine, increased from 19 percent to 53 percent (Patterson et al. 2018). Polydrug use data can enhance knowledge of drug use trends by identifying the primary drug—that is, the drug that users of two or more drugs consume most often. This study analysed primary and secondary drug use data for heroin, methamphetamine, cannabis and ecstasy because the DUMA program collected information on frequency of use for only these drugs.

Between 2010 and 2016, the consumption of heroin as a primary drug decreased (21% in 2010 vs 6% in 2016) while primary use of methamphetamine increased (21% in 2010 vs 38% in 2016; see Figure 2). Primary use of cannabis, which was the primary drug of choice among polydrug users, and ecstasy remained relatively stable during this period.

Figure 2: Primary drug used by polydrug users in the last 30 days, 2007 to 2016 (%)



Note: Includes four DUMA sites—Adelaide, Bankstown, Brisbane and Perth. Data were collected from those who reported use in the 30 days before detention. In 2013, the self-report question changed from asking detainees whether they had used 'amphetamine/speed/methamphetamine' to whether they had used 'methamphetamine/speed/ice'. This change is represented as a break in the time series. Data were not collected in Q1 and Q2 of 2013

Source: AIC DUMA collection 2007–16 [computer file]

Primary and secondary drug use combinations

Of the 1,505 detainees who reported using cannabis, methamphetamine, heroin or ecstasy in the 30 days before detention, 756 detainees (50%) reported using two or more of these drugs. Table 3 provides a breakdown of polydrug use combinations by the detainees' primary and secondary drugs.

Cannabis was the most commonly used primary drug (54%, n=409), followed by methamphetamine (37%, n=278). The most frequent combination of drugs was cannabis and methamphetamine (78%, n=587), with cannabis being the primary drug for most detainees reporting this combination of drug use (n=361). Cannabis and methamphetamine was also the most commonly used combination among Australian police detainees in 2009 (Sweeney & Payne 2011), but the proportion of detainees who reported using these drugs together has increased substantially (30% in 2009 vs 78% in 2016). Given the proportion of detainees using cannabis has been relatively stable over this period (48% in 2009 vs 44% in 2016), the rise in methamphetamine use has driven this increase.

Much lower proportions of detainees reported use of other drug combinations. For example, nine percent (n=69) had used heroin and methamphetamine in the last 30 days, most of whom used heroin as their primary drug (n=46).

Table 3: Reported primary and secondary drug combinations, 2016			
	n	% primary drug	% overall[a]
Cannabis as a primary drug			
Cannabis/heroin	26	6	3
Cannabis/methamphetamine	361	88	48
Cannabis/ecstasy	22	5	3
Total reporting cannabis & heroin, methamphetamine or ecstasy	409		54
Total reporting cannabis only	351		
Heroin as a primary drug			
Heroin/cannabis	17	26	2
Heroin/methamphetamine	46	71	6
Heroin/ecstasy	2	3	<1
Total reporting heroin & cannabis, methamphetamine or ecstasy	65		9
Total reporting heroin only	21		
Methamphetamine as a primary drug			
Methamphetamine/cannabis	226	81	30
Methamphetamine/heroin	23	8	3
Methamphetamine/ecstasy	29	10	4
Total reporting methamphetamine & cannabis, methamphetamine or ecstasy	278		37
Total reporting methamphetamine only	350		
Ecstasy as a primary drug			
Ecstasy/cannabis	3	75	0
Ecstasy/heroin	0	0	0
Ecstasy/methamphetamine	1	25	<1
Total reporting ecstasy & cannabis, heroin or methamphetamine	4		1
Total reporting ecstasy only	23		

a: Proportions were calculated out of 756 detainees

Note: Percentages may not total 100 due to rounding

Source: AIC DUMA collection 2016 [computer file]

Frequency of primary and secondary drug use

Of the 756 detainees who reported using two or more of cannabis, methamphetamine, heroin or ecstasy in the 30 days before detention, 58 percent (n=437) reported using their primary drug almost every day (6–7 days per week), a slightly greater proportion than in 2009 (52%, n=597; Sweeney & Payne 2011; see Table 4). This was followed by detainees using their primary drug four to five times a week (18%, n=135), one to three times a week (15%, n=114) or less than once a week (9%, n=70).

Thirty percent (n=229) of recent polydrug users consumed both primary and secondary drugs four to seven times per week, a slightly higher proportion than in 2009 (24%, n=268; Sweeney & Payne 2011). Forty-five percent of polydrug users (n=343) reported using their primary drug at moderate to high levels (4–7 times per week) and their secondary drug less frequently (less than 3 times per week). One in four recent polydrug users (24%, n=184) reported using both primary and secondary drugs at low levels, a smaller proportion than in 2009 (33%, n=375; Sweeney & Payne 2011). These data suggest recent polydrug users appear to be using drugs more frequently.

Table 4: Frequency of primary and secondary drug use, 2016 (n)

		Secondary				
		Less than once a week	1–3 times a week	4–5 times a week	6–7 times a week	Total
Primary	**Less than once a week**	70	–	–	–	70
	1–3 times a week	69	45	–	–	114
	4–5 times a week	51	67	17	–	135
	6–7 times a week	121	104	96	116	437
	Total	311	216	113	116	756

Source: AIC DUMA collection 2016 [computer file]

Discussion

This study contributes to research on polydrug use in several important ways. First, urinalysis data indicated that detainees under-reported polydrug use, suggesting that more detainees may be at risk of the harms associated with polydrug use than survey data suggest. Under-reporting may be related to social desirability, perceived consequences of reporting drug use, a lack of knowledge about the purity and composition of purchased illicit drugs, and recall issues that may be linked to drug use (Darke 1998; Miller, Donnelly & Martz 1997). These factors may help to explain the discrepancy between polydrug use reported by detainees and polydrug use detected by urinalysis.

Detainees were more likely to misreport recent drug use if they reported single drug use than if they reported using two drugs. Detainees may report using only one drug type for various reasons. For example, they may want to hide the extent of their drug use (Miller, Donnelly & Martz 1997). Individuals may also avoid reporting use of particular drugs due to the stigma attached to them, as in the case of heroin, which is among the drugs that Australians aged 14 years or over are least likely to personally approve the regular use of (AIHW 2017). The willingness of detainees to report use of particular drugs may also depend on how they obtained them (Preston et al. 1997). Additionally, individuals may report only the drug they have used most frequently or that they most prefer to use.

The study also showed that the proportion of DUMA police detainees reporting the use of two or more drugs has increased and the pattern of polydrug use has changed since 2009. Cannabis continued to be the primary drug for most detainees, but methamphetamine surpassed heroin as the second-most favoured primary drug. The most popular combination of primary and secondary drugs was cannabis and methamphetamine, with the proportion of detainees reporting use of this drug combination more than doubling in recent years. Furthermore, the frequency of use of primary and secondary drugs has increased.

It is important for frontline officers such as medical practitioners and law enforcement to understand the interactions between drugs and the effects that polydrug use can have on behaviour. Studies have found that interactions between drugs may lead to aggression and paranoia, resulting in increased hostility towards frontline officers (Dawe et al. 2009; Fuller & Goldsmid 2016; McKetin et al. 2014).

These drug interactions are also hazardous for users. For example, Darke, Kaye and Duflou (2017) found that in 83 percent of methamphetamine-related deaths in Australia between 2009 and 2015, an additional substance was also detected. There is also substantial evidence that the concurrent use of heroin and other drugs is associated with overdose and a greater severity of overdose (Coffin et al. 2007; Darke et al. 2014; Kerr et al. 2007; Roxburgh et al. 2017).

A limitation of this study is that it compared reported use of drugs in the last 48 hours with urinalysis results for all drugs, even though average detection time varies between drugs and depends on frequency of use. However, most drugs can be detected in urine samples within 48 hours. The study suggests polydrug use is a growing problem among offenders and that it may be partially hidden in self-reported drug use data. This underlines the importance of monitoring the impact of drug use trends on polydrug use and of understanding the interactions of different combinations of drugs.

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18. How much fentanyl is available on the darknet?

Matthew Ball, Roderic Broadhurst and Harshit Trivedi

A substantial share of the internet traffic operating in the encrypted 'deep web' is on illicit darknet markets (or 'cryptomarkets'), which are e-commerce style websites specialising in the sale and distribution of illicit items. Typical products offered on darknet markets include illicit drugs, pharmaceuticals, fraudulent identity documents, malware and hacking kits, counterfeit goods, weapons and other contraband. Europol estimates that two-thirds of the products listed on darknet markets between 2011 and 2015 were drug related and these markets are 'one of the engines of organised crime' in Europe (EMCDDA & Europol 2017: 15).

Search engines such as Google and Bing cannot access darknet markets. The darknet is commonly accessed via 'The Onion Router', which operates an overlay network of anonymous servers (onion routers), masking the original IP address of the user. Anonymity is further ensured by the use of cryptocurrencies such as Bitcoin or Litecoin for electronic payments.

Darknet marketplaces mimic conventional e-commerce services such as eBay, having three main actors: vendors, buyers, and market administrators. Buyers can leave reviews, send messages to vendors, and dispute transactions. Vendors give product descriptions and basic details such as quantities, prices, and shipping services. Administrators typically receive a commission of between three and eight percent from each sale and provide escrow services and overall supervision of the website and market operation.

Fentanyl, a potent synthetic opioid, has entered illicit drug markets worldwide, leading to a new opioid epidemic. The presence of fentanyl on darknet markets makes it effortless to acquire in a variety of physical forms. Fentanyl's potency allows it to be shipped in significantly smaller quantities than other opioids. This makes it attractive to vendors, who specialise in stealth packaging and use ordinary postal and courier services. All these factors make it difficult to regulate the manufacture and distribution of fentanyl. The fact that fentanyl is relatively easy to modify has also led to the production of even more potent derivatives (or analogues) such as carfentanil, furanylfentanyl, methylfuranylfentanyl, methoxyacetylfentanyl, and acrylfentanyl (O'Connor 2018).

The potency of different opioids is measured relative to morphine's potency as a pain suppressant. Fentanyl is about 80 to 100 times stronger than morphine, depending on user tolerance and purity. The derivatives of fentanyl are also potent. Carfentanil, for example, is 10,000 times stronger than morphine. Carfentanil is distinguished by its extraordinary potency and lethality.

Method

This bulletin draws on the darknet data collected by the Australian National University's Cybercrime Observatory, with a focus on fentanyl products. Data were collected over 51 days (from 2 January to 23 February 2019) from 36 'scrapes' of six omnibus darknet markets: Berlusconi, Dream Market, Empire, Tochka, Valhalla, and Wall Street. Each of these markets posts at least 1,000 products. All markets except Berlusconi experienced some downtime over the data collection period. This bulletin includes only unique product listings across all markets.

Darknet markets are vulnerable to distributed denial of service attacks, exit scams (where a business stops sending orders but continues to accept payment for new orders), voluntary closures, and occasionally hacks, de-anonymisation or seizure by law enforcement (EMCDDA & Europol 2017: 8). Markets are typically short lived, mostly operating for less than 12 months (EMCDDA & Europol 2017: 16). However, apart from Empire, the darknet markets included in this data capture have been operating longer (eg Dream Market since 2013 and Tochka since 2015).

In June 2018 Dream Market, although a major market for illicit drugs, banned the sale and listing of fentanyl and its analogues. However, Dream Market was included in this study because it is the largest market and because occasional rogue listings of fentanyl and other 'forbidden products and services' are still observed (eg assassinations; weapons of mass destruction; other weapons; poisons; child pornography; and audio, video or images of people being hurt or murdered).

Details of products, prices and vendors were captured by web crawlers designed to function in The Onion Router. These crawlers circumvent defences designed to prevent denial of service attacks, a common way to disrupt a market competitor. For example, most darknet markets use 'captcha' logins that restrict botnet and automated browser activity and limit the number of web-pages or product listings a visitor may access in a single session. Once the markets are accessed, the text describing the products is copied ('scraped') and stored in an external database for analysis. Details of the data capture method are provided in a technical report titled 'Data capture and analysis of darknet markets' (Ball et al. 2019).

Table 1: Market share by all unique products, drugs, opioids and fentanyl listings

Markets	All unique listings n (%)	Drugs n (%)	Opioids n (%)	Fentanyl n (%)
Berlusconi	38,673 (15.5)	13,079 (10.6)	420 (5.7)	64 (14.6)
Dream	167,217 (67.1)	88,905 (72.3)	5,495 (74.3)	30 (6.8)
Empire	9,483 (3.8)	2,765 (2.2)	104 (1.4)	34 (7.7)
Tochka	6,336 (2.5)	3,312 (2.7)	72 (1.0)	38 (8.6)
Valhalla	10,765 (4.3)	7,110 (5.8)	511 (6.9)	45 (10.3)
Wall Street	16,866 (6.8)	7,861 (6.4)	795 (10.8)	228 (51.9)
Total	**249,340**	**123,032**	**7,397**	**439**

Note: Percentages refer to column totals. Percentages may not total 100 due to rounding

Products, prices and weights

Each day, at least 15.55 kilograms of fentanyl products were available to buyers visiting the darknet markets included in this study. Over half (54%) of the available fentanyl was listed on Wall Street, followed by Berlusconi (15%), Valhalla (10%), Tochka (9%) and Empire (8%). A small number of fentanyl products (n=30, or 7%) were found on Dream Market, which dominates the market for opioids (74%) and drugs (72%) and has the largest number of overall listings (67%).

The average price of fentanyl was calculated excluding extreme outliers (eg vendors offering free samples or charging extremely high prices for 'pure' product). Vendors typically sell fentanyl in small quantities—micrograms or milligrams—but offerings in grams and occasionally larger quantities are also observed.

Figure 1 shows the number of unique listings of opioids observed and the relative share of various opioids. Heroin, oxycodone, tramadol, fentanyl and codeine account for the majority of opioid products available.

Figure 1: Opioids available on darknet markets, by type of opioid

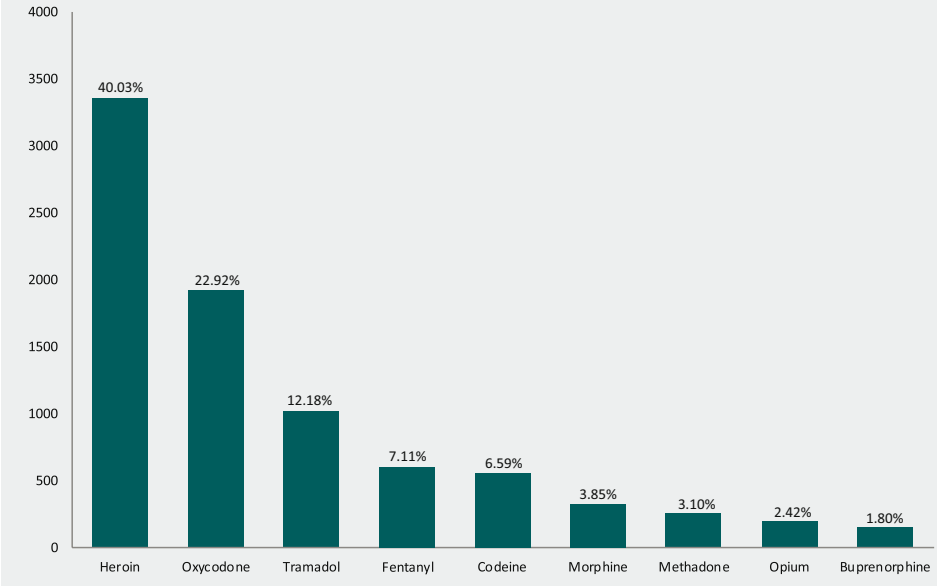


Table 2 compares the physical forms, the average price per gram and overall quantities found in the six markets. For the purposes of comparison, the street price in New South Wales of a 100 microgram patch of fentanyl is estimated to range from A$50 to A$400 (Australian Criminal Intelligence Commission 2018).

For about one in five listings (n=88 or 20% of the sample), weight values were not available. Adjusting for these missing values using the median and average weight of known listings as proxy values, an estimated 21.95 kilograms of fentanyl was available. This is likely an underestimate because only products strictly labelled as fentanyl or its derivatives were captured and classified. Products listed under colloquial names (eg 'Apache', 'China White', 'Bear', 'TNT'), whose potency and exact chemical composition are unknown, were not included in this analysis. In addition, nine propriety prescription fentanyl products were identified, including seven Sandoz and two Duragesic transdermal patches with a total weight of 0.0079 grams. Two of these products were listed on a market that had banned fentanyl.

Table 2: Total weight and unit prices of fentanyl and its analogues

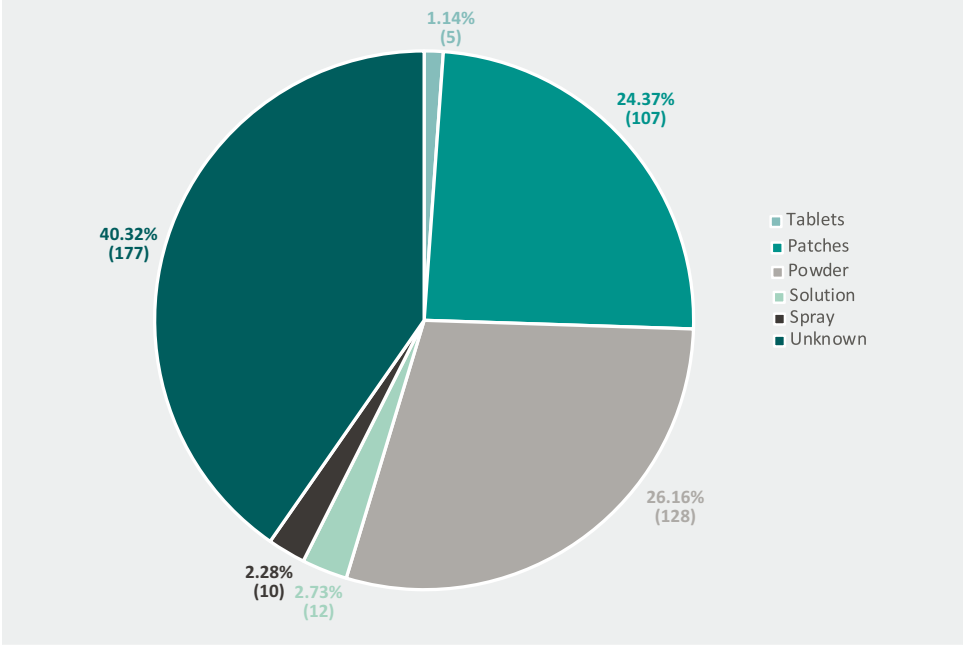
	Weight (grams)	Market share (%)	Average price (A$ per gram)	Common physical forms
Fentanyl	6,189.82	39.81	79.17	powder, patches
Carfentanil	5,669.69	36.47	300.90	powder, solution
Methylfuranylfentanyl	2,100.97	13.51	36.14	powder
Furanylfentanyl	1,501.91	9.66	122.90	powder
Methoxyacetylfentanyl	84.99	0.54	29.75	powder
Acrylfentanyl	0	0	0	unknown

Note: Acrylfentanyl appeared on Dream Market prior to the 2018 ban and is included here because of an expectation that it would appear on other markets

Physical form

The dataset revealed five physical forms: tablets, patches, powder, solutions, and sprays. Patches and powder dominated, with about 88 percent of the total share after adjusting for missing values (177 out of 439 product listings did not describe physical form).

Figure 2: Physical forms of fentanyl (n=439 products)



Vendors

Preliminary results identified 5,445 unique vendors across the six darknet markets surveyed. Among these, 102 vendors (2% of all vendors) were identified as selling fentanyl, and only eight of these operated in multiple markets. On average, each vendor offered 215.6 grams of fentanyl, with half (the median) offering less than 53.0 grams. However, the top seven vendors, each of whom offered over 1,000 grams, accounted for 62 percent (13.66 kg) of all the available fentanyl.

Of the 102 fentanyl vendors, 58 offered worldwide shipping (including to Australia), but the other 44 vendors did not provide details about shipping and packaging services. The data suggest that a small number of vendors reported shipping from Australia, although their location is unable to be verified.

Most vendors appear to be generalists, listing many types of drugs. However, several vendors seem to specialise in fentanyl and carfentanil, often selling significantly larger quantities of these drugs.

Conclusion

Despite the limited scale and duration of this data collection, a small but significant fentanyl market was identified on the darknet, including large amounts of carfentanil. Over one-third (36.5%) of the estimated 15.55 to 21.95 kilograms of fentanyl products for sale were the extremely potent carfentanil analogue, in solution or powder form. Fentanyl products are typically sold in very small quantities (micrograms or milligrams) as patches or a powder, but larger quantities (5–10 grams or more) are also offered by several vendors who appear to specialise in fentanyl products. Further monitoring of darknet markets could explore smaller single vendor markets that may arise as larger omnibus markets become increasingly wary of the unwanted attention fentanyl products invite from law enforcement agencies.

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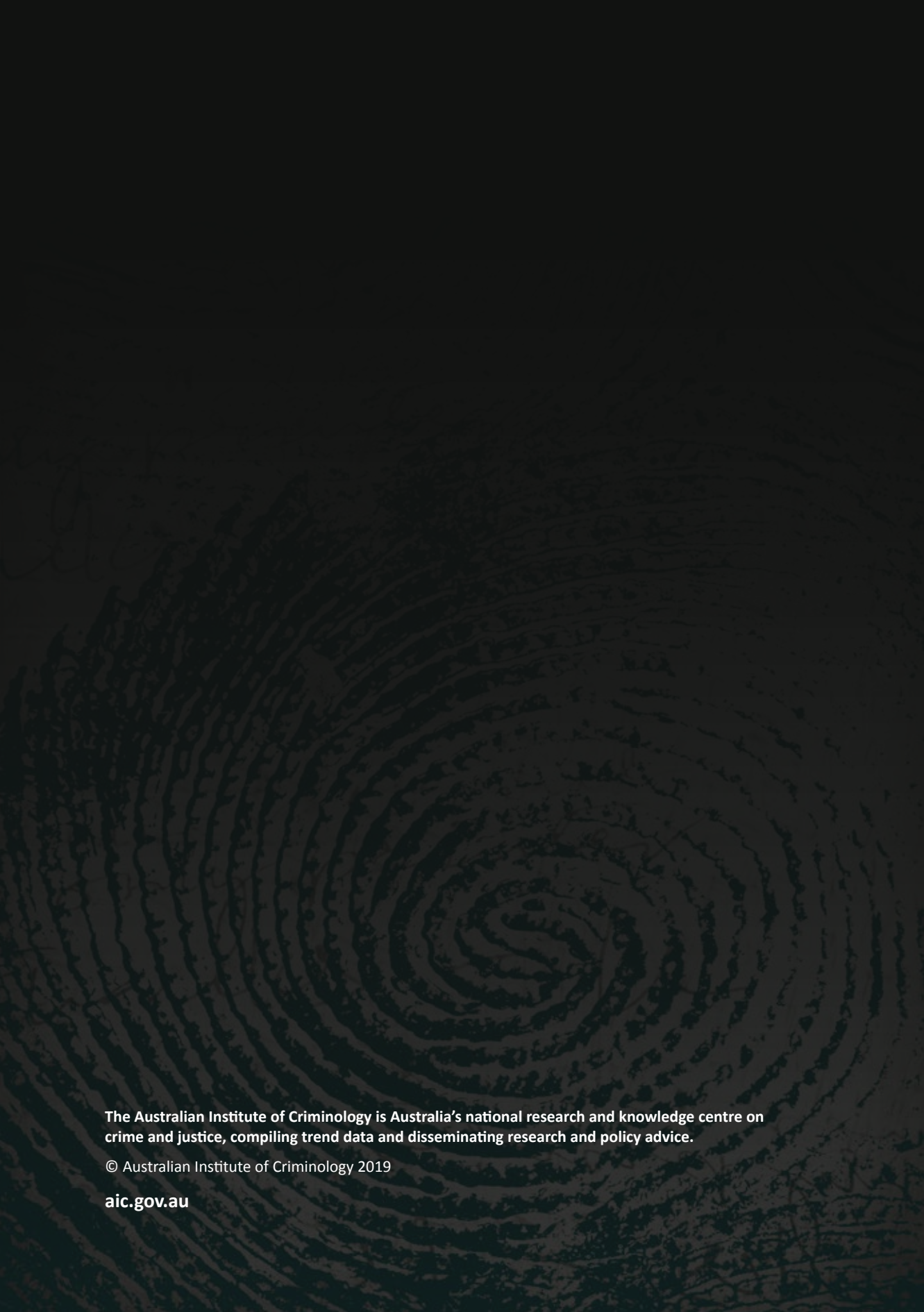

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