Intersections of Indigenous status, sex and age in sentencing decisions in the New South Wales Children’s Court

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Abstract
The current study uses sentencing data from the New South Wales Children’s Court to examine the impact of Indigenous status, age and sex on two outcomes: custodial status at sentence and the imposition of a detention order. Indigenous youth aged 10–16 were more likely to be in custody at sentence net of controls, although the major determinants of custody status were the criminal history of the offender as well as the nature of the offences that had been committed. Age and sex but not Indigenous status were related to the imposition of a detention order, with 17- to 21-year-old males having the highest odds of imprisonment. It is argued that while disparities in justice processing are primarily determined by differences in offending history and profile, some evidence was observed to indicate these differences may in part be a cumulative phenomenon, with early decisions indirectly leading to the later over-representation of Indigenous individuals.

Keywords
bail, detention, Indigenous incarceration, juvenile justice, sentencing

Introduction
An alarming characteristic of many western criminal justice jurisdictions is the over-representation of minority groups in prison populations. For example, in the United States, the respective imprisonment rates of Black, Hispanic and White Americans per 100,000 population were 3023, 1238 and 478 in 2011 (Carson & Sabol, 2012). Indigenous individuals are also over-represented in Canadian, United States and Australian gaols. The rate of imprisonment for Indigenous Canadians is some 10 times higher than the rate of imprisonment for non-Indigenous Canadians (Perreault, 2009). In the United States, in mid-2007, Native Americans were incarcerated at a rate of 942 per 100,000 population (Minton, 2008). In Australia, Indigenous and non-Indigenous incarceration...
rates were 1914 and 129, respectively, per 100,000 adults on 30 June 2012 (Australian Bureau of Statistics, 2012). This latter phenomenon is even more marked among juveniles. In 2007 for instance, Indigenous young people were detained at a rate of 397 per 100,000, compared to 14 non-Indigenous young people per 100,000. In June 2008, over half (54.7%) of juvenile detainees were Indigenous. By contrast, Indigenous prisoners made up just under a quarter (24.3%) of the adult gaol population (Australian Institute of Criminology, 2010).

These patterns of over-representation have been a source of concern to both policymakers and researchers. Scholars have suggested two reasons to account for these discrepancies. First, the ‘differential treatment’ hypothesis argues minority groups are likely to be sentenced to imprisonment by courts because of conscious or unconscious bias on the part of justice officials and departments. Second, the ‘differential offending’ hypothesis argues the higher imprisonment rates of minority groups are a selection effect caused by more frequent and severe offending by these individuals (Bishop, 2005; Jeffries & Bond, 2012a; Tracy, 2005).

A considerable body of research has investigated these competing claims (Bishop, 2005; Mitchell, 2005; Spohn & Holleran, 2000). In the United States this has focussed on the over-representation of Black and Hispanic Americans at all levels of the justice system, but notably in prison, whereas Australian research has been concerned with the over-representation of Indigenous individuals in gaol (Commonwealth of Australia, 1991; Jeffries & Bond, 2012a). The current paper will contribute to this literature by investigating the predictors of two outcomes: being in custody at sentencing and the imposition of a detention order. The reason for extending the parameters of this study beyond the usual focus on custodial sentences is to investigate the possibility of indirect racial effects on sentencing. Some evidence for this would be found if, for instance, Indigenous individuals were more likely to be in custody at sentence, and individuals in custody were more likely in turn to be sentenced to detention. These matters will be investigated using a dataset of all juveniles sentenced in the New South Wales Children’s Court between 2007 and 2008. The primary aim of the analyses will be to investigate interactions between Indigenous status, sex and age and whether these are related to custodial status at sentence and the subsequent sentencing decision. In what follows, I will first outline theoretical perspectives and research pertaining to this topic in the United States. I will then review research relating to the sentencing of Indigenous Australians, before presenting my findings.

**Theory and research on race and ethnic effects in the United States**

An extensive research literature in the United States indicates Black Americans, and to a lesser extent, Hispanic Americans, receive more severe sentences than White Americans, while controlling for other factors relevant to sentencing such as the type of offence committed and the criminal history of the offender. In a meta-analysis of 71 studies comparing a range of sentencing outcomes for Black and White offenders (e.g. imprisonment decisions and the length of subsequent sentence), a number of differences were observed. For instance, Black offenders had 28% higher odds of being sentenced to imprisonment than White offenders in non-Federal courts, and 15% higher odds of...
imprisonment in Federal courts (Mitchell, 2005). These results are consistent with other reviews (e.g. Spohn, 2000). Research conducted since, with large samples and stringent adjustment for selection bias, has provided further evidence to suggest Black Americans, and to a lesser extent Hispanic Americans, are dealt with more severely by United States courts net of controls (e.g. Bales & Piquero, 2012; Brennan & Spohn, 2008; Warren, Chiricos, & Bales, 2012).

Writing in 2010, Michael Tonry summarised racial disparities in the United States justice system thus:

> Imprisonment rates for black Americans have been five to seven times higher than those for whites since the mid-1980s. A third of black men in their 20s are in prison or jail or on probation or parole. A third of black babies born in 2001 will spend part of their lives as inmates in a federal or state prison. These are extraordinary numbers that raise fundamental questions about racial, social, and criminal justice in twenty-first-century America. (Tonry, 2010, p. 274)

Tonry ascribed this disparity to a complex mix of social, political, psychological and legal factors. In relation to sentencing practices, he argued implicit stereotypes, rather than outright racism, are more likely to contribute to differential sentencing of Black offenders. Other United States theorists have also argued for the differential sentencing hypothesis but from different perspectives.

One approach was suggested by Tittle and Curran (1988) who examined predictions made by two theoretical perspectives in criminology. The first, labelling theory, suggested minority groups would be more likely to commit acts of secondary deviance, in part because they would be more likely to be labelled as deviant than non-minority groups. The second, conflict theory, suggested minority group members would be sanctioned more harshly in an effort by elites to preserve their dominant social position.

The evidence they reviewed provided only equivocal support for these theoretical positions. Just under half of the studies (40%) showed a relationship between race and sentencing practices, however, this pattern of findings was attenuated in the more rigorously conducted studies. The authors argued these results did not necessarily constitute a fair test of the predictions of labelling and conflict theory as most studies reviewed failed to examine contingencies of sentencing practices, such as where the decision was made and who the decision was made by. Using court, file and census data from Florida ($N = 5,669$) a number of so-called contingent hypotheses were tested. Overall, the evidence suggested differential sentencing practices were relatively rare in Florida over the period the study examined. However, there were strong race effects for drug and sexual offences, and Black offenders were more likely to receive harsher sentences in jurisdictions with disproportionate numbers of young Black people. These findings were consistent with the argument that minority groups were perceived to constitute a threat to dominant elites, and as a result became the target of more severe sentencing. Race, sex and ethnicity were suggested to be some of the most salient factors that formed these perceptions.

A second theoretical perspective on the differential sentencing hypothesis was suggested by Steffensmeier, Ulmer, and Kramer (1998) in a study examining the impact of race, sex and gender on United States sentencing decisions. These authors identified
three ‘focal’ concerns (i.e. factors judges focus on when making decisions) that influence judicial decision-making. The first, *blameworthiness*, relates to the defendants’ culpability: consistent with the retributive philosophy of punishment, more serious offences will attract more severe sentences. Second, judges consider the *protection of the community*, which is influenced by assessments regarding the danger posed by the offender and their risk of recidivism. Third, there are *practical constraints and consequences* that include factors such as the workload of the relevant jurisdiction and whether the offender is considered capable of enduring incarceration. These heuristics allow judges to make decisions in highly complex circumstances, and categories such as *young, black and male*, because of ‘widely held stereotypes’ (p. 764), become unconscious cognitive shortcuts indicating both danger to the community and heightened risk of reoffending. Using sentencing data from Pennsylvania (1989–1992, $N = 138,916$), the authors found a moderate main effect of race on the odds of receiving a prison sentence ($OR = 1.50$), with the probability of incarceration being 10% higher for Blacks compared to Whites. However, when interactions between race, sex and age were examined it became clear that the young Black males in the sample had considerably higher odds of being sentenced to prison, net of controls. The authors referred to this phenomenon as ‘the punishment cost of being young, Black and male’ (p. 1). A further study found evidence to support this in relation to interactions between ethnic (i.e. Hispanic) status, gender and age using United States state-level data from 1990 to 1996 ($N = 24,254$) (Steffensmeier & Demuth, 2006).

Similar themes emerge in research examining the sentencing of juvenile offenders in the United States. In a comprehensive review of 150 studies examining racial disparities in juvenile sentencing, Bishop (2005) concluded ‘racial disparities in sentencing are attributable in part to differences in offending. Yet the evidence is incontrovertible that, in most jurisdictions studied, race differences in offending alone are insufficient to explain minority overrepresentation in the juvenile justice system’ (p. 24). However, Bishop noted important differences between juvenile and adult sentencing. While adult sentencing is determined by factors related to the offence and the offender, juvenile justice processing often – and indeed properly – takes into account contextual factors such as the youths’ family circumstances. Models that control for only legal factors could therefore be underspecified. Bishop also distinguished between direct and indirect race effects. A direct race effect is where a racial group is observed to be more likely to receive a prison sentence, once the other relevant factors have been controlled for. An indirect race effect is where no such relationship is observed, but the racial group in question, for instance, more likely to be in custody at sentence, and individuals in custody are subsequently more likely to be imprisoned. Finally, race effects can be *interactive*. Individuals from a racial group might be no more likely to be sentenced to prison, but males, and not females, from that racial group might be. The absence of main effects might mask important racial differences in treatment, an argument made clear by the findings of Steffenmeier et al. (1998) and Steffensmeier and Demuth (2006).

Research investigating the sentencing of juveniles in the United States provides some support for these arguments. Engen, Steen, and Bridges (2002) in a review of 65 studies yielding 125 separate race/sentence analyses found, inter alia, race effects to be more likely in the early stages of processing (e.g. diversion or bail), and less likely in the later stages (e.g. sentence). Leiber and Fox (2005), in a study of 5554 young offenders in Iowa,
tested both the direct and indirect impact of race on detention decisions. They found both an additive and interactive effect of race on pre-adjudication detention. One example of this was Black youth charged with drug offences were more likely to be detained in pre-trial custody than White youth charged with similar offences. Race was also found to lead to more severe later outcomes indirectly; for example Blacks had higher odds of being detained prior to sentence, and these detained individuals had higher odds of receiving harsher subsequent treatment (e.g. transfer to the adult jurisdiction). Rodriguez (2010), in a study including Black, White, Hispanic and native American youth \(N = 18,927\), also found a cumulative effect of differential processing, with all minority groups more likely to be detained prior to adjudication, and detention at this stage of proceedings leading to more severe later treatment. These findings taken together reinforce the importance of examining decisions earlier in the sentencing process, as these might indirectly influence later treatment. Failure to do so could well obscure important racial and ethnic differences in juvenile justice processing.

A number of conclusions emerge from this review of the United States literature investigating racial and ethnic effects in sentencing. First, the evidence favours racial and ethnic disparity in sentencing even after controlling for selection effects. Second, it is clear the influence of both main and interactive effects on sentencing decisions is of considerable empirical (and indeed practical) interest. Third, examining sentencing decisions at one time point only can be misleading because racial effects at later decision points might only be evident through the influence of earlier decisions. In the next section, I will consider these points in relation to research investigating the sentencing of Indigenous offenders in Australia.

**Australian research investigating the sentencing of Indigenous offenders**

Scholarly debate relating to Indigenous over-representation in the Australian legal system has, as in the United States, revolved around the distinction between differential treatment and offending, although latterly the possibility of Indigenous offenders receiving more lenient sentences has also been considered (Jeffries & Bond, 2012a). The Royal Commission into Aboriginal Deaths in Custody (Commonwealth of Australia, 1991) is a common reference point for this debate. The Commission was set up in response to concerns about the high numbers of Indigenous deaths in custody. One notable conclusion was that the high numbers of Indigenous deaths were related to Indigenous over-representation in prison. The report of the Commission placed the blame for Indigenous over-representation largely on extra-legal factors such as the well-recognised level of Indigenous disadvantage across a number of areas including health, education and employment (Cooke, Mitrou, Lawrence, Guimond, & Beavon, 2007), but also attributed it to bias against Indigenous individuals at various levels of the legal system.

Rigorous research investigating the sentencing of Indigenous offenders has been less common in Australia than in the United States. A recent review by Jeffries and Bond (2012a) identified six Australian studies of adult sentencing that used appropriate methodology to adjust for recognised predictors of more severe sentences (Bond & Jeffries, 2010, 2011; Bond, Jeffries, & Weatherburn, 2011; Jeffries & Bond, 2009; Snowball & Weatherburn, 2006, 2007). A lesser number of studies investigating juvenile sentencing
have also been conducted in Australia (Bond & Jeffries, 2012b; Gallagher & Poletti, 2000; Luke & Cunneen, 1995; McGrath & Weatherburn, 2012). The overall pattern of findings has been in favour of the differential offending hypothesis, with most studies observing no differences in sentencing outcomes once offence and offender related variables are accounted for. Where differences have been observed, they have often been in favour of the Indigenous offenders. Each of these studies will now be reviewed in more detail.

Snowball and Weatherburn (2006, 2007), in two related studies, examined predictors of imprisonment among adults in NSW. In the first study (N = 93,130) they found no difference in the probability of imprisonment for Indigenous and non-Indigenous offenders after controlling for a range of factors including the type of offence and the offenders’ criminal histories. This study however excluded unrepresented offenders as well as individuals with previous episodes of imprisonment (Snowball & Weatherburn, 2006). The second study (N = 30,265) extended the earlier findings by including these groups of offenders. Indigenous offenders were observed to have higher odds of receiving a prison sentence, once the relevant covariates had been included in the equations, $OR = 1.17$, 95% confidence interval (CI) = 1.06, 1.29, although the difference was relatively modest (Snowball & Weatherburn, 2007).

Jeffries and Bond (2009) compared 127 Indigenous offenders with a matched sample of 127 non-Indigenous offenders in South Australia. After controlling for relevant covariates, the Indigenous offenders were found to be less likely to receive a prison sentence compared to the matched non-Indigenous offenders, however Indigenous offenders who were imprisoned received longer sentences. In a study of 2789 women sentenced in Western Australia between 1996 and 2005, the same authors found the Indigenous women in the sample had lower odds of imprisonment compared to the non-Indigenous women, net of controls (Bond & Jeffries, 2010). Bond and Jeffries (2011) also examined sentencing decisions in relation to indictable offences heard in Western Australia’s higher courts (District and Supreme) using a random sample of 918, stratified by sex and Indigenous status. The study was notable for its rich range of controls, including education, health status and negative life history, in addition to the usual measures of offence type and criminal history. Indigenous status was unrelated to the decision to imprison once all the relevant controls had been included in the logistic regression model. When interactions were examined, Indigenous males were found to have the highest odds of imprisonment. A similar finding was observed in relation to age, with older Indigenous but not non-Indigenous offenders more likely to be imprisoned. Finally, Bond, Jeffries, and Weatherburn (2011) in a study of 9991 adult offenders sentenced in NSW between 2003 and 2004 found Indigenous status to be unrelated to sentence length in higher courts, but a predictor of a shorter sentence in the lower courts, once covariates were taken into account. The only interactive effect identified was between age and Indigenous status, with older non-Indigenous offenders receiving longer sentences than their younger counterparts. No such effect was observed for the Indigenous offenders.

Since the publication of their 2012 review (Jeffries & Bond, 2012a) a number of further studies have been published by the same authors. The finding that Indigenous offenders receive shorter sentences net of control was also replicated in a study of 563 offenders sentenced in the higher courts of Western Australia between 2003 and 2005.
Further, in a study of three Queensland courts (higher children’s, $N = 695$, lower and higher adult, $N = 970$ and 1179, respectively), Indigenous offenders were found to have equal odds of imprisonment in both higher (i.e. adult and children’s) courts, but higher odds of imprisonment in the other adult court (Bond & Jeffries, 2012b). Finally, in a study of lower court sentencing in NSW and South Australia, Jeffries and Bond (2012b) found Indigenous offenders in both jurisdictions to have higher odds of imprisonment once demographic, prior history and other relevant legal factors had been controlled for.

In addition to Bond and Jeffries’ 2012 study of juvenile decisions in Queensland, there has been comparatively little research examining the sentencing of juveniles in Australia. Two studies that explicitly examined this question among juvenile offenders in NSW found no difference between Indigenous and non-Indigenous sentences once covariates were accounted for (Gallagher & Poletti, 2000; Luke & Cunneen, 1995). A further study in NSW examining the impact of detention orders on reoffending found Indigenous status was unrelated to detention in a propensity score model (McGrath & Weatherburn, 2012). However, it is clear the sentencing of Indigenous juveniles in Australia is an under-researched area.

Bail

Bail laws in NSW, in particular, have been a matter of some controversy for a number of years. Stubbs (2010) traced the history of the relevant legislation and subsequent amendments and concluded changes made since the passing of the *Bail Act* in 1978 had the effect of leading to a greater number of juveniles in remand custody as a result of either being bail refused or being unable to meet the increasingly stringent bail conditions imposed. Data from the relevant juvenile justice agency provided to support this view showed the juvenile remand population increased from 3255 in 2003/4 to a peak of 5081 in 2007/8. Since then this figure has declined somewhat, with a total of 4088 young people remanded to custody in 2011/2012 (Department of Attorney General and Justice, 2012). Partly in response to these controversies, an extensive review of bail laws in NSW was carried out by the Law Reform Commission. The Commission, in its report, characterised bail laws in NSW as follows:

> The most significant of the amendments have removed the presumption in favour of bail in relation to certain offences and certain defendants, have introduced a presumption against bail in other instances, and have required that bail should only be granted in exceptional circumstances in other cases. As a result, NSW now has one of the most convoluted and restrictive bail statutes in Australia. (NSW Law Reform Commission, 2012, p. xvii)

Subsequently, the NSW government has amended the *Bail Act* 1978 to replace these presumptions with a risk-based approach, where the decision-maker is required to assess whether the accused will fail to appear, will commit a serious offence, endanger the safety of individuals or the community, or interfere with a witness. Under the terms of the Bill, introduced into Parliament on 1 May 2013, bail may only be refused if there is an unacceptable risk that cannot be addressed through bail conditions.3

The United States research reviewed earlier suggested racial disparities in the imposition of detention orders could in part be a result of disparities in bail status.
(Leiber & Fox, 2005; Rodriguez, 2010). Unfortunately, little research in Australia has examined racial disparities in bail status. One recent study examining this question in NSW adult lower courts found Indigenous status had a small but significant impact on bail status at sentence, with Indigenous individuals having a 2.8% risk of being bail refused, compared to 2.5% for non-Indigenous individuals (Weatherburn & Snowball, 2012). It is clear this remains an under-researched area in Australian sentencing scholarship.

**Conclusion and research aims**

Given the continuing over-representation of minority groups at all levels of the justice system, but particularly in detention, further research investigating the reasons for these disparities is important. This is particularly the case in relation to Indigenous juveniles in Australia, who are one of the most heavily detained groups in the country. It is surprising factors relating to the sentencing of these young people have not received more attention.

Research from the United States (e.g. Engen, Steen, & Bridges, 2002; Rodriguez, 2010) suggests the over-representation of minority groups in detention could be the result of a cumulative process. Relatively small differences at each level of processing could, according to this view, result in large disparities at later decision points. Alternatively, disparities in sentence could be an indirect effect of earlier differential treatment. Although this hypothesis has not been tested in research relating to the over-representation of Indigenous youth in detention in Australia, it is at least plausible that similar processes might occur here. For this reason, the current study will not only examine disparities in juvenile sentencing, but also at decisions preceding sentencing. Research investigating these matters should control for as many legal factors related to sentencing as possible. ‘Legal’, in this context, is a convenient label for factors related to the offence (e.g. seriousness) and offender (e.g. criminal history) that are taken into account by sentencing officers and will be used throughout to describe these. It is also important to investigate interactive effects. The absence of a main effect of Indigenous status on sentence could well mask important interactive effects. The current study will therefore examine the impact of interactions between age, sex and Indigenous status in relation to two outcomes for juvenile offenders: custodial status at sentencing and the imposition of a detention order. It will do so using sentencing data from the NSW Children’s Court between 2007 and 2008.

**Method**

**Data**

Data for this study were obtained from the reoffending database managed by the NSW Bureau of Crime Statistics and Research. This database contains the records of each individual sentenced in a NSW Court since 1994. Further information regarding the matching procedures used and their accuracy can be found in Hua and Fitzgerald (2006) and Weatherburn, Lind, and Hua (2003). The dataset consists of all finalised Children’s Court appearances between 2007 and 2008 where a juvenile was convicted of one or more charges. Where the same individual had more than one appearance, one was chosen at random. The final sample was 7449.
**Dependent variables**

There were two dependent variables used in this study. They are:

*Custodial status at sentencing.* In its original form, this variable was coded 1 = bail dispensed with ($N = 2127, 28.5\%$), 2 = on bail ($N = 4281, 57.5\%$), 3 = in custody ($N = 1010, 13.5\%$), 4 = in custody for prior offence ($N = 31, 0.5\%$). The first two categories were re-coded as 0 = not in custody ($N = 6408, 86\%$) and the last two as 1 = in custody at sentence ($N = 1041, 14\%$). Although bail determinations account for most of the variance in custodial status, it is clear a small number of individuals in custody were there because of prior offences. It was considered more consistent with the theoretical framework of the study, in particular the focal concerns approach, to include these latter individuals because this approach might see custodial rather than bail status as having the more potent signalling effect to sentencing officers. This variable is therefore referred to as custodial status at sentence.

*Sentence.* This variable was coded 0 = non-custodial sentence ($N = 6791, 91\%$) and 1 = custodial sentence ($N = 658, 9\%$). A custodial sentence was defined as a full-time control order.

**Independent variables**

The independent variables in this study have been selected because of their established empirical and theoretical relationship with sentencing and cover a wide range of both legal and extra-legal factors. I will describe individual level factors first and then legal factors.

**Individual**

Indigenous status: In the original dataset, the Indigenous status of 592 individuals was recorded as unknown. These individuals were removed from analyses leaving a final sample of 4797 (64.4\%) non-Indigenous participants and 2652 (35.6\%) Indigenous participants.

Sex: Although some recent evidence suggests that the sex gap in offending is narrowing, males still make up the majority of the individuals before the justice system, and the majority of individuals given detention orders (Carrington, 2006; Richards, 2011). Sex is therefore an important control variable in any study of criminal offending. In the current study, one of the main empirical questions is whether sex interacts with Indigenous status and age, which previous research indicates is a possibility. There were a total of 1345 (18\%) females and 6104 (82\%) males in the final sample.

Age: The impact of age on sentencing for juveniles is unclear. Steffensmeier et al. (1998) found a significant and non-linear age effect however this was with adult offenders. Given detention is a last resort in the juvenile jurisdiction it might be expected older offenders would be more likely to receive this sentence, as they would have had more opportunity to amass a significant criminal history. The mean age of the sample was 16.24 (standard deviation ($SD$) = 1.61) with a range from 10 to 21. For the analyses, age was dichotomised so that 0 = 10–16 ($N = 4078, 50.32\%$) and 1 = 17–21 ($N = 4026, 49.68\%$). The primary reason to dichotomise age was because the analytic technique to be used in this study, logistic regression, assumes a linear relationship between the
predictor and dependent variables, and this is almost certainly violated in the case of age (Steffensmeier, Kramer, & Ulmer, 1995).

Socio-economic disadvantage: Cross-sectional studies have shown that rates of juvenile participation in crime in NSW are much higher in areas of high economic and social disadvantage (Weatherburn & Lind, 2001). I control for this variable using the socio-economic indexes for areas tool (Australian Bureau of Statistics, 2001) and the postcode for each offender recorded in the re-offending database. The index score was categorised into quartiles with 1 = very low disadvantage (N = 1451, 19.48%), 2 = low disadvantage (N = 1999, 26.84%), 3 = disadvantage (N = 2408, 32.33%) and 4 = high disadvantage (N = 1591, 21.36%). In the original dataset, 206 individuals were missing values on this variable. New values were imputed by regressing the missing values against the other covariates in the dataset.

Remoteness index: This variable is based on the Australian standard geographical classification tool (Australian Bureau of Statistics, 2008) and the postcode of residence for each offender. People living in remote areas are socially, environmentally and culturally distinct from their urban counterparts (Allen, Inder, Lewin, Attia, & Kelly, 2012; Baxter, Hayes, & Gray, 2011). Given these differences, it is an important factor to control for. There are five categories in this variable: 1 = living in a major city (N = 3822, 51.31%), 2 = living in inner regional areas (N = 1517, 20.37%), 3 = living in outer regional areas (N = 1684, 22.61%), 4 = living in remote areas (N = 236, 3.17%) and 5 = living in very remote areas (N = 190, 2.55%). As with the socio-economic disadvantage variable, there were 206 missing values for this variable, and these were dealt with in the same way.

**Legal**

**Offence seriousness**

Sentencing properly takes into consideration the severity of the offence in question. This is controlled for using a measure of offence seriousness developed by MacKinnell, Poletti, Holmes, and Wales (2010). This measure (known as the offence seriousness index, or OSI) has two advantages. First, its values can be grouped into a small number of categories. Second, because it is based on past sentencing practice, the OSI is a strong predictor of whether or not an offender will receive a prison sentence (MacKinnell et al., 2010). Four categories of seriousness were used in the current study, where a higher score indicates a more serious offence. In category 1 (least serious) there were 1816 individuals (24.4%); in category 2 there were 1793 individuals (23.6%); in category 3, 1733 individuals (23.7%) and in category 4 (most serious) there were 2107 individuals (28.3%).

**Violent offence**

In addition to offence seriousness, a variable indicating whether the young person had been charged with a serious or violent offence was created. This was defined as an aggravated assault, robbery or sexual assault. In total 1488 participants (20%) had been charged with such an offence.

**Criminal history**

There were a number of different measures of criminal history available. The variable measuring number of prior convictions was somewhat skewed in its raw form (M = 1.64,
$SD = 2.73$, range $0–29$. It was thus re-categorised so that $0 = \text{no prior convictions (} N = 3539, 47.51\%)$, $1 = \text{one prior conviction (} N = 1510, 20.27\%)$ and $2 = \text{two or more prior convictions (} N = 2400, 32.22\%)$. The other measures were whether the young person had previously received a custodial ($N = 599, 8\%$) or suspended sentence ($N = 373, 5\%$), had been convicted of a violent offence ($N = 1488, 20\%$), had breached a justice order ($N = 850, 11.4\%$) and appeared in the Children’s Court ($N = 4061, 54.5\%$).

**Legal representation**

A total of 1636 young people in the study (22\%) were unrepresented at their sentencing hearing.

**Specialist magistrate**

A total of 4692 young people (63\%) were sentenced by non-specialist Magistrates. This measure was included in the analyses to first determine whether there is any difference in sentencing patterns between specialist and non-specialist Magistrates, and second, to control for these if there are.

**Counts of principal offence**

This variable records the number of counts of the principal offence at the time of sentencing. In its raw form this variable was skewed ($M = 1.14, SD = 0.88$, range $1–38$). It was thus dichotomised so that $0 = \text{one count only (} N = 6895, 92.5\%)$ and $1 = \text{more than one count (} N = 554, 7.5\%)$.

**Concurrent offences**

This variable records the number of concurrent charges (both proven and unproven) at sentence. Like counts, this variable was skewed in its raw form ($M = 1.59, SD = 2.39$, range $0–44$) and was also categorised so that $0 = \text{no concurrent offences (} N = 3007, 40.4\%)$ and $1 = \text{one or more concurrent offences (} N = 4442, 59.6\%)$.

**Analyses**

Analyses were performed using Stata version 11. First I report descriptive statistics for the entire sample, as well as for the Indigenous and non-Indigenous participants. I then use logistic regression to examine the relationship between Indigenous status, age, sex and the two dependent variables: bail status at sentence and detention orders. I examine predictors of these factors for the entire sample and then separately by sex and Indigenous status to investigate interactive effects. I then use a categorical variable indicating the age, sex and Indigenous status of the young person to further investigate these interactions.6

**Results**

**Descriptive statistics**

Descriptive statistics are displayed in Table 1. Indigenous offenders were more likely to be given detention orders and were more likely to be in custody at sentence.
They also scored substantially higher on all the criminal history measures than non-Indigenous offenders (Cramer’s $V^2 = 0.11$–0.17) and had more concurrent offences at sentence (Cramer’s $V = 0.05$). By contrast, the non-Indigenous offenders were more likely to have been charged with a serious or violent offence (Cramer’s $V = 0.07$), while there was no difference in the general offence seriousness measure used between the two groups. Another notable finding was Indigenous offenders were substantially less to be legally represented at sentence (Cramer’s $V = 0.16$) and were also more likely to be from a remote area. Non-Indigenous young people were more likely to come from an area of higher socio-economic disadvantage by contrast.

### Predictors of custodial status at sentence

Indigenous young people, males and offenders 10–16 years of age all had higher odds of being in custody at sentence, net of controls. Other factors associated with custodial status were how serious the offence was, the offenders’ criminal histories, number of concurrent offences and remoteness index. Offenders living in more remote areas were also more likely to be in custody. It should be noted that although age, sex and Indigenous status were all significant predictors of custodial status, they accounted for only a modest amount of variance. For instance, the area under the curve (AUC)$^8$ for the full custody at sentence model was 0.788 (95% CI, 0.771, 0.804) compared to an AUC of 0.773 (95% CI, 0.757, 0.790) for this model minus age, sex and Indigenous status.
Although the full 15 predictor model accounts for significantly more variance than the reduced 12 predictor model (Incr. $X^2 = 97.20$, $p = 0.001$), it is clear the addition of these demographic variables improved the predictive ability of the model only marginally.

A number of differences were evident when the same model was run with the sample split by sex and Indigenous status. While the results for the males mirrored those for the whole sample, the only significant predictors of custodial status at sentence for the females were Indigenous status, age, concurrent offences and remoteness. Differences also emerged when the sample was split by Indigenous status. Sex, prior offences and the remoteness index were predictors of custodial status at sentence for the Indigenous youth, whereas a prior suspended sentence was related to custodial status for the non-Indigenous youth. Table 2 has the complete models.9

To further investigate interactive effects a new variable was created which categorised participants by age, sex and Indigenous status. The reference group was Indigenous males ages 10–16, who had substantially higher odds of being in custody at sentence compared to the other groups. For example, they had a 31% higher probability of being in custody than 17- to 21-year-old Indigenous females and were also 27% more likely to be in custody than non-Indigenous females of the same age group.10 Their odds of being

<table>
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<th>Variable</th>
<th>Total sample(^a)</th>
<th>Females(^b)</th>
<th>Males(^c)</th>
<th>Non Indigenous(^d)</th>
<th>Indigenous(^e)</th>
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<td>1.31 0.086</td>
<td>1.74 0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous status</td>
<td>1.71 0.000</td>
<td>1.63 0.026</td>
<td>1.72 0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age category</td>
<td>0.63 0.000</td>
<td>0.60 0.025</td>
<td>0.64 0.000</td>
<td>0.73 0.003</td>
<td>0.53 0.000</td>
</tr>
<tr>
<td>Offence seriousness</td>
<td>1.27 0.000</td>
<td>1.10 0.392</td>
<td>1.29 0.000</td>
<td>1.29 0.000</td>
<td>1.25 0.000</td>
</tr>
<tr>
<td>Violent offence</td>
<td>0.95 0.578</td>
<td>0.71 0.256</td>
<td>1.01 0.950</td>
<td>0.81 0.120</td>
<td>1.18 0.273</td>
</tr>
<tr>
<td>Prior offences</td>
<td>1.06 0.000</td>
<td>1.05 0.459</td>
<td>1.07 0.001</td>
<td>1.04 0.154</td>
<td>1.08 0.001</td>
</tr>
<tr>
<td>Prior imprisonment</td>
<td>4.10 0.000</td>
<td>2.43 0.063</td>
<td>4.30 0.000</td>
<td>4.55 0.000</td>
<td>3.86 0.000</td>
</tr>
<tr>
<td>Prior suspended sentence</td>
<td>1.46 0.009</td>
<td>1.14 0.812</td>
<td>1.51 0.006</td>
<td>1.97 0.003</td>
<td>1.23 0.263</td>
</tr>
<tr>
<td>Prior violent offence</td>
<td>1.13 0.220</td>
<td>1.73 0.082</td>
<td>1.09 0.408</td>
<td>1.06 0.689</td>
<td>1.21 0.161</td>
</tr>
<tr>
<td>Prior breach offence</td>
<td>1.53 0.000</td>
<td>1.77 0.070</td>
<td>1.49 0.001</td>
<td>1.54 0.010</td>
<td>1.54 0.004</td>
</tr>
<tr>
<td>Prior juvenile offence</td>
<td>1.49 0.000</td>
<td>1.09 0.768</td>
<td>1.53 0.000</td>
<td>1.51 0.002</td>
<td>1.49 0.011</td>
</tr>
<tr>
<td>Counts of principal offence</td>
<td>0.83 0.231</td>
<td>0.54 0.204</td>
<td>0.85 0.329</td>
<td>0.90 0.624</td>
<td>0.77 0.237</td>
</tr>
<tr>
<td>Concurrent offences</td>
<td>2.58 0.000</td>
<td>1.92 0.004</td>
<td>2.76 0.000</td>
<td>2.39 0.000</td>
<td>2.81 0.000</td>
</tr>
<tr>
<td>Socio-economic disadvantage</td>
<td>0.98 0.577</td>
<td>0.95 0.604</td>
<td>0.98 0.660</td>
<td>0.94 0.184</td>
<td>1.03 0.579</td>
</tr>
<tr>
<td>Remoteness index</td>
<td>0.86 0.000</td>
<td>0.71 0.003</td>
<td>0.88 0.002</td>
<td>0.90 0.090</td>
<td>0.85 0.001</td>
</tr>
</tbody>
</table>

\(^a\)N = 7449, Model $X^2 = 1105.40$, $R^2 = .18$, AUC = 0.79.
\(^b\)N = 1345, Model $X^2 = 78.15$, $R^2 = .10$, AUC = 0.71.
\(^c\)N = 6104, Model $X^2 = 998.68$, $R^2 = .19$, AUC = 0.80.
\(^d\)N = 4797, Model $X^2 = 1105.40$, $R^2 = .13$, AUC = 0.74.
\(^e\)N = 2652, Model $X^2 = 558.73$, $R^2 = .20$, AUC = 0.80.
in custody was also marginally higher than the Indigenous females aged 10–16, however this difference was not significant ($p = 0.076$). These odds, which are net of controls, are graphed in Figure 1.

**Predictors of detention orders**

Custodial status at sentence was an overwhelmingly strong predictor of being sentenced to detention, with young people in custody having 20 times higher odds of receiving a control order. In fact, 74% of young offenders who were in custody at sentence received a control order. In the detention model Indigenous status, age and sex were unrelated to detention orders. Most of the legal variables were related to sentence in the direction expected. Offenders charged with more serious offences, violent offences, who

### Table 3. Odds of being sentenced to detention.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total sample</th>
<th>Females</th>
<th>Males</th>
<th>Non-Indigenous</th>
<th>Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (95% CI)</td>
<td>P</td>
<td>Odds p</td>
<td>OR P</td>
<td>Odds p</td>
</tr>
<tr>
<td>Gender</td>
<td>1.38 (0.091)</td>
<td></td>
<td></td>
<td>1.44 (0.199)</td>
<td>1.34 (0.261)</td>
</tr>
<tr>
<td>Indigenous status</td>
<td>1.15 (0.279)</td>
<td></td>
<td></td>
<td>1.25 (0.187)</td>
<td>1.18 (0.345)</td>
</tr>
<tr>
<td>Age category</td>
<td>1.21 (0.123)</td>
<td></td>
<td></td>
<td>1.25 (0.187)</td>
<td>1.18 (0.345)</td>
</tr>
<tr>
<td>Offence seriousness</td>
<td>1.57 (0.000)</td>
<td></td>
<td></td>
<td>1.51 (0.000)</td>
<td>1.62 (0.001)</td>
</tr>
<tr>
<td>Violent offence</td>
<td>2.05 (0.000)</td>
<td></td>
<td></td>
<td>2.03 (0.000)</td>
<td>2.24 (0.001)</td>
</tr>
<tr>
<td>Prior offences</td>
<td>1.07 (0.005)</td>
<td></td>
<td></td>
<td>1.13 (0.002)</td>
<td>1.04 (0.183)</td>
</tr>
<tr>
<td>Prior imprisonment</td>
<td>3.74 (0.000)</td>
<td></td>
<td></td>
<td>3.09 (0.000)</td>
<td>4.34 (0.001)</td>
</tr>
<tr>
<td>Prior suspended sentence</td>
<td>3.98 (0.000)</td>
<td></td>
<td></td>
<td>3.74 (0.000)</td>
<td>4.93 (0.001)</td>
</tr>
<tr>
<td>Prior violent offence</td>
<td>1.13 (0.393)</td>
<td></td>
<td></td>
<td>1.24 (0.303)</td>
<td>1.05 (0.816)</td>
</tr>
<tr>
<td>Prior breach offence</td>
<td>1.03 (0.849)</td>
<td></td>
<td></td>
<td>0.77 (0.306)</td>
<td>1.23 (0.329)</td>
</tr>
<tr>
<td>Prior juvenile offence</td>
<td>2.16 (0.000)</td>
<td></td>
<td></td>
<td>1.69 (0.021)</td>
<td>3.00 (0.001)</td>
</tr>
<tr>
<td>Custodial status at sentence</td>
<td>19.93 (0.000)</td>
<td></td>
<td></td>
<td>19.47 (0.000)</td>
<td>20.22 (0.001)</td>
</tr>
<tr>
<td>Legal representation</td>
<td>0.39 (0.000)</td>
<td></td>
<td></td>
<td>0.61 (0.081)</td>
<td>0.29 (0.001)</td>
</tr>
<tr>
<td>Specialist magistrate</td>
<td>0.86 (0.294)</td>
<td></td>
<td></td>
<td>0.89 (0.539)</td>
<td>0.81 (0.354)</td>
</tr>
<tr>
<td>Counts of principal offence</td>
<td>0.15 (0.000)</td>
<td></td>
<td></td>
<td>0.06 (0.000)</td>
<td>0.24 (0.001)</td>
</tr>
<tr>
<td>Concurrent offences</td>
<td>2.88 (0.000)</td>
<td></td>
<td></td>
<td>2.78 (0.000)</td>
<td>2.84 (0.001)</td>
</tr>
<tr>
<td>Socio-economic disadvantage</td>
<td>0.92 (0.168)</td>
<td></td>
<td></td>
<td>0.99 (0.862)</td>
<td>0.83 (0.032)</td>
</tr>
<tr>
<td>Remoteness index</td>
<td>0.87 (0.068)</td>
<td>0.76</td>
<td>0.301</td>
<td>0.89 (0.118)</td>
<td>1.02 (0.905)</td>
</tr>
</tbody>
</table>

\*\*N\*\* = 7449, Model $X^2 = 2216.69$, $R^2 = .50$, AUC = .94.
\*\*N\*\* = 1345, Model $X^2 = 208.72$, $R^2 = .50$, AUC = .96.
\*\*N\*\* = 6104, Model $X^2 = 1961.15$, $R^2 = .49$, AUC = .94.
\*\*N\*\* = 4797, Model $X^2 = 930.25$, $R^2 = .44$, AUC = .93.
\*\*N\*\* = 2652, Model $X^2 = 1155.00$, $R^2 = .53$, AUC = .95.

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had more extensive criminal histories, and more concurrent offences had higher odds of being sentenced to detention. A somewhat counter-intuitive finding was detention orders were less likely for participants charged with more than one count of the principal offence. Of the 554 individuals who had more than one count of the principal offence, only 12 received a custodial sentence. Finally, young people without legal representation at sentence were more likely to receive detention orders, with unrepresented offenders having a 22% higher probability of receiving a control order.

When interactions were examined, Indigenous status was unrelated to sentence for either males or females. Older (17–21) males and males charged with a violent offence had higher odds of receiving a custodial sentence. Another notable gender difference was in relation to legal representation, with unrepresented males but not females having higher odds of receiving a control order. The main differences observed when the sample was split by Indigenous status related to legal representation, socio-economic disadvantage and remoteness, with unrepresented Indigenous youth from more disadvantaged and remote areas having higher odds of receiving a custodial sentence.

Further examination of the interaction between Indigenous status, sex and age is shown in Figure 2. Given older males had the highest odds of imprisonment, the reference category was Indigenous males ages 17–21. The biggest difference evident was between Indigenous males and females aged 17–21. The females had a 26% lower probability of being sentenced to detention than the males. Otherwise, few clear differences emerged, apart from males aged 17–21 generally having the highest odds of being sentenced to detention.

Figure 1. Odds of being in custody at sentence, by Indigenous status, age and sex, net of controls.
Discussion

This study investigated interactions between Indigenous status, age and sex in juvenile sentencing decisions in NSW. Indigenous young people were found to have higher odds of being in custody at sentence, although the size of this relationship was modest compared to the impact of other factors such as the offence committed and the criminal history of the offender. Indigenous offenders were by contrast no more likely to be sentenced to detention once these controls had been taken into account. The decision to impose a custodial sentence was determined by factors such as the seriousness of offence committed and the criminal history of the offender, with the disturbing addition of lack of legal representation.

A number of interactions between the key independent variables of the study were also observed. In regard to custodial status at sentence, young (i.e. aged 10–16) Indigenous offenders had the highest odds of being in custody net of controls. Another notable interactive effect was in relation to offence seriousness, which was a predictor of custodial status at sentence for the males in the sample but not the females. In relation to detention orders, the group most at risk of being sentenced to detention were 17- to 21-year-old males regardless of Indigenous status. Males but not females charged with violent offences were more likely to be sentenced to detention. Perhaps most importantly, lack of legal representation, socio-economic status and residence in a remote area predicted the imposition of a detention order for the Indigenous but not non-Indigenous young people in the study. Some important differences were therefore
observed between the sentencing of Indigenous and non-Indigenous juvenile in the NSW Children’s Court.

This study also aimed to examine whether differential sentencing could be observed as an indirect, or cumulative, effect of earlier disparities. There was some evidence to support this view, as Indigenous individuals were more likely to be in custody at sentence, and individuals in custody in turn had higher odds of being sentenced to detention.

The findings relating to custodial status at sentence should be considered with a number of caveats in mind. One is the logistic regression model that accounted for a more modest proportion of variance than the detention model, and further, the contribution of age, sex and Indigenous status to this model was relatively minor. It is likely there are other factors related to the bail decision not measured in this study, notably, the type of bail conditions imposed and the circumstances under which they were breached. It is possible if such measures were included in the models the difference between Indigenous and non-Indigenous offenders would attenuate. It is also possible that further disparities might be evident at these earlier stages of processing. Unfortunately little is known about the type and number of bail conditions imposed on juvenile offenders in NSW and the circumstances under which they are breached. One study which did examine this in NSW found that out of 50 young people placed on remand for breaching their bail conditions, 35 did not observe their curfew and 29 were not in the company of their parents as required. Other breached conditions included associating with co-offenders ($N = 7$), being discovered at a banned location ($N = 5$) and not reporting to a police station ($N = 5$) (Vignaendra, Moffatt, Weatherburn, & Heller, 2009). It has been suggested Indigenous people tend to use public space for recreation and socialisation more extensively than non-Indigenous people, particularly in regional areas (Allard, 2010; Homel, Lincoln, & Herd, 1999). As a result, breaches of bail conditions by Indigenous young people could be more easily detectable by police, which might contribute to Indigenous over-representation in the remand population. In any event, more research investigating bail conditions, the circumstances under which they are breached and how these breaches are detected is required.

The findings of this study in relation to detention orders are broadly consistent with other Australian research which, in most cases, has found no direct relationship between Indigenous status and the probability of imprisonment once controls are accounted for. Other Australian studies, however, have not examined the indirect impact of earlier decisions. Consistent with this, the current study found Indigenous status predicted bail status, and bail status predicted whether a detention order was imposed. Disparities preceding the sentencing decision could therefore be a contributing factor to Indigenous over-representation in the juvenile justice system. This is not to suggest the severity of the offence and the offender’s criminal history were not also taken into account. These were also clear predictors of the imposition of a sentencing order. Nevertheless, the evidence presented here shows some areas of concern in relation to the sentencing of Indigenous juveniles. The fact that unrepresented Indigenous youth from more disadvantaged and remote areas were treated more harshly than their non-Indigenous counterparts is a finding worthy of further investigation.

None of the foregoing should be taken to be arguing exclusively in favour of the differential treatment hypothesis. The sentencing of juveniles in NSW is driven largely by
offence and offender-related variables. Little or no evidence was observed to indicate the existence of bias in the sentencing of juveniles in NSW. Consistent with past research, this study did find evidence to suggest Indigenous offenders have more extensive criminal histories than non-Indigenous offenders. Whether this is a result of differential treatment or offending has been a matter of some controversy (Cunneen, 2005; Weatherburn, Fitzgerald, & Hua, 2003). By contrast, no difference was observed between the two groups in the seriousness of the offence they had been charged with, and non-Indigenous offenders were in fact more likely to have been charged with a violent offence.

United States scholars have advanced various theoretical explanations for the differential sentencing of minority groups (Tittle & Curran, 1988). Some have argued these disparities can be explained in terms of labelling and conflict theories. The current study provides no direct evidence for these theories, although the finding that Indigenous youth from more disadvantaged and remote areas were more likely to be sentenced to detention is perhaps at least consistent with conflict theory, which in part says minority groups will be dealt with more harshly in places where they are more visible. It could also be the labelling process, where minority groups are more likely to be labelled as deviant, is more potent in these remote areas. These suggestions remain only tentative at this stage, but in the light of the findings of this study perhaps deserve further scrutiny. It is also possible that sentencing of Indigenous youths in remote areas is a result of the more limited options available to Magistrates in rural, compared to metropolitan, areas. In this regard, the sentencing of juveniles in regional and remote areas could be related to the focal concern of practical constraints and consequences rather than factors relating tolabelling and conflict theory. The custodial status of the young people when being sentenced could also be considered to be the kind of subconscious signal the focal concerns approach argues influences sentencing. Further research could perhaps explore this further.

There are differences between the United States and Australian justice systems that are also relevant to this discussion. Tonry and Melewski, for instance, have made a convincing case for differential enforcement of drug laws in the United States being responsible for Black over-representation in prison (Tonry & Melewski, 2008). To support this argument they cited data showing that while Black Americans were less likely to use illicit drugs than White Americans, they were four times as likely to be arrested for drug crimes. No such clear-cut reason for Indigenous over-representation has yet been identified. Weatherburn (2014) has recently reviewed the evidence relating to a number of theories of Indigenous offending and over-representation. These include cultural theory, which holds violence to be a traditional element of Indigenous cultural life; conflict theory, which holds Indigenous offending is a method of resisting colonial and neo-colonial authority and lifestyle or routine activity theory, which holds offending to arise from a conjunction between certain lifestyle factors and potential victims in the absence of suitable guardians, such as police. While there is some evidence to implicate lifestyle factors such as drug and alcohol use, as well as financial and social stress in Indigenous offending, at this stage these conclusions remain tentative given they rely mainly on cross-sectional survey data. While Indigenous over-representation in our legal system remains a matter of the highest priority from both a social justice and legal perspective, it is clear we are no closer to solving this problem over 20 years after the
Royal Commission into Aboriginal Deaths in Custody. Indeed, as Weatherburn argues, the situation is in many ways measurably worse.

The findings of the current study should be considered in relation to some of its shortcomings. This study is an example of what Baumer (2013) has described as a ‘typical’ study of race and sentencing. It used archival data and regression-based methodology to investigate disparities in sentencing among juvenile offenders in NSW. As Baumer argues, while this type of study has produced important results, use of other research methodologies, such as experimental and field studies, is now required to extend our knowledge of these processes further, particularly to explore the reasons behind judicial decision-making. Such research could answer questions regarding why judges are so influenced by the custodial status of the offender, how they view lack of legal representation and whether this influences their decisions, how and why stereotypes arise, and the impact of these on sentencing. Like all regression-based studies of sentencing, bias from omitted variables could have influenced the results described here, particularly in relation to the findings relating to custodial status at sentence. Further, the data from this study cover only 2 years of sentencing decisions that are up to 6 years old. Further replication of these findings with more current data is required. Nevertheless, this study has advanced knowledge of disparities in the sentencing of juvenile Indigenous offenders in Australia. Continuing to investigate this is an important priority given the ongoing disadvantages experienced by Indigenous Australians.

Conclusion

While Indigenous sentencing is primarily determined by offence and offender related factors, the current study has highlighted a number of areas of concern in relation to juvenile sentencing in NSW, principally relating to bail and sentencing practices in regional and remote areas, and lack of legal representation. These are findings that should be of some interest to policy makers. Twenty-two years after the report of the Royal Commission into Aboriginal Deaths in custody was released, the proportion of Indigenous prisoners in Australia has almost doubled (Lyneham & Chan, 2013). Indigenous Australians also continue to suffer in comparison to their non-Indigenous counterparts on most measures of health and social conditions (Cooke et al., 2007). It appears unlikely these two phenomena are unrelated. Strategies to address Indigenous over-representation in the Australian justice system therefore cannot ignore this wider context of Indigenous disadvantage. Nevertheless, the current study has identified a number of areas that could be addressed in order to reverse the trend of Indigenous over-representation in the juvenile justice system.

Acknowledgements

I thank the NSW Bureau of Crime Statistics and Research for providing the data used in this study. The opinions here do not necessarily reflect the view of this organisation or its officers.

Funding

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Notes
1. A heuristic has been defined as ‘any sophisticated, directed procedure that functions by reducing the range of possible solutions to a problem or the number of possible answers to a question’ (Reber, 1995, p. 336). A stereotype is an example of a heuristic.
2. Offenders were matched on offence type, current and prior convictions, court and plea.
3. Following media criticisms, these laws are currently under review at the time of writing, despite having been in operation for only 1 month.
4. To determine the impact of the individuals in detention for previous offences, all custody at sentence models were run while omitting them ($N = 7418$). This made no discernible difference to the results: some odds ratios and p-values changed to the second decimal place however the strength and direction of the relationships observed were not altered.
5. The relevant legislation in NSW is the Children (Criminal Proceedings) Act 1987. Under section 33(1) of the Act, Magistrates of the NSW Children’s Court may commit a young person to the control of the relevant Minister. This is in effect a full-time custodial sentence.
6. These analyses in effect replicate Steffensmeier et al. (1998).
7. Cramer’s V ranges from 0 to 1 and gives a measure of effect size similar to a correlation coefficient.
8. The AUC is the area under the receiver operator curve, which plots the true positivity rate (sensitivity) against the false alarm rate (specificity).
9. Some readers might be concerned regarding the possibility of multicollinearity between the predictors, and in particular the two measures of offence seriousness used. The relevant diagnostics showed no evidence of multicollinearity, with VIFs ranging from 1.01 to 2.66 ($M = 1.38$). The correlation coefficient between offence seriousness and violent offending was 0.42. Finally, the correlation between concurrent offences and counts (a possibility explicitly raised by one reviewer) was 0.01.
10. The formula for calculating probabilities from odds is $(\text{odds} 1/\text{odds} 2 + 1) – 0.5$. See Steffensmeier et al. (1998, p. 776).
11. Again, the relevant diagnostics revealed no reason to suspect multicollinearity between the predictor variables, with VIFs ranging from 1.01 to 2.68 ($M = 1.44$).

References


