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A Comparative Analysis of the Risk Profiles of Australian Young Offenders From Rural and Urban Communities

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Abstract

Australian young people from rural areas, particularly Aboriginal young people, are overrepresented in the juvenile justice system. Apart from broad evidence regarding the entrenched social disadvantages experienced by young people in rural communities, the literature is limited in describing why this might be case. Due to these social disadvantages, it is hypothesised that young offenders from rural communities will have higher levels of offending risk factors, as measured by the Youth Level of Service/Case Management Inventory—Australian Adaption (YLS/CMI-AA). A total of 6,750 archival records were analysed, showing that significantly more Aboriginal young offenders live in rural areas. Contrary to the hypothesis, urban young offenders had significantly higher risk scores than rural young offenders. These findings suggest that there may be particular ecological factors that are not assessed in the current risk assessment instrument or that rural young people have a range of protective factors that may insulate against the broader context of social disadvantage.

Keywords

rural, urban, young offender, risk/need, Youth Level of Service Inventory

The Australian national data clearly show that young people who live in rural communities are overrepresented in the juvenile justice system, and further, that Aboriginal

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young offenders are more likely to come from rural areas, despite most of Aboriginal people living in cities (Australian Institute of Health and Welfare [AIHW], 2018; Creative Spirits, 2018). In light of this finding, a significant gap in knowledge emerges when one considers that the bulk of criminological theory and research is based on data collected from metropolitan areas rather than examining the particular factors associated with rural crime and offending (Australian Institute of Criminology, 2010; Dwyer, Ball, & Baker, 2015; Hogg, 2005). This is particularly important, as there is a large volume of literature indicating that people who live in rural communities in Australia are more likely to report higher rates of substance use, child abuse, poorer mental health, and domestic violence than their urban peers, which all are shown to be associated with juvenile offending (Allard, Rayment-McHugh, Adams, Smallbone & McKillop, 2015; AIHW, 2009; Dudgeon, Milroy, & Walker, 2014; Indig, Fewen, & Moore, 2016; Malvaso, Delfabbro, & Day, 2017; Onifade, Davidson, & Campbell, 2008; Parliament of the Commonwealth of Australia, 2011). However, despite growing interest in how factors such as ethnicity, gender, patterns of risk and a range of different ecological variables influence risk in young offenders (see, for example, Campbell et al., 2014; Onifade et al., 2008), there have been surprisingly few attempts to understand the association between living in a rural area and crime. To address this gap in knowledge, the aim of this article is to first examine how rural disadvantage may contribute to offending risk in juvenile offenders and then examine the differences in the risk profiles of urban and rural young offenders in an Australian sample.

Defining Rurality

The terms regional, rural, and remote are used to describe areas outside Australia's major cities. Rural and remote communities are heterogeneous, though for statistical and public health planning purposes may be consolidated into the umbrella terms: regional, rural, and remote (AIHW, 2017). However, each regional, rural, and remote community differs substantially in economic function, location (coastal, in-land, or on-state borders), culture, social class and demography, housing availability, and the like. McGregor (2001) describes three types of small towns in rural Australia: *Aboriginal settlements*, *specialist centres*; and *open service* towns. The Aboriginal settlements are those that are characterised as having a strong cultural foundation but which lack basic services, and possess little industry apart from that which results directly from public funding. Specialist centres are described as mining towns, where services are provided by the mining companies operating in the areas. Open service towns, or "hubs," provide services and resources (such as groceries, postal services, goods, and services) to stations and properties nearby (see also Maru, McAllister, & Smith, 2007).

Defining Risk

The risk-need-responsivity (RNR) model of offender rehabilitation (Andrews & Bonta, 2010) is used on young offenders in most jurisdictions in Australia (NSW Juvenile Justice, 2014). The model requires services to be delivered in ways that are

consistent with three overarching principles: the risk principle—matching the level of servicing provided to the assessed level of risk of re-offending; the need principle—targeting those risk factors that are amenable to change through services and programmes; and the responsivity principle—delivering services and programmes in a way that considers the individual learning style, cognition, motivation, and cultural needs of the offender. In the youth justice context, a risk factor is defined as a "variable that predicts a high probability of offending" (Farrington, Ttofi, & Piquero, 2016, p. 63), and these may vary in their presence or intensity (Klepfisz, Daffern, & Day, 2016). Risk factors, however, are not necessarily causal or linear in their relationship to offending (Farrington et al., 2016). Importantly, offending risk factors are measured as discrete factors and considered to be quite separate to social welfare or other humanistic needs (Ogloff & Davis, 2008). These discrete factors, termed the Central Eight, comprise family/living circumstances, substance use, leisure/recreation, education and employment, antisocial peers, antisocial attitudes, antisocial personality pattern, and prior/current offences. There is limited information on how these particular risk-need factors may be similar (or different) for rural and urban young offenders; despite evidence indicating rural young people have higher rates of contact with Juvenile Justice in Australia (AIHW, 2018). Nonetheless, the disadvantage experienced by young people in each of these domains may be proxy indicators of rural young offenders having an increased exposure to offending-specific risk factors. The next section will discuss how these central eight factors are currently defined in a juvenile justice context, followed by consideration of whether there is evidence to indicate potential differences between rural and urban young offenders.

Family/Living Circumstances

Family circumstances is considered an important determinant of risk in young offenders and is defined, in a juvenile justice context, as inadequate monitoring, difficulty controlling behaviour, inappropriate discipline, poor relations with father (or step-father), poor relations with mother (or step-mother), homelessness, and antisocial attitudes within the family (Thompson & Pope, 2005).

Andrews and Bonta (2010) indicate from a review of eight meta-analyses that family circumstances has been found to have correlations of between $r = .10$ and $r = .33$ with criminal behaviour. They highlight the importance of hostile emotions, poor monitoring, and inconsistent discipline within the family unit in the development of antisocial and offending behaviours. There is also consistent evidence to support the proposition that a history of child maltreatment and neglect are strong predictors of juvenile delinquent behaviour and subsequent contact with the justice system (e.g., Corrado, Kuehn, & Margaritescu, 2014; Malvaso et al., 2017; Vidal et al., 2017). For example, one study (conducted in Florida, USA), found that each maltreatment report increased the risk of going into a detention centre by 15% (Yampolskaya, Armstrong, & McNeish, 2011).

There is evidence that rates of maltreatment are higher in rural areas than in the major cities of Australia. In Victoria, for example, 47% of young people in statutory

out-of-home care in Victoria have been reported to come from rural areas (Youth Affairs Council of Victoria, 2013). Similarly, across the 20 child-protection districts of New South Wales (NSW), the regional and rural area of Hunter New England was identified as having the highest number of young people reported as being at risk of significant harm (Family & Community Services, 2016). Thus, it seems likely that this risk factor for youth offending will be more prevalent in rural Australia.

Substance Use

A second recognised risk factor is substance use, defined in juvenile justice context, as occasional or regular drug use, occasional or regular alcohol use, substance use interfering with life, and substance use linked to offending behaviours (Thompson & Pope, 2005). Alcohol use has a modest predictive association with offending behaviours ($r = .09$), whereas drug use has a wide range of predictive validity of between $r = .03$ and $r = .42$. However, when polysubstance use is considered, predictive validity increases to between .17 and .34 (Andrews & Bonta, 2010). Substance use and abuse is a particular issue for young people in custody in NSW, Australia, with 89% of detainees reporting to have ever used illicit substances, and 78% of detainees were found to have been drinking at risky levels. Furthermore, alcohol misuse has an association with juvenile offending, as young offenders who were categorised as heavy drinkers were seven times more likely to have been previously incarcerated than their peers (Indig et al., 2016).

It has been suggested that alcohol consumption has a high social value in rural communities in Australia and is integral and intrinsic to rural culture (Allan, Clifford, Ball, Alston, & Meister, 2012). Allan and colleagues (2012) note that, somewhat paradoxically, rural people consider problematic consumption of alcohol an individual weakness, whereas the archetypal rural person can drink quantities of alcohol with no harm. In addition to being more likely to report alcohol consumption and binge drinking, young people who live on farms are more likely to report illicit substance use, inhalant use, as well as being exposed to parental attitudes supportive of substance use and poor family relations than urban peers (Rhew, Hawkins, & Oesterele, 2011). Factors such as boredom and a lack of pro-social recreational activities for farm dwelling youth may be associated with these findings (Rhew et al., 2011). In another Australian study, Kenny and Schreiner (2009) found that rural location and having an absent father were significant predictors of increased alcohol abuse, whereas school dropout was a more significant risk factor for urban youth. Although consumption rates of alcohol and illicit substance use are likely to be expected to be higher in rural youth, the literature does not indicate if substance abuse (i.e., interfering with a young person's life) is more prevalent in either cohort, and similarly, there is a lack of evidence indicating whether not substance use has direct association with offending behaviours in either cohort.

Leisure and Recreation

Leisure and recreation is defined as no organised participation in activities, could make better use of time, and no positive interests (Thompson & Pope, 2005). Leisure and recreational difficulties have been shown to predict subsequent re-offending (r = .21) (Andrews & Bonta, 2010). Andrews and Bonta (2010) explain that leisure and recreation activities to address recidivism cannot be simply physical exercise but they are required to provide opportunities for prosocial modelling and have an anticriminal orientation to be effective (i.e., RNR-based principles). They do, however, highlight that there is a marked lack of evidence describing these types of programmes. Similarly, the available literature only describes the physical activity of rural and urban Australians, and even then, the evidence is conflicting (Dollman, Maher, Olds & Ridley, 2012). For example, the Australian Bureau of Statistics (2011a) reported there are no statistically significant differences in levels of sporting and recreation between Australian's living in rural and urban locations. However, the National Rural Health Alliance (2013) indicates that Australians living in rural communities are 1.16 times more likely to be sedentary than people in urban communities. They suggest that a range of issues, including transport and access to sporting and leisure activities, impact rural people's ability to participate in leisure and recreation. However, research by Dollman and colleagues (2012) found that young rural people are more physically active than young urban people, and young urban people have more "screen time" activities. However, participation rates in structured activities were similar across rural and urban young people. There is not enough established evidence to indicate whether this risk factor would be different for rural or urban young people; as the extant literature describes physical activity rates (and even then, is conflicting), rather young people being able to use their time better or having positive interests.

Education and Employment. In the juvenile justice context, difficulties with education and employment is defined as disruptive school or workplace behaviour, violent school or workplace behaviour, low academic achievement/performing below expected standard for the individual, social problems with peers and co-workers, social problems with teachers/supervisors, truancy and unemployment (if the young person has finished education and is not employed or preparing to be employed) (Thompson & Pope, 2005). It is established that rates of delinquency in schools are higher, where there are higher proportions of male students, lower socioeconomic status, and poorer students (Andrews & Bonta, 2010). Although there is little evidence on the behaviour in school settings of young people in rural communities compared to urban peers, youth living in rural communities experience greater challenges to thrive in education or find employment. In a national review of the Australia education system, Halsey (2018) states that "the national statistics show there is a persistent relationship between location and educational outcomes when data for the various measures is aggregated" (p. 4). This relationship means that youth from regional, rural, and remote communities were more likely to score lower on national standardised testing: NAPLAN (National Assessment Programme Literacy and Numeracy), the Programme for International Student Assessment, and the Trends in

International Mathematics and Science Study (TIMSS), less likely to complete year 12, and less likely to move onto tertiary study. Research by the Brotherhood of St Laurence (2018) found that 17 of the 20 postcodes with the highest rates of youth unemployment were in regional or remote Australia.

The Big Four

The final four offending risk factors can be grouped together as "the Big Four": antisocial attitudes/orientation, antisocial personality, antisocial peers, and prior/current offences. These are considered to be the factors most closely associated with offending risk and recidivism (Andrews & Bonta, 2010). Antisocial attitudes/orientation are defined as antisocial/procriminal attitudes, defying authority, insensitive to others, not seeking help, and actively rejecting help. Antisocial personality is defined as inflated self-esteem, inadequate remorse, poor frustration tolerance, impulsivity, verbal aggression, physical aggression, and tantrums. Antisocial peers as a construct includes: some delinquent friends, no or few positive friends, some delinquent acquaintances, and no or few positive acquaintances. Prior/current offences include age at first offence, outcome at first court order, type of offence in first court order (common assault, break and enter, and stealing motor vehicle), more than one court order, three or more prior offences, two or more failures to comply, prior control order, and three or more current offences. These factors have a strong predictive validity for future recidivism r = .0.26, 95% confidence interval (CI) = [.22, .30].

There is no direct evidence in the literature reviewed to indicate that people in rural or urban communities are more or less likely to present with any of these big four factors. However, it has been demonstrated that community factors may influence offending behaviour. For example, community disorganisation (defined by levels of crime and substance use) has a predictive association with violent re-offending in youth in both the United States and Australia (Edwards, Mattingly, Dixon, & Banyard, 2014; Hemphill et al., 2009; Ohmer, 2016). Conversely, higher rates of informal social control, collective action, and social cohesion ("collective efficacy") have also been shown to help keep communities safe. This is likely due to the interactions between an individual and their social and cultural contexts, through a nested ecological approach (Mercer & Howe, 2012; Verrecchia, Fetzer, Lemmon & Austin, 2010). Cultural contexts (e.g., family structures, community membership, ethnicity, and group memberships) may also facilitate social learning and define acceptable group norms and values (Maunder & Crafter, 2018). This process may describe how living in a community with low collective efficacy may influence cognitions and attitudes associated with offending behaviour. For example, low rates of collective efficacy have been associated with young people who have higher rates of callous and impulsive traits (Meier, Slutske, Arndt & Cadoret, 2008). In another study conducted in a custodial environment in NSW, there were no statistically significant differences in callous/unemotional traits between Aboriginal status or gender in young offenders in, though the analysis did not compare rural and urban young people (Justice Health and Forensic Mental Health Network, 2015). Barclay, Donnermeyer, Scott, and Hogg (2007) have also

suggested that many rural communities experience low social cohesion and collective efficacy as a result of rural migration, low levels of home ownership and high rates of single parent families. Barclay and colleagues also suggest that many rural communities experience low social cohesion and collective efficacy as a result of rural migration, low levels of home ownership and high rates of single parent families. Nonetheless, current youth justice approaches to risk conceptualisation are highly individual-specific with apparently little consideration of how environmental and ecological factors influence the development of attitudes and beliefs.

Aboriginal Young People's Involvement in the NSW Youth Justice System

The facts of overrepresentation of Aboriginal youth in the juvenile justice system have been well documented. A range of sociopolitical factors such as marginalisation as a minority group, impact of colonisation, and social disadvantage factors such as unemployment, welfare dependency, histories of abuse, destructive coping behaviours and addictions, health and mental health issues, and low self-esteem and feelings of powerlessness are all thought to contribute to Aboriginal justice system involvement (see Blagg, Bluett-Boyd, & Williams, 2015; Dudgeon et al., 2014). In NSW, Aboriginal youth are 24 times more likely to be in custody on any given day than their non-Aboriginal counterparts and 14 times more likely to be under supervision in the community (Murphy, McGinnies, Balmarks, McDermott & Corriea, 2010). A study by Thompson and McGrath (2012) found that Aboriginal young offenders in NSW scored higher on risk-need subscales of prior and current offences, family and living circumstances, education/employment, leisure/recreation, and attitudes/ beliefs than non-Aboriginal young offenders. A review of national juvenile justice data across Australia also found that Aboriginal young people under community supervision or in detention were more likely than non-Aboriginal young people to have lived in rural and remote areas (AIHW, 2018).

The aim of this research then was to establish whether there is an association between living in a rural area, Aboriginality, and the presence of risk factors for re-offending in a cohort of young people involved with the NSW juvenile justice system. Given the higher rates of social disadvantage that may influence risk, it was predicted that young offenders from rural communities in NSW would have higher total scores on a risk assessment measure than those from urban areas, and that this association would apply to both Aboriginal and non-Aboriginal youth. Furthermore, it was expected that Aboriginal young people from rural areas would have higher overall risk scores than non-Aboriginal young people in both urban and rural areas.

Method

Procedure and Materials

Ethical approval for this study was provided by three committees: a university Human Ethics Research Committee; the Australian Institute for Aboriginal and Torres Strait

Islander Studies Human Ethics Research Committee; and the NSW Juvenile Justice Research and Evaluation Steering Committee. Deidentified data for all young offenders who had a first contact with NSW Juvenile Justice between 2013 and 2016 were provided by NSW Juvenile Justice from their Client Information Management System (CIMS). This included demographic information, and subscale scores for the Youth Level of Service/Case Management Inventory—Australian Adaption (YLS/CMI-AA; Thompson & Pope, 2005), a tool specifically designed to measure a young offender's level of risk of re-offending in Australia. The tool is a 50-item checklist assessing eight areas of offending risk and was used to group offenders into risk categories associated with their risk of re-offending. The YLS/CMI-AA has also been shown to have good predictive validity in predicting violent, sexual, and general recidivism in youth (Thompson & McGrath, 2012).

Postcode data[1] from the Juvenile Justice spreadsheet were matched to the *Australian Bureau of Statistics Postcode to Remoteness Area* Excel spreadsheet. This allowed for the classification of postcodes into five areas of remoteness: "major cities"; "inner regional"; "outer regional"; "remote"; and "very remote." For postcodes that occupy more than one remoteness area, overall classification was determined by the area in which the majority of the postcode fell (e.g., 87.8% of postcode 2,081 was classified as a "major city" with the remaining "12.2%" as "inner regional," and so this postcode was allocated a "major city" coding). Finally, a dichotomous geography variable was created to differentiate between "urban" postcodes in the major cities classification and "rural" postcodes in inner regional, outer regional, remote, and very remote areas, as used in population-level statistical analysis in Australian contexts (see Australian Bureau of Statistics, 2016; Davie, 2015). There were 2 two-level independent variables: Aboriginality (Aboriginal and non-Aboriginal) and geography (urban and rural), and the dependent variables were the eight domain scores, and a total risk score. Finally, Excel data were imported into SPSS (IBM Statistical Package for the Social Sciences, version 24) for analysis.

Data Preparation

A total of 6,889 records were available. These were screened to identify missing data and to remove incomplete entries. Records with no postcode information were removed ($n = 110$), as were postcodes that could not be matched to a geographical standard ($n = 1$). A total of 1,207 (17.9%) records did not record Aboriginal or Torres Strait Islander status and so were excluded from Aboriginal/non-Aboriginal data comparisons but included for the purposes of other analyses. A box plot was used to identify dependent variable outliers, which were then deleted (prior and current offences, $n = 16$, and family living circumstances, $n = 6$).

Design and Analytic Strategy

The data set was considered suitable for parametric analysis using a multivariate analysis of variance (MANOVA). Domain scores and total risk scores were

normally distributed, with the exception of the "attitudes/orientation" subscale which was positively skewed (skewness of 1.00, $SE = 0.39$). As the skewness and kurtosis of all other dependent variables was less than ± 2, normality of distribution was assumed (see Gravetter & Wallnau, 2014). The assumption of homogeneity of covariance did not hold for three subscales of the YLS/CMI-AA; accordingly, Pillai's Trace was selected as the preferred MANOVA statistic (given that this protects against Type I errors caused by the violation of homogeneity of covariance; see Finch, 2005). Finally, the assumption of equality of covariance matrices was met, as no variables had corresponding covariance greater than 3.5 times (Huberty & Petoskey, 2000).

Results

Descriptive Statistics

Of the 6,750 records that were available for analysis, 4,238 were for men and 1,260 for women. A total of 1,951 records (28% of the total) held data related to young people who were identified as being from an Aboriginal cultural background (of $n = 3,592$, 53% identified as non-Aboriginal and for $n = 1207$, or 17.9%, cultural background was not recorded (see Table 1). For the whole sample, the age of first contact with the juvenile justice system was between 10 and 20 years ($X = 15.35$; $SD = 1.55$), with the average age of first contact for Aboriginal young people being 14.82 years ($SD = 1.66$), with the equivalent for non-Aboriginal young people being 15.46 years ($SD = 1.46$). When broken down by geography, the mean age for those from urban areas was 15.50 years ($SD = 1.49$) and slightly lower for those from rural areas ($X = 15.11$; $SD = 1.64$). Most had received a youth justice outcome, and as a result did not have a YLS/CMI-AA completed in line with current youth justice policy (28.7% a remand order, 23.5% a community supervision order, 1% a remand to control order, and 0.3% a control order). All of those under a community supervision, remand, or control order had Justice Offences identified as their most serious offence (MSO). Most offences ($n = 5,760$; 85.0%) were non-violent in nature, as categorised by the Australian New Zealand Standard Offence Classification (Australian Bureau of Statistics, 2011a). Over half of the sample ($n = 3,549$; 58.6%) had a completed YLS/CMI-AA assessment, with total risk scores ranging from 0 to 43 ($X = 16.91$; $SD = 8.13$). Only those with a completed YLS/CMI-AA and a defined Aboriginal status (i.e., excluding those with "unknown" status) were included for data analysis, leading to a total sample of $n = 3,549$. Descriptive information is reported in Table 1.

There were more non-Aboriginal young offenders living in major cities than Aboriginal young offenders, and more Aboriginal young offenders in inner regional, outer regional, remote, and very remote locations than those living in major cities. More Aboriginal young offenders tended to live in rural areas ($n = 864$; 61.67%), whereas non-Aboriginal young offenders were more likely to live in urban areas ($n = 1543$; 71.84%). These differences were significant, chi-square ($2, n = 6750$) = 618.12, $p < .05$.

Table 1. Descriptive Statistics[a].

	Aboriginal, *n*	%	Non-aboriginal, *n* %		Total, *n*
Gender					
Male	1,064	(75.94)	1,755	(81.70)	2,819
Female	337	(24.05)	393	(18.30)	730
Total	1,401		2,148		3,549
Residence					
Major cities	537	(38.33)	1,543	(71.84)	2,080
Inner regional	536	(38.26)	496	(23.09)	1,032
Outer regional	259	(18.49)	103	(4.80)	362
Remote	45	(3.21)	6	(0.30)	51
Very remote	24	(1.71)	0	(0)	42
Rurality					
Urban	537	(38.33)	1543	(71.84)	2,080
Rural	864	(61.40)	605	(28.16)	1,469
Justice outcome					
YJC	422	(30.12)	496	(23.09)	918
Community	444	(31.69)	788	(36.69)	1,232
Remand	502	(35.83)	815	(39.94)	1,317
Remand to control	21	(1.50)	42	(2.00)	63
Control	12	(0.86)	7	(0.33)	19
Total	1,401		2,148		3,549

Note. YJC = Youth Justice Conference.
[a]Those with an unknown Aboriginal status are not included in this table.

It was expected that young offenders from rural communities would have higher levels of risk in the specific domains of substance use, family circumstances, and education and employment. However, an examination of the univariate effects revealed significant differences, with small effect sizes, between YLS/CMI-AA scores for young offenders from urban areas on all domains of the YLS/CMI-AA and on all of the subscales other than prior and current offences (young people in rural communities scored higher on this factor; see Table 2).

The hypothesis that Aboriginal young people in rural areas would have higher overall levels of risk (as measured by the YLS/CMI-AA) was also not supported. Risk scores were significantly higher for Aboriginal young offenders in urban areas ($X = 17.59$, $SD = 8.27$) than for those in rural areas ($X = 15.97$, $SD = 7.83$). The main effect of Aboriginality was significant, $F\,(2, 4608) = 36.60$, $p < .05$, with Aboriginal youth scoring higher on total risk score ($X = 18.03$, $SD = 8.00$) than non-Aboriginal youth ($X = 16.95$, $SD = 8.09$). However, the interaction effect between Aboriginality and rurality for overall risk was nonsignificant, $F\,(2, 45.06) = .71$, $p > .05$. Between-groups *t*-tests (see Table 3) were used to examine whether Aboriginal youth in urban locations scored significantly higher than Aboriginal youth in rural areas across each domain of the YLS/CMI-AA (substance use, family-living circumstances, education

Table 2. Univariate Effects of Rurality on Youth Level of Service/Case Management Inventory—Australian Adaption Domains.

	Rural (n = 1,087)		Urban (n = 2,080)			
Domain	χ^2	*SD*	χ^2	*SD*	*F* (1, 3956)	Partial η^2
Substance use	2.08	1.80	2.36	1.87	21.18*	.01
Family living circumstances	2.14	1.59	2.51	1.69	47.47*	.01
Education/employment	2.51	1.80	2.73	1.92	12.31*	.00
Prior current offences	2.53	1.47	2.21	1.45	45.43*	.01
Peer relations	1.91	1.30	2.08	1.32	16.83*	.00
Leisure/recreation	1.42	1.10	1.54	1.10	11.72*	.00
Personality	2.36	1.85	2.76	1.91	43.63*	.01
Attitudes orientation	1.30	1.27	1.42	1.42	78.72*	.02
Total score	15.97	7.39	17.59	8.27	38.64*	.01

Note. *SD* = standard deviation.
*$p < .001$.

and employment, prior current offences, peer relations, leisure/recreation, personality, and attitudes/orientation) and total score. There were statistically significant differences on all subscales, other than peer relations. Rural youth were scored as statistically significantly higher on prior/current offences.

The hypothesis that young offenders from rural communities would have higher levels of risk than those from urban areas was tested using a MANOVA to examine the effects of rurality (urban vs rural) on the eight subscales of the YLS/CMI-AA. A significant multivariate effect was found with a medium effect size, Pillai's Trace = .045, F (8, 3949) = 23.48, p = .00, η^2 = .05. Power analysis had indicated that in order for an effect of this size to be detected (80% chance) as significant at the 5% level, a sample of 260 participants would be required. Therefore, this analysis was sufficiently powered.

Discussion

Rural young people are known to be overrepresented in juvenile justice systems across Australia (AIHW, 2018). In NSW, slightly over one-quarter (26.01%) of young people aged between 10 and 19 years live in a rural community (N = 239,096; see HealthStats NSW, 2018), but more than 4 in 10 are from rural areas, and Aboriginal young offenders (in this sample) were statistically more likely to come from these areas, chi-square (2, N = 6750) = 618.12, $p < .05$. The primary aim of this study is to establish whether there is an association between living in a rural area, Aboriginal cultural identification, and the presence of risk factors for re-offending in a cohort of young people in NSW who are involved with the juvenile justice system. The hypothesis that young offenders from rural communities would have higher levels of assessed risk than those from

Table 3. Comparison of Aboriginal Rural and Aboriginal Urban Youth..

	Aboriginal rural ($N = 1{,}202$)		Aboriginal urban ($N = 537$)						95% confidence interval	
Domain	χ^2	*SD*	χ^2	*SD*	*t*	*df*	*p*	*d*(*r*)	Lower	Upper
Substance use	2.16	1.80	2.45	1.88	2.93	1,399	.03*	−0.15 (−0.07)	0.97	0.49
Family living circumstances	2.28	1.57	2.90	1.74	6.93	1,399	.001**	−0.37 (−0.18)	0.45	0.80
Education/employment	2.73	1.83	3.20	1.87	4.63	1,399	.001**	−0.25 (- 0.12)	0.27	0.67
Prior current offences	2.70	1.50	2.38	1.49	−3.94	1,399	.001**	−0.21 (−0.11)	−0.49	−0.16
Peer relations	2.22	1.27	2.32	1.31	1.47	1,399	.141	−0.07 (−0.04)	−0.34	0.24
Leisure/recreation	1.50	1.09	1.72	1.07	3.63	1,399	.001*	−0.20 (−0.10)	0.10	0.33
Personality	2.41	1.81	3.01	1.99	5.77	1,399	.001**	−0.32 (−0.16)	0.39	0.80
Attitudes orientation	1.12	1.30	1.53	1.50	5.41	1,399	.001**	−0.29 (−0.14)	0.26	0.56
Total risk score	17.11	7.61	19.50	8.38	2.39	1,399	.001**	−0.30 (−0.15)	1.54	3.42

Note.SD = standard deviation.
*$p < .05$. **$p < .001$.

urban areas was, however, not supported. In fact, urban youth had significantly higher levels of risk across eight of nine different areas of assessment (substance use, family living, education and employment, peer relations, leisure and recreation, personality, attitudes and total risk score). This was unexpected and suggests that it is factors not measured by the risk assessment tool (the YLS/CMI-AA) that may predominantly contribute to rural youth involvement in the juvenile justice system.

Onifade and colleagues (2008) have, for example, suggested that between-group variation in YLS scores may be associated with differences in environmental and system-level factors that are not directly measured, such as crime rates, actual and reported crime, and differences in policing, with these factors only having a small influence on the individual-level risk factors measured by this assessment tool.

Factors such as differences between rural and urban policing may also contribute to the higher rates of justice involvement for rural young people. Rural policing is widely considered to be substantially different in practice to urban policing, with rural police having generally closer relationships with communities, and a focus on problem solving instead of pure law enforcement (Dwyer et al., 2015). Other compounding factors may include the greater visibility of young offenders in rural communities, particularly Aboriginal young offenders (Barclay et al., 2007; Shirley, 2017) and the differential introduction of specific policing programmes. For example, the controversial NSW intensive policing surveillance programme, the Suspect Target Management Plan (STMP), has been criticised for its disproportionate focus on both young people (44.82% of total individuals) and Aboriginal people (44.1%). Furthermore, the three rural local area commands have been reported to have been responsible for 42.2% of people on STMP (see Sentas & Pandlofini, 2017). It is possible that the risk of reoffending is affected by the migration of Aboriginal young people between communities, given that nearly one in three (30.8%) Aboriginal young people aged between 15 and 24 years are known to have moved either to a capital city or a different regional area in the past 5 years (Australian Bureau of Statistics, 2011b). Conversely, factors such as urban sprawl and the push to fringe urban corridors may negatively impact Aboriginal young people's ability to connect with their culture and with land, and this may translate into increased risk. For example, in urban communities, large proportions of Aboriginal residents are socioeconomically and spatially separated from the more affluent areas in their communities and often placed in high concentrations in fringe urban corridors (Atkinson, Taylor, & Walter, 2008). It has been suggested that socioeconomic and spatial distance, coupled with high concentrations of people within socially isolated and stigmatised locations, contribute to rates of lateral violence for Aboriginal communities. It is also possible that people in rural communities have a range of strengths and protective factors that were not assessed but serve to buffer against the intensity of risk factors (see also Cunneen & White, 2007; Thompson & McGrath, 2012). Nonetheless, Spivakovsky (2009) is highly critical of reductionist approaches to risk and need assessment in identifying the needs of Aboriginal offenders. She highlights that complex interrelated experiences of loss and dispossession cannot be reduced to a series of simplistic, identified, and predictable attributes and risk factors. Similarly, Lockwood, Peterson-Badali, and Schmidt (2018) highlight that

there is a range of factors inextricably linked to colonisation and dispossession that affect Aboriginal young offenders and that is not adequately identified in actuarial risk assessment approaches such as the YLS/CMI-AA. However, they also warn against using Indigenous-specific factors in risk assessment tools, as they may be used for increased surveillance or oppression of Aboriginal youth.

The findings of this study clearly indicate that further research is needed to better understand the risks experienced by rural young offenders that lead them into contact with the juvenile justice system. This is particularly important to understanding the risks of Aboriginal young people in rural areas if services and programmes are to be developed that can impact on rates of youth justice overrepresentation. There are also implications for how young offenders are assessed as the YLS/CMI-AA is currently used to determine which programmes and services are offered to young offenders in NSW. Cunneen (2006) highlights that using data without proper conceptualisation and grounding of the issues surrounding Aboriginal offenders, results in research that can be inherently simplistic and superficial, and unlikely to address issues such as over-representation. This suggests the need to take a step back and employ qualitative research methods in partnership with local communities to better understand conceptualisations of juvenile offending by Aboriginal rural youth.

Limitations

This article analysed data from the risk-need assessments of young people who had their first contact with NSW Juvenile Justice between 2013 and 2016 to establish the impact of rural location. A limitation of the study was the way in which rurality was measured, as the method of classification may not have been nuanced enough to identify instances of rural and urban migration, and some postcodes were coded under two geographic locations when it was not possible to determine where the young person resided at the time. Furthermore, risk-need data were not available for a large proportion (41%) of the sample, as the assessment was not completed for those who had been referred to a diversionary programme, Youth Justice Conferencing. This introduces the possibility that there are systematic differences between those who have been assessed and those who have not, potentiality masking the effects of rurality. A final limitation concerns the absence of re-offence data, as this means that it is not possible to determine whether rural young people remain in contact with the youth justice system at a higher rate than their urban peers (despite differences in the initial assessment). Nonetheless, these data offer sufficient evidence for the need to pursue further research into understanding the environmental and ecological drivers of youth offending.

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Note

1. Postcodes are for young person's self-reported usual place of residence at first contact with juvenile justice.

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