Early Versus Late Contact with the Youth Justice System: Differences in Characteristics Measured at Birth, Child Protection System Contact and Adolescent Mental Health Outcomes

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Declaration

This dissertation contains no material which has been accepted for the award of any other degree or diploma in any University, and, to the best of my knowledge, this report contains no materials previously published except where due reference is made. Data used in this thesis is highly sensitive and pertains to children and young people in the South Australian Youth Justice and Child Protection systems. Permission has been granted by the School to restrict public access to this thesis until approvals have been granted from the relevant government departments. The digital version of my thesis will be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, once the relevant approvals have been granted.

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For the purpose of anonymous submission, acknowledgements have been deleted from this copy of the thesis.

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KEYWORDS

youth justice, juvenile justice, early-onset offending, child protection, developmental psychology, mental health, data linkage

ABSTRACT

Early contact with the youth justice (YJ) system leads to poorer health, wellbeing and recidivism. However, there is little known about how early versus late YJ contact (i.e., before age 14 versus age 14 or older) influences YJ contact patterns, or whether early life circumstances and associated outcomes differ by early versus late YJ contact. This study uses whole-of-population linked data to examine differences between young people who have early versus late YJ system contact. Data were from the Better Evidence Better Outcomes Linked Data (BEBOLD) platform including children in South Australia born 1991-1998, followed from birth to age 18 (n=169,172), of which 1.9% had YJ contact. Compared to the late contact group, young people with early YJ contact had: more serious YJ contact patterns (e.g., 91% versus 59% ever experienced custodial supervision); were more disadvantaged at birth (e.g., 63% versus 44% born into jobless families); had more serious child protection contact by age 10 (e.g., 40% versus 27% had experienced out-of-home care); and experienced more mental health-related hospitalisations from ages 12-18 (e.g., 48% versus 35%). This analysis demonstrates the complex circumstances that precede and co-occur with YJ involvement and point to the need for investment in early supports.

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Introduction

Numerous studies around the world have demonstrated that early contact with the justice system is associated with recidivism, longer duration and higher frequency involvement with crime, and a higher prevalence of mental health problems in adolescence and adulthood (Corrado & Freedman, 2011; Shepherd & Purcell, 2015; Staff, Whichard, Siennick & Maggs, 2015). However, few studies have been able to examine differences in the early life circumstances preceding Youth Justice (YJ) system contact, as well as how associated outcomes may differ between young people who have early (i.e., before age 14) versus late (i.e., at age or older) YJ contact relative to the wider population. A reason for this is that the type of data needed to examine these differences has not usually been available at a population level. Understanding patterns of early contact with the youth justice (YJ) system and the characteristics of children who have early versus late contact is foundational knowledge for planning and developing prevention strategies and intervention programs that aim to divert children and young people from the YJ system.

In this paper, we use whole-of-population data in an Australian jurisdiction to better understand the differences between young people who have early (i.e., before age 14) versus late (i.e., at age 14 or older) contact with the YJ system, relative to the general population. We focus on examining differences in four key areas: 1) the patterns of YJ system contact from age 10 to 18; 2) social and economic characteristics at birth; 3) child protection contact up to age 10; and 4) mental health-related hospitalisations from age 12 to 18. This research aims to build on developmental criminological theories (e.g., Moffitt, 1993) that suggests that early life circumstances affect developmental pathways which, in turn, may be associated with early and more serious involvement with the justice system and poorer associated outcomes.

Developmental and life course criminological perspectives on early versus late offending behaviour

There is an observed relationship between offending patterns, recidivism rates, and age at which the first offence occurred and/or came to the attention of the criminal justice system (Gottfredson & Hirschi, 1990; Tibbetts & Piquero, 1999). Research in this area is predominantly based on longitudinal cohort studies in the United States, United Kingdom, and New Zealand, and has consistently shown that early onset offending is a strong predictor of serious offending in later adolescence and adulthood (Farrington et al., 1990; Moffitt, 1993; Nagin & Farrington, 1992a, 1992b; Tibbetts & Piquero, 1999). Recent Australian research using whole-of-population linked administrative data from government departments has demonstrated findings consistent with those from well-known cohort studies. Malvaso et al. (2020a) have shown that, compared to young people who had their first YJ supervision at age 14 or older, those who had their first YJ supervision before age 14 were more likely to experience more restrictive types of supervision (i.e., time in custody) and had a higher median number of supervision orders by age 18.

Developmental and Life Course (DLC) criminology theorists have suggested that early life circumstances are prevalent in both the onset and continuation of offending behaviours over time. For example, Moffitt's (1993) developmental taxonomy distinguished between 'adolescent-limited' and 'life-course-persistent' offending behaviour, with those engaging in life-course-persistent offending being more likely to commence offending at a younger age and displaying anti-social behaviour during early childhood compared to their adolescent-limited counterparts. Moffitt attributed this chronic and early-onset participation in crime to the interaction between neuropsychological impairments and social disadvantage (1993). Patterson, Forgatch, Yoerger, and Stoolmiller (1998) expanded on this, suggesting that a lack of parental discipline, monitoring, and problem solving throughout childhood can

foster an environment in which the child learns that antisocial behaviours have a maladaptive function. This pattern of learning can then lead to a predisposition to offending behaviours that persist over the life course. In comparison, those whose first offense is at a later age are more likely to come from more functional families compared to the early onset group, but endure difficulties greater than the non-offender group, including being less socially skilled, having poorer peer relations, and experiencing lower academic achievements (Fergusson & Nagin, 2000; Patterson & Yoerger, 2002).

Leading theories in developmental psychopathology indicate that early childhood and family disadvantage plays a critical role in the onset of early offending behaviours (Moffitt, 1993; Staff, Whichard, Siennick & Maggs, 2015). Evidence has indicated that children born with neuropsychological deficits, that occur in utero or in infancy, have negatively affected brain development which may lead to behavioural and emotional adjustment problems that can persist over their life course (Cicchetti, 2016; Cicchetti & Toth, 1995; Hambrick, Brawner & Perry, 2019; Moffitt, 1993). In addition, childhood and family-related disadvantages can prevent young children from learning the skills needed to prevent later offending behaviours (Gottfredson & Hirschi, 1990; Staff, Whichard, Siennick & Maggs, 2015). For example, single-parent families, being born to teenage parents, and low income or occupational status can increase the risk of early childhood anti-social disposition, which has been linked to early onset offending (Dodge, Greenberg & Malone, 2008; Maughan, Pickles, Rowe, Costello & Angold, 2000; Tremblay & Nagin, 2001; Tremblay, 2014; Staff, Whichard, Siennick & Maggs, 2015).

The role of child maltreatment and child protection contact in offending pathways

One of the most significant experiences in early childhood that has been suggested to

play a role in the development of offending behaviours is exposure to maltreatment. There is strong evidence from both international and Australian studies that children who experience abuse and neglect, and those who have had contact with the child protection (CP) system, are at greater risk for criminal justice involvement compared to non-maltreated groups (see Braga, Goncalves, Basto-Pereira & Maia, 2017; Malvaso, Delfabbro & Day, 2016 for reviews). While CP involvement is a significant risk factor for YJ system contact, it is important to note that the vast majority of children exposed to maltreatment never become involved with YJ (Yun, Ball & Hyeyoung, 2011). Population-level data in South Australia has demonstrated that although more than 1 in 4 children born 1991 to 1998 will have contact with the CP, less than 6% of these children will go on to have YJ system contact between ages 10 and 18 (Malvaso et al., 2020a). However, when examined from the YJ system perspective, 84% of these birth cohorts who come under YJ supervision by age 18 have had contact with the CP system 18 (Malvaso et al., 2020a). The overrepresentation of CP-involved young people in YJ and, in particular, those who experience custody is well-established (Kolivoski, Shook, Goodkind & Kim, 2014; Lemmon, 2006; Ryan & Testa, 2005).

Longitudinal studies have also demonstrated that in the vast majority of cases, CP contact precedes YJ system contact (Malvaso et al., 2020b). Many of the young people involved with YJ have experienced maltreatment, including neglect and physical, sexual, and emotional abuse (Mallett, 2014). These experiences, as well as the subsequent experiences within the CP system, such as placement in out-of-home care (OOHC), have been found to evoke serious and long-term repercussions for many individuals (Mallett, 2014). Children who enter OOHC have often been exposed to early onset, protracted, and repeated adverse events including maltreatment and exposure to domestic violence. They are also likely to suffer from greater behavioural and emotional problems, including difficulties in emotion

regulation, attention, activity level, or aggression (Sawyer, Carbone, Searle & Robinson, 2007). From a developmental perspective, it is clear that exposure to child maltreatment and contact with the CP system may be linked with subsequent offending behaviour through numerous potential pathways. Child abuse can influence cognitive and social development, including links with poor emotional control, impulse control issues, aggressive behaviours, substance use, and mental health problems, all of which have been linked to a higher likelihood of YJ contact (Cicchetti, 2016; Cicchetti & Toth, 1995; Hambrick, Brawner & Perry, 2019; Malvaso, Delfabbro & Day, 2017b; van Berkel, Tucker & Finkelhor, 2018). Indeed, international research has shown that these developmental pathways into the criminal justice system are influenced by a complex interaction of individual, social and contextual features that act in combination with maltreatment (Braga, Goncalves, Basto-Pereira & Maia, 2017).

Given that evidence indicates that initial exposure to CP often occurs early, at approximately 60%, by age five (Pilkington et al., 2017), understanding population-level differences in CP system contact among young people who have early, late, or no contact with YJ system may provide new insights into opportunities for the prevention and early intervention.

Co-occurring challenges and needs

Early life disadvantage, child maltreatment, and YJ system contact have all been linked with poorer psychosocial outcomes later in adolescence and adulthood, including a higher prevalence of mental health problems (Casswell, French & Rogers, 2012; Mallett, 2014; Shepherd & Purcell, 2015). Others have highlighted the substantial cross-over between young people in the CP system, the YJ system, and the mental healthcare system (Tarren-

Sweeney, 2008). Evidence has indicated risk factors that pre-date offending can lead to both YJ contact and mental health problems. For example, many of the identified risk factors for early-onset offending, such as anti-social behaviour in childhood, maltreatment, functional impairment, family dysfunction, socio-economic disadvantage, and developmental delays, have also been linked to ongoing mental health conditions (Casswell, French & Rogers, 2012). In addition, findings have shown that YJ contact can produce an environment that exacerbates mental health problems, which then perpetuates ongoing contact with the YJ system (Atkins et al., 1999; Mallett, 2014; Shepherd & Purcell, 2015). For example, a review conducted by McReynolds et al. (2008) found higher rates of mental health disorders for already incarcerated youth compared to youth entering the juvenile courts. It is not known whether a greater proportion of young people who have early contact with YJ experience mental health disorders in adolescence compared with those who have late or no contact. Accordingly, there is a need for more detailed examination of mental health outcomes, such as might be achieved through emergency department records and in-patient hospitalisations, among these groups.

Policy and practice relevance for understanding early versus late contact with the justice system

Young people who have early contact with the justice system are of policy interest because, even though they make up a small proportion of the overall YJ system population, they are responsible for significantly higher rates of crime and system contact later on (Malvaso, Delfabbro, Day & Nobes, 2019; Moffitt, 2003). While there is evidence that the number of children who have contact with the justice system is decreasing across the developed world (known as the ‘universal crime drop’), these decreases are purportedly largely driven by a reduction in one-off and low-level offending, with a small but growing

proportion of children responsible for more serious and chronic offending (AIHW, 2020; Malvaso et al., 2020a; McCarthy, 2020; Payne & Piquero, 2020). Identifying factors contributing to these developmental pathways as early as possible is necessary for planning and developing prevention strategies and intervention programs aimed at reducing offending behaviour and diverting children and young people from the YJ system.

The present study

This study aimed to provide population-level insight into differences between young people who have early versus late YJ contact relative to the general population. This knowledge is foundational for understanding the potentially complex circumstances that precede YJ system contact and may provide new insights into opportunities for intervention. While previous research has provided some information on the differences between children who come into YJ early versus the children who come into YJ late, much of what is known is drawn from cohort studies. These studies may not always capture populations who are experiencing significant disadvantage and can be affected by attrition. This study aimed to build on what is known from cohort studies using population-level data. These data have high levels of completeness and accuracy, avoid non-response, attrition, and reporting bias. These data also provide new opportunities to build on the evidence-base provided by cohort studies and studies based on samples of justice-involved individuals by not only examining differences between young people who have early versus late contact with the justice system, but also how early life risk among these groups differs from the wider population of non-justice involved individuals.

This research used a whole-of-population linked data platform to better understand early life characteristics, child protection contact, and mental health outcomes among young

people in an Australian jurisdiction who had early, late, or no contact with the YJ system. IT was anticipated that this would provide a more in-depth understanding of the characteristics and experiences of these young people and foundational knowledge necessary for identifying early intervention opportunities that aim to prevent and/or reduce YJ system contact.

This study addressed the following four research questions:

1) Are patterns of YJ contact for young people who had their first supervision with YJ early (i.e., before age 14) different compared to those who had their first supervision late (i.e., at age 14 or older)?
2) Are there differences in characteristics measured at birth for those who had their first YJ supervision early compared to those who had their first supervision late?
3) Are there differences in patterns of CP contact before age 10 (notifications through to OOHC placement) for those who had their first YJ supervision early compared to those who had their first supervision late?
4) Are there differences in patterns of mental health hospitalisations after age 12 for those who had their first YJ supervision early compared to those who had their first supervision late?

Methods

Data source

The research project utilised data from the Better Evidence Better Outcomes Linked Data (BEBOLD) platform, a comprehensive whole-of-population linked data platform able to track children's wellbeing from birth into early adulthood. BEBOLD contains de-identified data on ~500,000 young people in South Australia born from 1991 onwards and spans more than 30 different government administrative data sources. This study included data from five

sources held within the platform, including: Youth Justice (YJ), Department for Child Protection, the birth registry, perinatal statistics collection, and public hospitals (including both in-patient and emergency department records). Data used in this paper pertained to young people born 1991-1998 in order to capture complete YJ system contact from age 10 to 18. Data were probabilistically linked by SA-NT Datalink, an independent linkage agency using personal information (SA-NT, n.d.). Australian data linkage systems typically estimate false linkage rates of 0.1-0.5% (Centre for Health Record Linkage, 2012; Holman, Bass, Rouse, & Hobbs, 1999).

Youth justice system data. The YJ system data includes information on both community and custodial-based supervision orders, as well as admissions into Kurlana Tapa (Adelaide Youth Training Centre). Orders can be unsentenced, i.e., the offending matter(s) is alleged, and has not been finalised by the courts or the young person is awaiting sentencing, or sentenced, i.e., the alleged offending matter(s) have been finalised by the courts who have delivered their sentence(s). The YJ system data includes complete information on orders and admissions to Kurlana Tapa until 2016. Data were analysed according to the following categories: any community-based supervision (yes/no); type of community-based supervision (three mutually exclusive categories of unsentenced, sentenced, and sentenced & unsentenced); any custodial supervision (yes/no); type of custodial supervision (three mutually exclusive categories of unsentenced, sentenced, and sentenced & unsentenced), type of first YJ supervision (categorised by unsentenced/sentenced and community-based/custodial supervision), and total number of supervision orders (grouped according to 1, 2, 3-6, 7-23, and 24+). We also examined return to sentenced supervision defined as the proportion of young people who returned to sentenced supervision out of all young people who experienced at least one sentenced supervision (yes/no).

Sociodemographic and perinatal characteristics. Perinatal characteristics and

demographic information was sourced from the SA Perinatal Statistics Collection and was supplemented and validated by Births Registrations data, which included parental and child demographic information as well as basic clinical birth data filled out by the attending midwife or nurse at birth. Pregnancy and birth outcome information included: sex (male/female), Aboriginal and/or Torres Strait Islander identification based on an algorithm developed by Gialamas et al. (2016; yes/no), maternal smoking in the second half of pregnancy (yes/no), low birth weight (<2500grams/≥2500grams), preterm gestational age (<37 weeks/≥37 weeks), mother's number of previous births and insufficient antenatal care defined as <7 visits (yes/no). Sociodemographic variables included maternal age (grouped as <19, 20-24, 25-29, 30-34, 35-39, and 40+), marital status (partner/no partner), and parental labour force status (in labour force/not in labour force). Mother's postcode at the time of birth was assigned an Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) score, a neighbourhood level indicator of socio-economic disadvantage that included neighbourhood aggregate information on income, education, employment, housing, car ownership, lone parenthood, English proficiency, and disability (Australian Bureau of Statistics, 2011). The mother's IRSAD are reported according to if she lived in the most disadvantaged decile at the time of the child's birth (yes/no).

Child protection. Information on young people who had contact with CP was obtained from the Department for Child Protection (DCP). There are multiple levels (or layers) of CP contact ranging from notifications (or reports) of alleged or suspected maltreatment or risk-of-harm, screened-in notifications (notifications assessed to meet a threshold of concern), investigations (notifications which meet a threshold warranting an investigation), and substantiations (verification that maltreatment is occurring or at risk of occurring) (Child Protections Systems Royal Commission, 2016). In situations where children are assessed as unable to remain safely in the care of their families, DCP can apply

to the Youth Court for orders than enable the removal of children to be placed into OOHC. Typically, these include short-term (up to 12 months) or long-term (until the child turns 18) orders. A small proportion of children are also placed in OOHC on other types of orders, including voluntary custody and immigration orders.

There are different types of OOHC placements that commonly include: foster care where children are placed with foster parents, kinship care where children are placed with members of child's extended family or kin network, and residential care where children are in houses staffed by carers on a rotational basis who are employed through DCP or private agencies. This study includes information from all levels of CP-related contact, including: ever notified, investigated, substantiated, and/or placed in OOHC. Analysis was also presented on primary substantiated type of maltreatment - physical, emotional, sexual abuse and neglect; highest type of CP contact categorised into six mutually exclusive groups: only ever notified but not screened-in, only ever subject to a screened-in notification but not investigated, only ever subject to an investigation but not substantiated, substantiated but not placed in OOHC, and OOHC placement. OOHC placements are defined by order type including short-term 12 month orders, long-term orders until age 18, or other; first type of OOHC placement according to family-based, residential care, or other; highest type of OOHC ordered as family-based only, family-based and residential care, residential care only. Due to small numbers of children experiencing some types of care placement before age 10, we also examined 'ever' being placed in OOHC by type (ever foster, kinship, or residential care).

Mental health and substance use related hospitalisations. Information on hospitalisations of young people with diagnosis codes related to mental health and/or substance use were obtained from the Integrated South Australian Activity Collection (ISAAC), a data collection system recording information on all patients admitted to public

hospitals in South Australia (since the 1st July, 2001). Information from the South Australian Emergency Department Data Collection (EDDC) were also used, which details emergency department presentations (since the 1st July, 2003). The inpatient admissions include information on primary or additional diagnoses. The emergency department presentations include information on primary diagnoses only. Diagnoses were recorded using the International Statistical Classifications of Diseases and Related Health Problems, 10th Revision, Australian Modification codes (ICD-10-AM). Mental health-related hospitalisations were categorised based on inpatient admission and/or presentations to the emergency department of public hospitals in South Australia. Dichotomous (yes/no) variables were created to examine: any mental health-related hospitalisations, and by type (mental and behavioural disorders due to substance use, neurotic stress-related and somatoform disorders, symptoms and signs involving emotional state, behavioural and emotional disorders with early-onset, intentional self-harm, mood disorders, disorders of adult personality and behaviour, schizophrenia, schizotypal and delusional disorders, other mental health-related hospitalisations and external cause codes for self-harm).

Statistical analysis

The study included eight birth cohorts of young people born 1991-1998 (n=169,172). Young people were followed from birth to age 18 to capture the entire eligibility period for YJ contact (age 10 to 18 years), CP contact (birth to 10 years) and mental health-related hospitalisations (age 12 to 18 years). Young people were categorised into two groups according to age at first YJ supervision: 1) those who had their first supervision with YJ early, i.e., before age 14, referred to as the ‘early contact’ group, and 2) those who had their first supervision late, i.e., at age 14 or older, referred to as the ‘late contact’ group.

For Question One, patterns of YJ system contact by age group at first supervision (early versus late) were examined. Numbers and percentages were reported pertaining to the two groups, and relative risks (RRs), 95% Confidence Intervals (95% CIs), and *p*-values were calculated to compare the proportion of young people who experienced the various types of YJ supervision features by age group at first supervision.

For Question Two, differences in sociodemographic and perinatal characteristics between the early and late YJ contact groups, relative to the general population (no YJ contact) were examined. Numbers and percentages pertaining to the three groups were reported. RRs, 95% CIs and *p*-values were calculated to compare the proportion of young people in the early and late YJ contact groups with different sociodemographic and perinatal characteristics relative to the general population.

For Question Three, differences in patterns of CP contact before age 10 (notifications through to OOHC placement) between the early and late YJ contact groups, relative to the general population with no YJ contact were examined. Numbers and percentages pertaining to the three groups were reported, and RRs, 95% CIs and *p*-values were calculated to compare the proportion of young people in the early and late YJ contact groups with different levels of contact with CP, relative to CP contact patterns in the general population. Further analyses were conducted by restricting the population to those who had at least one contact with CP to examine different patterns of CP contact. Young people in the early and late YJ contact groups were thus compared to a CP but no YJ contact group. A further restriction was made to examine patterns of OOHC contact among those who experienced at least one OOHC placement. RRs, 95% CIs and *p*-values were calculated to compare groups in both restricted sample analyses.

For Question Four, differences in the prevalence of mental health-related hospitalisations between ages 12-18 years in the early and late YJ contact groups, relative to

the prevalence of hospitalisations in the general population (no YJ contact group), were examined. Numbers and percentages of mental health-related hospitalisations were reported according to these groupings, and RRs, 95% CIs and *p*-values were calculated to compare the proportions of young people in the early and late YJ contact groups who experienced different types of mental-health related hospitalisations relative to the general population.

Finally, we conducted additional analyses to examine differences in sociodemographic and perinatal characteristics, CP characteristics and mental health-related hospitalisations according to age at first YJ supervision among young people who ever experienced custodial supervision. Results of these analysis are included in supplementary material (Appendix A). This supplementary analysis was conducted as it is known that any time spent in custody is associated with poorer outcomes and this group is of particular interest to policy (Goldson, 2013; Motz et al., 2020). Therefore, this analysis provided a closer look into the differences between young people who had experienced custodial supervision by age group at first supervision.

While *p*-values are reported, these should not be relied on for interpretation, in line with recommendations from the American Statistical Association (Wasserstein & Lazar, 2016). *p*-values and confidence intervals have been shown to be highly dependent on sample size, which can bias conclusions based on interpretations of statistical significance (Greenland et al., 2016; Morey, Hoekstra, Rouder, Lee, & Wagenmakers, 2016). Confidence intervals were interpreted as indicators of the precision of the effect estimate, and not as having a 95% probability of including the true effect size of the population, as commonly misinterpreted. All analyses were conducted in Stata version 15.1 (StataCorp, 2014).

Ethical approval

Ethics and Site-Specific Assessment (SSA) approval was granted from the South Australian Department of Health and Wellbeing (HREC/13/SAH/106; Central SSA/13/SAH/146); Women's and Children's Health Network (SSA/14/WCHN/21), and the Aboriginal Health Research Ethics Committee (04-13-538).

No participants were approached to participate in this research as the data is routinely collected as a part of service delivery. A waiver of consent was granted as 1) the data are de-identified, 2) it is impractical to acquire consent from such a large number of parents or caregivers, 3) a small proportion of the sample may be deceased and 4) the parents would consent if given the opportunity due to the risk minimisation strategies and the benefits of the project (National Statement on Ethical Conduct in Human Research, 2007).

Results

Of the 169,172 young people born between 1991-1998, 3,161 young people (1.9%) ever experienced YJ supervision between 10 and 18 years old; 26,511 (15.7%) had any contact with the CP system before age 10; 3,846 (2.3%) had been placed in out-of-home care (OOHC); and, 10,201 young people (6.1%) had any mental health-related hospitalisation between 12 and 18 years.

Patterns of YJ contact among young people who had their first supervision early versus late

Table 1 shows the patterns of YJ supervision for young people born between 1991 and 1998 by age at first supervision (10-13 years old compared to 14 and older). First, we examined ever having experienced YJ supervision by type of supervision. A larger proportion of young people with early YJ contact experienced community-based supervision (88.8%

compared to 82.0% late YJ contact group; RR 1.1, CI95% 1.0-1.1). Some differences were observed when the type of community supervision was examined. Compared to the late contact group, the early contact group were more than twice as likely to have experienced both sentenced and unsentenced community supervision (62.5% compared to 28.0%; RR 2.2, CI95% 2.0-2.5). Almost all of the early contact group had experienced custodial supervision compared to almost two thirds of the late contact group (90.6% compared to 59.3%; RR 1.5, CI95% 1.5-1.6). When examined by type of custodial supervision at some point, compared to the late contact group, a lower proportion of the early contact group ever experienced unsentenced custodial supervision only (66.2% compared to 83.0%; RR 0.8, CI95% 0.7-0.9).

When examining differences in the type of *first* YJ supervision experienced, a higher proportion of young people in the early contact group experienced custodial supervision (sentenced or unsentenced) compared to the late contact group (~71% compared to ~51%; RR 1.4, CI95% 1.3-1.5).

Overall, the early contact group experienced a higher total number of supervision orders compared to the late contact group. For example, 80.9% of the late contact group experienced 6 or less supervision orders compared to 34.9% of the early contact group. In contrast, 65.1% of the early contact group experienced 7 or more supervision orders compared to 19.1% of the late contact group.

We examined the median number of supervision orders and the total number of days spent under supervision by age group. Overall, the early contact group (*n*=436) had a higher median number of supervision orders compared to the late contact group (*n*=2,275) (12 compared to 2). When examining the median number of custodial supervision orders, the early contact group (*n*=395) had a higher median number of custodial supervisions compared to the late contact group (*n*=1,605) (6 compared to 2). The early contact group (*n*=432) also spent a higher median number of days under supervision compared to the late contact group

(*n*=2,699) (614.5 days compared to 186 days). The early contact group (n=395 also spent a higher median number of days in custody compared to the late contact group (n=1,598) (44 days compared to 10 days) (data not shown).

We also examined the proportion of young people who returned to sentenced supervision at least once by age at first supervision. Relative to the late contact group, the proportion of young people from the early contact group who returned to sentenced supervision was over two times higher (73.6% compared to 32.4%; RR 2.3 CI95% 2.1-2.5).

Table 1
Patterns of YJ supervision for young people born 1991-1998 by age group at first YJ supervision

	YJ contact by age group					
	Early contact (age 10-13; *n*=436)		Late contact (age 14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Ever YJ supervision by type						
Community-based supervision						
No community-based supervision	49	11.2	490	18.0	0.6 [0.5 – 0.8]	<0.001
Any community-based supervision	387	88.8	2,235	82.0	1.1 [1.0 – 1.1]	<0.001
Type of community-based supervision						
Unsentenced community-based supervision	40	10.4	266	11.9	0.9 [0.6 – 1.2]	0.376
Sentenced community-based supervision	105	27.1	1,343	60.1	0.5 [0.4 – 0.5]	<0.001
Sentenced & unsentenced community-based supervision	242	62.5	626	28.0	2.2 [2.0 – 2.5]	<0.001
Custodial supervision						
No custodial supervision	41	9.4	1,109	40.7	0.2 [0.2 – 0.3]	<0.001
Any custodial supervision	395	90.6	1,616	59.3	1.5 [1.5 – 1.6]	<0.001
Type of custodial supervision						
Unsentenced custodial supervision	259	66.2	1,326	83.0	0.8 [0.7 – 0.9]	<0.001
Sentenced custodial supervision	<5	<2.0[a]	<20	<5.0	#	#
Sentenced and unsentenced custodial supervision	<130	<35.0	<260	<20.0	2.0 [1.7 – 2.5]	<0.001

	YJ contact by age group					
	Early contact (age 10-13; *n*=436)		Late contact (age 14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Type of first YJ supervision						
Unsentenced community-based supervision	50	11.5	181	6.7	1.7 [1.3 – 2.3]	<0.001
Sentenced community-based supervision	86	19.8	1,205	44.4	0.4 [0.4 – 0.5]	<0.001
Unsentenced custodial supervision	<300	<70.0	<1,320	<50.0	1.4 [1.3 – 1.5]	<0.001
Sentenced custodial supervision	<5	<2.0[a]	<20	<2.0[a]	#	#
Total number of supervision orders						
1 supervision order	48	11.0	1,067	39.2	0.3 [0.2 – 0.4]	<0.001
2 supervision orders	26	6.0	464	17.0	0.4 [0.2 – 0.5]	<0.001
3 to 6 supervision orders	78	17.9	674	24.7	0.7 [0.6 – 0.9]	0.002
7 to 23 supervision orders	187	42.9	463	17.0	2.5 [2.2 – 2.9]	<0.001
24 or more supervision orders	97	22.2	57	2.1	10.6 [7.8 – 14.5]	<0.001
Return to sentenced supervision [b]						
No	92	26.4	1,251	67.6	0.4 [0.3 – 0.5]	<0.001
Yes	256	73.6	600	32.4	2.3 [2.1 – 2.5]	<0.001

Note. CI = Confidence Interval; Col % = Column Percentage; [a] Numbers have been perturbed due to small cell sizes in order to protect confidentiality. This perturbation does not alter the interpretation of the results; [b] Return to sentenced supervision is calculated as the proportion of young people who returned to sentenced supervision out of all young people who experienced at least one sentenced supervision (n=2,199).

Sociodemographic and perinatal characteristics at birth among young people who had their first supervision early versus late, compared to the general population

Presented in Table 2, this analysis included three groups for comparison: early YJ contact, late YJ contact, and the general population with no YJ contact as a comparison group. Those experiencing YJ supervision – whether early or late – were predominantly males (~77% in both YJ contact groups compared to 50.9% in the general population with no YJ contact). Aboriginal and Torres Strait Islander people were overrepresented in both the early and late contact groups (51.8% and 63.3%, respectively), compared to 3.0% in the general population with no YJ contact.

Patterns of increased social and economic disadvantage measured at birth were evident for young people in both YJ contact groups relative to the general population. For example, relative to the general population, the proportion of the early contact group and the late contact group who were born to mothers aged less than 19 at their first birth was 4.2 (CI 95% 3.4-5.2) and 3.9 (CI95% 3.5-4.2) times higher (21.9% and 19.9%, respectively, compared to 5.2%). Similarly, the proportion of both YJ contact groups who were living in the most disadvantaged areas at birth was two times higher relative the general population (47.2% and 40.6%, respectively, compared to 21.5%). Although it could only be examined for one birth cohort due to availability of the measure, ~70% of both the early and late contact groups were born to mothers who smoked during pregnancy, which was three times higher compared to the proportion (25.2%) in the general population. In terms of birth outcomes, similar proportions of the YJ contact groups had a low birth weight (10.7% and 8.5% in the early and late contact groups, respectively) or were born preterm (9.2% and 8.6%). These proportions were slightly higher when compared to the general population (6.8% and 7.6% low birth weight and pre-term birth, respectively).

When examining differences in the relative risks of the early contact group versus the

late group compared respectively with the general population, it was clear both groups were disadvantaged and there was only some evidence that indicated the early contact group experienced more pronounced disadvantage compared to the late contact group. For example, relative to the general population, the proportion of young people born into jobless families was 5.4 (CI95% 4.9-5.9) times higher among those in the early contact group and 3.8 (CI95% 3.6-4.0) times higher among those in the late contact group.

Table 2
Sociodemographic and perinatal characteristics at birth for young people born 1991-1998 by age group at first YJ supervision, compared to the general population

	General population - No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (age 10-13; *n*=436)				Late contact (age 14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Sex[a]										
Female	75,262	49.0	103	23.6	0.5 [0.4 – 0.6]	<0.001	628	23	0.5 [0.4 – 0.5]	<0.001
Male	78,221	50.9	333	76.4	1.5 [1.4 – 1.6]	<0.001	2,089	76.7	1.6 [1.5 – 1.6]	<0.001
Aboriginal and/or Torres Strait Islander										
No	148,999	97.0	204	48.2	0.5 [0.5 – 0.5]	<0.001	951	36.7	0.4 [0.4 – 0.4]	<0.001
Yes	4,541	3.0	219	51.8	17.5 [15.9 – 19.3]	<0.001	1638	63.3	21.4 [20.5 – 22.3]	<0.001
Mother smoked in pregnancy[b]										
No	13,496	74.8	8	26.7	0.4 [0.2 – 0.6]	<0.001	45	29.8	0.4 [0.3- 0.5]	<0.001
Yes	4,541	25.2	22	73.3	2.9 [2.3 – 3.6]	<0.001	106	70.2	2.8 [2.5 – 3.1]	<0.001
Low birth weight (<2500g)										
No	143,065	93.2	302	89.3	1.0 [0.9 – 1.0]	0.005	1744	91.5	1.0 [1.0 – 1.0]	0.003
Yes	10,472	6.8	36	10.7	1.6 [1.1 – 2.1]	0.005	163	8.5	1.3 [1.1 – 1.5]	0.003
Preterm birth										
No	141,922	92.4	307	90.8	1.0 [0.9 – 1.0]	0.262	1743	91.4	1.0 [1.0 – 1.0]	0.087
Yes	11,601	7.6	31	9.2	1.2 [0.9 – 1.7]	0.262	164	8.6	1.1 [1.0 – 1.3]	0.087

	General population - No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (age 10-13; *n*=436)				Late contact (age 14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Mother number of previous births										
None	61,957	40.3	77	22.8	0.6 [0.5 – 0.7]	<0.001	621	32.6	0.8 [0.8 – 0.8]	<0.001
1	53,725	35.0	88	26.0	0.7 [0.6 – 0.9]	<0.001	575	30.1	0.9 [0.8 – 0.9]	<0.001
2	24,833	16.2	86	25.5	1.6 [1.3 – 1.8]	<0.001	349	18.3	1.1 [1.0 – 1.2]	0.012
3	8,589	5.6	41	12.1	2.2 [1.6 – 2.9]	<0.001	194	10.2	1.8 [1.6 – 2.1]	<0.001
4	2,734	1.8	20	5.9	3.3 [2.2 – 5.1]	<0.001	89	4.7	2.6 [2.1 – 3.2]	<0.001
5 or more	1,702	1.1	26	7.7	6.9 [4.8 – 10.1]	<0.001	79	4.1	3.7 [3.0 – 4.7]	<0.001
Insufficient antenatal care										
No (7+ visits)	126,914	91.5	190	65.1	0.7 [0.7 – 0.8]	<0.001	1316	76.5	0.8 [0.8 – 0.9]	<0.001
Yes (<7 visits)	11,713	8.5	102	34.9	4.1 [3.5 – 4.8]	<0.001	405	23.5	2.8 [2.6 – 3.0]	<0.001
Maternal Age										
<19	7,968	5.2	74	21.9	4.2 [3.4 – 5.2]	<0.001	379	19.9	3.9 [3.5 – 4.2]	<0.001
20-24	28,800	18.8	121	35.8	1.9 [1.7 – 2.2]	<0.001	633	33.2	1.8 [1.7 – 1.9]	<0.001
25-29	53,192	34.6	83	24.5	0.7 [0.6 – 0.8]	<0.001	524	27.5	0.8 [0.7 – 0.9]	<0.001
30-34	44,590	29.0	49	14.5	0.5 [0.4 – 0.6]	<0.001	260	13.6	0.5 [0.4 – 0.5]	<0.001
35-39	<16,400	<15.0	<20	<5.0	0.2 [0.2 – 0.5]	<0.001	<100	<5.0	0.5 [0.4 – 0.6]	<0.001
40+	2,600	1.7	<5	<2.0[c]	#	#	<20	<2.0[c]	#	#

	General population - No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (age 10-13; *n*=436)				Late contact (age 14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Mother's Marital Status										
Partner	132,804	86.5	176	52.1	0.6 [0.5 – 0.7]	<0.001	1158	60.7	0.7 []0.7 – 0.7	<0.001
No Partner	20,711	13.5	162	47.9	3.6 [3.2 – 4.0]	<0.001	749	39.3	2.9 [2.7 – 3.1]	<0.001
Mother in Labour Force										
Yes	90,147	59.4	59	17.8	0.3 [0.2 – 0.4]	<0.001	510	27.2	0.5 [0.4 – 0.5]	<0.001
No	61,740	40.6	272	82.2	2.0 [1.9 – 2.1]	<0.001	1368	72.8	1.8 [1.7 – 1.8]	<0.001
Father in Labour Force										
Yes	118,844	86.8	90	38.0	0.4 [0.4 – 0.5]	<0.001	860	57.4	0.7 [0.6 – 0.7]	<0.001
No	18,084	13.2	147	62.0	10.6 [8.2 – 13.8]	<0.001	639	42.6	3.2 [3.0 – 3.4]	<0.001
Jobless Family										
No	129,493	88.3	114	37.5	0.4 [0.4 – 0.5]	<0.001	991	56.1	0.6 [0.6 – 0.7]	<0.001
Yes	17,101	11.7	190	62.5	5.4 [4.9 – 5.9]	<0.001	777	43.9	3.8 [3.6 – 4.0]	<0.001
Lived in Most Disadvantaged IRSAD Quintile										
No	119,903	78.5	180	52.8	0.7 [0.6 – 0.7]	<0.001	1,137	59.4	0.8 [0.7 – 0.8]	<0.001
Yes	32,833	21.5	161	47.2	2.2 [2.0 – 2.5]	<0.001	777	40.6	1.9 [1.8 – 2.0]	<0.001

Note. CI = Confidence Interval; Col % = Column Percentage; [a] Number of participants with sex Not Stated/Inadequately described were less than 10 and for this reason were not reported.; [b] Information on smoking in pregnancy was only collected from 1998 onwards, therefore this variable only includes data on mothers of young people born in 1998 only; [c] Numbers have been perturbed due to small cell sizes in order to protect confidentiality. This perturbation does not alter the interpretation of the results.

Child protection (CP) characteristics before age 10 among young people who had their first supervision early versus late, compared to the general population

Table 3 presents analysis on three groups: early YJ contact, late YJ contact, and the general population with no YJ contact group for comparison. Young people from both the early and late YJ contact groups were over-represented at every level of the CP system, from notification through to placement in out-of-home care (OOHC). However, this over-representation was more pronounced for the early contact group compared to the late contact group. For example, more than three-quarters (81.0%) of young people in the early contact group and half (51.3%) in the late contact group had been notified to CP before age 10, compared to 14.5% of the general population. Similar patterns were observed across all levels of CP contact before age 10. The proportion of young people from the early contact group who had been investigated, substantiated and placed in OOHC before age 10 were ~16 times higher relative to the general population (CI95% 14.2-18.7), and seven times higher among young people in the late contact group (CI95% 6.3-7.7).

We also examined the first type and highest type of OOHC placement experienced. Due to small numbers of children being placed in residential care before age 10, and the need to redact some of the analysis as per data custodian and ethical requirements to protect confidentiality, limited conclusions could be drawn from this analysis, with very few young people experiencing placement in residential care before age 10. The proportions who experienced family-based OOHC placements were eight to twelve times higher in the early and late contact groups relative to the general population

To examine patterns of CP contact before age 10 among young people who had their first YJ supervision early versus late, the analysis was restricted to those who had at least one contact with the CP system (see Table 4). There was evidence that young people in contact with YJ had moved further through the CP system than children who did not have YJ contact.

The proportion of the early contact group who had been placed in OOHC on a one-year (GOM12) order was 5.4 times higher compared to the CP no YJ group, and 3.6 times higher among those in the late contact group. Both the early and late YJ contact groups were about three times more likely to have been placed on an 18-year order (GOM18) than the CP group with no YJ contact. For all areas of maltreatment, the early and late YJ contact groups showed higher proportions of abuse and neglect than the general population group, with the exception of sexual abuse, which had a similar prevalence of 2-3% amongst all groups.

To examine patterns of OOHC contact before age 10, the analysis was then restricted to those who had experienced at least one OOHC placement (see Table 5). A higher proportion of those in contact with YJ had been placed in residential and foster care; however, the small numbers made it difficult to draw firm conclusions.

Table 3
Patterns of child protection contact before age 10 among young people born 1991-1998 by age group at first YJ supervision, compared to the general population

	General population - No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (age 10-13; *n*=436)				Late contact (14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Child Protection Contact Before Age 10										
Ever notified										
No	141,924	85.5	83	19.0	0.2 [0.2 – 0.3]	<0.001	1,328	48.7	0.6 [0.5 – 0.6]	<0.001
Yes	24,087	14.5	353	81.0	5.6 [5.3 – 5.7]	<0.001	1,397	51.3	3.5 [3.4 – 3.7]	<0.001
Ever investigated										
No	156,961	94.5	216	49.5	0.5 [0.5 – 0.6]	<0.001	1,965	72.1	0.8 [0.7 – 0.8]	<0.001
Yes	9,050	5.5	220	50.5	9.3 [8.4 – 10.2]	<0.001	760	27.9	5.1 [4.8 – 5.4]	<0.001
Ever substantiated										
No	160,424	96.6	265	60.8	0.6 [0.6 – 0.7]	<0.001	2,141	78.6	0.8 [0.8 – 0.8]	<0.001
Yes	5,587	3.4	171	39.2	11.7 [10.3 – 13.1]	<0.001	584	21.4	6.4 [5.9 – 6.9]	<0.001
Ever in OOHC										
No	162,687	98.0	294	67.4	0.7 [0.6 – 0.7]	<0.001	2,345	86.1	0.9 [0.9 – 0.9]	<0.001

	General population - No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (age 10-13; *n*=436)				Late contact (14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Yes	3,324	2.0	142	32.6	16.5 [14.2 – 18.7]	<0.001	380	13.9	7.0 [6.3 – 7.7]	<0.001
Out-of-Home-Care Characteristics Before Age 10										
First type of OOHC										
No OOHC	162,687	98.0	294	67.4	0.7 [0.6 – 0.7]	<0.001	2,345	86.1	0.8 [0.8 – 0.9]	<0.001
Other[a]	3,109	1.9	135	31.0	16.5 [14.3 – 19.1]	<0.001	348	12.8	6.8 [6.1 – 7.6]	<0.001
Family-based	214	0.1	<10	<2.0	12.5 [5.9 – 26.3]	<0.001	<35	<2.0	8.5 [5.8 – 12.5]	<0.001
Residential	<5	<2.0[b]	<5	<2.0[b]	#	#	<5	<2.0[b]	#	#
Highest type of OOHC										
No OOHC	162,687	98.0	294	67.4	0.7 [0.6 – 0.7]	<0.001	2,345	86.1	0.8 [0.8 – 0.9]	<0.001
Other[a]	2,555	1.5	93	21.3	13.9 [11.5 – 16.7]	<0.001	241	8.8	5.7 [5.1 – 6.5]	<0.001
Family-based only	740	0.4	42	9.6	21.6 [16.1 – 29.1]	<0.001	123	4.5	10.1 [8.4 – 12.2]	<0.001
Family-based + residential	<30	0	<5	<2.0[b]	#	#	<20	<0.5	#	#
Residential only	<10	0	<5	<2.0[b]	#	#	<5	0.2[b]	#	#

Note. CI = Confidence Interval; Col % = Column Percentage; [a] The 'Other' label includes the categories 'Other,' 'Other Home-Based,' and 'Independent Living'; [b] Numbers have been perturbed due to small cell sizes in order to protect confidentiality. This perturbation does not alter the interpretation of the results.

Table 4

Patterns of child protection contact before age 10 among young people born 1991-1998 by age group at first YJ supervision, compared to those with no YJ contact – restricted to young people who had at least one child protection contact

	CP but No YJ contact (*n*=24,735)		YJ contact by age group							
			Early contact (age 10-13; *n*=356)				Late contact (14+; *n*=1,420)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Child Protection Contact Patterns Before Age 10										
Highest type of CP contact										
Notified	5,829	23.6	34	9.6	0.4 [0.3 – 0.6]	<0.001	165	11.6	0.5 [0.4 – 0.6]	<0.001
Screened in	6,085	24.6	52	14.6	0.6 [0.5 – 0.8]	<0.001	248	17.5	0.7 [0.6 – 0.8]	0.001
Investigated	5,623	22.7	51	14.3	0.6 [0.4 – 0.8]	<0.001	304	21.4	0.9 [0.9 – 1.0]	0.246
Substantiated	3,863	15.6	77	21.6	1.4 [1.3 – 1.7]	0.002	321	22.6	1.5 [1.3 – 1.6]	<0.001
OOHC	2,682	10.8	101	28.4	2.6 [2.2 – 3.1]	0.001	260	18.3	1.7 [1.5 – 1.9]	<0.001
OOHC–GOM12	255	1.0	20	5.6	5.4 [3.5 – 8.5]	<0.001	52	3.7	3.6 [2.6 – 4.8]	<0.001
OOHC–GOM18	398	1.6	21	5.9	3.7 [2.4 – 5.6]	<0.001	70	4.9	3.1 [2.4 – 3.9]	<0.001
Ever substantiated for physical abuse										
No	23,223	93.9	298	83.7	0.2 [0.4 – 0.2]	<0.001	1,251	88.1	0.9 [0.9 – 1.0]	<0.001

	CP but No YJ contact (*n*=24,735)		YJ contact by age group							
			Early contact (age 10-13; *n*=356)				Late contact (14+; *n*=1,420)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Yes	1,512	6.1	58	16.3	2.7 [2.1 – 3.9]	<0.001	169	11.9	1.9 [1.7 – 2.3]	<0.001
Ever substantiated for sexual abuse										
No	24,082	97.4	349	98.0	1.0 [1.0 – 1.0]	0.430	1,379	97.1	1.0 [1.0 – 1.0]	0.573
Yes	653	2.6	7	2.0	0.7 [0.4 – 1.6]	0.430	41	2.9	1.1 [0.8 – 1.5]	0.573
Ever substantiated for emotional abuse										
No	23,036	93.2	302	84.8	0.9 [0.9 – 1.0]	<0.001	1,221	86.0	0.9 [0.9 – 0.9]	<0.001
Yes	1,699	6.8	54	15.2	2.2 [1.7 – 2.8]	<0.001	199	14.0	2.0 [1.8 – 2.3]	<0.001
Ever substantiated for neglect										
No	22,301	90.2	235	66.0	0.7 [0.7 – 0.8]	<0.001	1,059	74.6	0.8 [0.8 – 0.9]	<0.001
Yes	2,434	9.8	121	34.0	3.5 [3.0 – 3.9]	<0.001	361	25.4	2.6 [2.3 – 2.8]	<0.001

Note. CI = Confidence Interval; Col % = Column Percentage.

Table 5

Patterns of OOHC contact before age 10 among young people born 1991-1998 by age group at first YJ supervision, compared to those with no YJ contact – restricted to young people who had at least one placement in OOHC

	OOHC but No YJ contact (*n*=3,324)		YJ contact by age group							
			Early contact (10-13; *n*=142)				Late contact (14+; *n*=380)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
First type of OOHC										
Other[a]	3,109	93.5	135	95.1	1.0 [1.0 – 1.1]	0.463	348	91.6	1.0 [0.9 – 1.0]	0.148
Family-based	<220	<10.0	<10	<5.0	0.8 [0.4 – 1.6]	0.471	<40	<10.0	1.2 [0.8 – 1.8]	0.278
Residential	<5	<2.0[b]	<5	<2.0[b]	#	#	<5	<2.0[b]	#	#
Highest type of OOHC										
Other[a]	2,555	76.9	93	65.5	0.8 [0.9 – 1.0]	0.002	241	63.4	0.8 [0.8 – 0.9]	<0.001
Family-based only	740	22.3	42	29.6	1.3 [1.0 – 1.7]	0.020	123	32.4	1.5 [1.2 – 1.7]	<0.001
Family-based + residential	<30	<2.0[b]	<5	<5.0	#	#	<20	<5.0	#	#
Residential only	<10	<2.0[b]	<5	<5.0	#	#	<5	<2.0[b]	#	#
Ever in residential care placement										
No	3,295	99.1	135	95.1	0.9 [0.9 – 1.0]	<0.001	364	95.8	1.0 [0.9 – 1.0]	<0.001
Yes	29	0.9	7	4.9	5.7 [2.5 – 12.7]	<0.001	16	4.2	4.8 [2.6 – 8.8]	<0.001

	OOHC but No YJ contact (*n*=3,324)		YJ contact by age group							
			Early contact (10-13; *n*=142)				Late contact (14+; *n*=380)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Ever in kinship care placement										
No	3,130	94.2	135	95.1	1.0 [1.0 – 1.0]	0.651	339	89.2	0.9 [0.9 – 1.0]	<0.001
Yes	194	5.8	7	4.9	0.8 [0.4 – 1.8]	0.651	41	10.8	1.8 [1.3 – 2.5]	<0.001
Ever in foster care placement										
No	2,677	80.5	99	69.7	0.9 [0.8 – 1.0]	0.002	259	68.2	0.8 [0.8 – 0.9]	<0.001
Yes	647	19.5	43	30.3	1.6 [1.2 – 2.0]	0.002	121	31.8	1.6 [1.4 – 1.9]	<0.001

Note. CI = Confidence Interval; Col % = Column Percentage; [a] The 'Other' label includes the categories 'Other,' 'Other Home-Based,' and 'Independent Living'; [b] Numbers have been perturbed due to small cell sizes in order to protect confidentiality. This perturbation does not alter the interpretation of the results.

Mental health and substance use related hospitalisations among young people who had their first supervision early versus late, compared to the general population

Table 6 presents analysis on three groups: early YJ contact, late YJ contact, and the general population with no YJ contact as a comparison group. Mental health-related hospitalisations were examined between the ages of 12-18 years. A higher proportion of the early contact group experienced at least one mental health-related hospitalisation compared to the late contact group (47.9% compared to 35.5%), and these proportions were 7.8 (CI95% 7.1-8.6) and 5.8 (CI95% 5.5-6.1) times higher, respectively, compared to the proportion hospitalised in the general population (6.1%).

When examining types of mental health hospitalisations, a higher proportion of the early contact group were hospitalised for every mental health and substance use related disorders in comparison to the late contact group, with the exception of hospitalisation for schizophrenia, schizotypal, and delusional disorders which had a similar prevalence of ~3% among both groups. Overall, the proportions of the early and late contact groups who had been hospitalised for mental health and substance use related disorders were between 4 and 25 times higher than the proportions hospitalised in the general population. The most striking differences were for: substance use related disorders (12.6 times higher in the early contact group compared to the general population; CI95% 10.9-14.6); early onset behavioural and emotional disorders (18.7 times higher in the early contact group compared to the general population; CI95% 15.3-22.9); and personality and behaviour disorders (25 times higher in the early contact group compared to the general population; CI95% 17.1-36.5).

Table 6

Mental health-related hospitalisations between ages 12-18 years among young people born 1991-1998 by age group at first YJ supervision, compared to the general population

	General population – No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (10-13; *n*=436)				Late contact (14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Mental health-related hospitalisation										
No	155,810	93.9	227	52.1	0.5 [0.5 – 0.6]	<0.001	1,758	64.5	0.7 [0.7 – 0.7]	<0.001
Yes	10,201	6.1	209	47.9	7.8 [7.1 – 8.6]	<0.001	967	35.5	5.8 [5.5 – 6.1]	<0.001
Diagnoses for mental health hospitalisations[a]										
Mental and behavioural disorders due to substance use (F10-F19)										
No	162,094	97.6	306	70.2	0.7 [0.7 – 0.8]	<0.001	2,111	77.5	0.8 [0.8 – 0.8]	<0.001
Yes	3,917	2.4	130	29.8	12.6 [10.9 – 14.6]	<0.001	614	22.5	9.6 [8.8 – 10.3]	<0.001
Neurotic, stress-related and somatoform disorders (F40-F48)										
No	161,352	97.2	324	74.3	0.8 [0.7 – 0.8]	<0.001	2,275	83.5	0.9 [0.8 – 0.9]	<0.001
Yes	4,659	2.8	112	25.7	9.2 [7.8 – 10.8]	<0.001	450	16.5	5.9 [5.4 – 6.4]	<0.001
Symptoms and signs involving emotional state (R45)										

	General population – No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (10-13; *n*=436)				Late contact (14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
No	163,606	98.6	350	80.3	0.8 [0.8 – 0.8]	<0.001	2,396	87.9	0.9 [0.9 – 0.9]	<0.001
Yes	2,405	1.4	86	19.7	13.6 [11.2 – 16.5]	<0.001	329	12.1	8.3 [7.5 – 9.3]	<0.001
Behavioural and emotional disorders with early onset (F90-F98)										
No	164,341	99.0	354	81.2	0.8 [0.8 – 0.9]	<0.001	2,416	88.7	0.9 [0.9 – 0.9]	<0.001
Yes	1,670	1.0	82	18.8	18.7 [15.3 – 22.9]	<0.001	309	11.3	11.3 [10.0 – 12.6]	<0.001
Intentional self-harm (X60-X84)										
No	164,005	98.8	379	86.9	0.9 [0.8 – 0.9]	<0.001	2,543	93.3	0.9 [0.9 – 1.0]	<0.001
Yes	2,006	1.2	57	13.1	10.8 [8.5 – 13.8]	<0.001	182	6.7	5.5 [4.8 – 6.4]	<0.001
Mood disorders (F30-F39)										
No	163,774	98.7	403	92.4	0.9 [0.9 – 1.0]	<0.001	2,557	93.8	1.0 [0.9 – 1.0]	<0.001
Yes	2,237	1.3	33	7.6	5.6 [4.0 – 7.8]	<0.001	168	6.2	4.6 [3.9 – 5.3]	<0.001
Disorders of adult personality and behaviour (F60-F69)										
No	165,600	99.8	409	93.8	0.9 [0.9 – 1.0]	<0.001	2,639	96.8	1.0 [1.0 – 1.0]	<0.001

	General population – No YJ contact (*n*=166,011)		YJ contact by age group							
			Early contact (10-13; *n*=436)				Late contact (14+; *n*=2,725)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*	*n*	Col %	Unadjusted RR [95% CI]	*p*
Yes	411	0.2	27	6.2	25.0 [17.1 – 36.5]	<0.001	86	3.2	12.7 [10.1 – 16.0]	<0.001
Schizophrenia, schizotypal and delusional disorders (F20-F29)										
No	165,674	99.8	423	97.0	1.0 [1.0 – 1.0]	<0.001	2,634	96.7	1.0 [1.0 – 1.0]	<0.001
Yes	337	0.2	13	3.0	14.7 [8.5 – 25.4]	<0.001	91	3.3	16.4 [13.1 – 20.7]	<0.001
Other mental health-related hospitalisations[b]										
No	164,642	99.2	405	92.9	0.9 [0.9 – 1.0]	<0.001	2,598	95.3	1.0 [1.0 – 1.0]	<0.001
Yes	1,369	0.8	31	7.1	8.6 [6.1 – 12.1]	<0.001	127	4.7	5.6 [4.7 – 6.7]	<0.001

Note. CI = Confidence Interval; Col % = Column Percentage; [a] Diagnosis type in any primary or additional diagnosis code (or external cause code for self-harm). Individuals can be represented in more than one diagnosis categories as children can have multiple diagnoses; [b] Other mental health-related hospitalisations include the ICD-10-AM classifications of behavioural syndromes associated with physiological disturbances and physical factors (F50-F59) and sleep disorders (G47.0-G47.9), mental retardation (F70-F79), disorders of psychological development (F80-F89), unspecified mental disorder (F99-F99), mental disorders and diseases of the nervous system complicating pregnancy, childbirth and the puerperium (099.3) and other symptoms and signs involving general sensations and perceptions (R44).

Given that experiencing custodial supervision has been shown to be associated with more serious offending patterns and poorer outcomes, we also examined differences in characteristics between those who had their first supervision early versus late among those who experienced custodial supervision at least once. Higher proportions of the early contact group experienced social and economic disadvantage at birth and CP contact compared to the late contact group (see Appendix A, Tables A1-A4).

Discussion

Understanding the patterns of early contact with the YJ system and the characteristics of children who have early versus late contact is foundational knowledge for planning and developing prevention strategies and intervention programs that aim to divert children and young people from the YJ system. The analyses in this paper aimed to provide population-level insight into the potential differences between young people who have early versus late YJ system contact and how these groups compared to the general population. Based on the previous literature, the research aims were to examine differences in four key areas: 1) the patterns of YJ system contact from age 10 to 18; 2) social and economic characteristics at birth; 3) child protection contact up to age 10; and 4) mental health-related hospitalisations from age 12 to 18. The analyses showed that, relative to young people who had late contact with the YJ system, those who had early YJ contact experienced longer duration, higher frequency and more serious involvement with the YJ system. The results also indicated the complex circumstances that precede and co-occur with YJ involvement. While indicators of social and economic disadvantage, CP contact, and mental health problems were higher for both the early and late YJ contact group relative to the wider population, these indicators were generally more pronounced among the early contact group. These findings are contextualised within the broader developmental psychology and criminology literature and

limitations, future research possibilities, and implications for policy and practice are discussed.

Differential patterns of justice system contact among young people with early versus late onset offending behaviours

The present study's first aim was to examine patterns of YJ contact among young people who had their first supervision early versus late. The results showed consistent patterns that the early contact group experienced more serious types of YJ system contact; this included: ever experiencing custodial supervision; experiencing custody as their first type of YJ supervision; having a higher total number of supervision orders by age 18; and, being more likely to return to sentenced supervision. This was consistent with the literature in this area which suggests that early exposure to the YJ system is recognised as a risk factor for persistent criminal behaviour (Corrado & Freedman, 2011; Shepherd & Purcell, 2015; Staff, Whichard, Siennick & Maggs, 2015; van Hazebroek, Blokland, Wermink, Keijser, Popma & Domburgh, 2019). For the children having contact with the system early, the majority of them (90.6%) had experienced custody at least once. A higher proportion of the early contact group were subject to some form of custodial supervision as their first YJ supervision, whereas the late contact group were more likely to be subject to some form of community-based supervision. These findings are important considering research suggests that spending any time in custody promotes rather than deters offending behaviours, and that it is known that these environments expose young people to further risks, such as association with offending peers and reinforcement of antisocial behaviours (Kitsuse, 1962; Malvaso & Delfabbro, 2015; McAra & McVie, 2007; Motz et al., 2020; Ryan, Herz, Hernandez & Marshall, 2007).

The total number of supervision orders and return to sentenced supervision provide an

indication of the frequency of YJ system contact and recidivism. Consistent with previous studies, the early contact group were more likely to experience seven or more supervision orders and to return to sentenced supervision compared to the late contact group (Corrado & Freedman, 2011; Farrington, 1983; Novak, 2019). Whilst multiple factors may influence frequency and recidivism, these indicators are, in part, an indication of the performance of justice departments (AIHW, 2019). A next step would be to determine whether these patterns persist into early adulthood. Nonetheless, it is clear that further efforts to divert young people from the justice system, especially among those with early initial contact, are needed.

Early life social and economic circumstances

The study's second aim was to examine sociodemographic and perinatal characteristics at birth among young people who had their first supervision early versus late YJ contact, and in comparison to the general population. These results mostly demonstrated that young people who had early YJ contact experienced higher proportions of perinatal and sociodemographic disadvantage compared to those who experienced YJ late. However, there were fewer differences between these characteristics at birth between the two age groups than expected given the theories established by Moffitt (1993, 2003, 2006). It was evident that exposure to social and economic disadvantage was substantially higher for both age groups in contact with YJ in comparison to the general population. Though data collected at birth from parents is just one snapshot of social and economic circumstances at one time point, the findings suggest that further investment aimed at improving early life circumstances for all children may contribute to crime prevention. Further research is needed to identify other potential differences in early life circumstances, such as engagement with childcare, early education, or developmental milestones that may provide further insight into the opportunities for targeting more supports towards children and families that could have flow-

on effects for crime prevention.

Child protection contact

The study's third aim was to examine CP experiences preceding YJ contact (i.e., before age 10) and how these may differ among young people who had their first supervision early/late, and compared to the general population. The findings indicated that young people with any YJ contact regardless of age group at first supervision were overrepresented at every level of the CP system relative to the general population, but that this was more pronounced for the early contact group. CP system contact is commonly used as a proxy measure for exposure to child maltreatment. One implication of these findings is that addressing maltreatment is likely to be an important area of investment for preventing YJ contact. This is based on the knowledge that child maltreatment usually does not occur in isolation. Instead, it often co-occurs, and is influenced by, an interplay of individual, social, and economic risk factors, such as social isolation, substance use and mental health problems, and poverty (Braga, Goncalves, Basto-Pereira & Maia, 2017; Cicchetti, 2016; Hambrick, Brawner & Perry, 2019; Mallett, 2014; Malvaso, Delfabbro & Day, 2017b; Sawyer, Carbone, Searle & Robinson, 2007; van Berkel, Tucker & Finkelhor, 2018) and is an important focal point for prevention efforts.

Consistent with previous literature, young people with early YJ contact were also more likely to have experienced OOHC placements relative to both the late YJ contact group and the general population (Goodkind, Shook, Kim, Pohlig & Herring, 2013; Malvaso & Delfabbro, 2015; Malvaso, Delfabbro & Day, 2017a; Ryan & Testa, 2005). There are a variety of reasons for why OOHC can lead to earlier and more severe YJ contact. For example, young people who require OOHC placement services are likely to have experienced more serious and protracted maltreatment and adversity, which has been found to be

associated with more disruptive and challenging emotional and behavioural problems (Malvaso & Delfabbro, 2015). This includes problems such as difficulties in emotion regulation, attention, hyperactivity and aggression, which have all been demonstrated as precursors of more serious delinquent behaviours (Farrington, 1983; Farrington et al., 1990; Moffitt, 1993, 2003, 2006). These findings again point to the potential for early intervention efforts to be targeted towards addressing these problems in childhood in order to prevent more serious behaviours from developing the increase the risk of justice system contact.

In addition, there are systemic factors that have also been shown to contribute to the over-representation of children from OOHC in YJ. Research has demonstrated that young people in CP may be at a greater likelihood of being placed in YJ facilities due to the absence of other appropriate accommodation (Cashmore, 2011). McFarlane (2010) found that young people commonly faced court for damage to the care homes in which they resided and, as a result, foster families were less likely to remain involved, limiting the courts to place the young people into juvenile justice facilities. Although this study focused specifically on early life CP contact that preceded YJ contact, these studies point to the need to further understand the complex interplay between CP contact OOHC placements that continue to occur in adolescence and YJ contact.

The co-occurrence of justice system contact and mental health problems

The study's fourth aim was to examine of the prevalence of mental health and substance use related hospitalisations among young people who had their first supervision early versus late, and to draw comparisons with the general population. The findings indicated that the prevalence of almost all acutely-identified mental health disorders was higher among the early YJ contact group compared to the late YJ contact group, but the prevalence in both groups was higher compared to the general population. These findings are

especially critical due to these young people being in the transition period from adolescence to adulthood when offending, substance use, and mental health disorders peak, but rates of help-seeking, engagement, and retention in treatment programs are typically lower (Aalsma & Dir, 2021; Bergman, Kelly, Nargiso & McKowen, 2016). Spontaneous, long-term remission of serious mental health problems like those indicated, albeit as an acute measure in hospital records, is unlikely and co-morbidity also makes therapeutic engagement in mental health treatments more difficult. There are also logistical challenges associated with providing mental health treatments in a YJ setting, including short-term orders, insufficient resources, and lack of coordination between agencies (Teplin et al., 2021; Zajac, Sheidow & Davis, 2015). Some researchers have suggested that problems in the mental health system may contribute to the unmet needs in at-risk populations of young people who ultimately end up in the justice system (Teplin et al., 2021). These findings indicate that it is not only connecting young people with treatment that is important, but ensuring engagement continues when young people are no longer under YJ supervision. Co-morbid problems of mental health issues, substance use, and offending, points to the need for multi-disciplinary and holistic approaches to assessment and treatment.

Children in custody

Additional analyses, restricted to those in YJ who had ever experienced custodial supervision, revealed fewer pronounced differences among young people who had their first supervision early compared to late in the early life social and economic circumstance, CP system contact and co-occurrence of mental health problems. However, this study provided further evidence that young people with early YJ contact were more likely to experience custodial supervision. Therefore, prevention and intervention efforts targeted in early childhood are likely to be beneficial for all children who are at risk of YJ supervision,

regardless of type of supervision.

Policy and practice implications

There has always been contention in criminal justice policy about the need to contain, punish and deter children and young people's criminal actions and a desire to support prevention, treatment and rehabilitation initiatives. This tension is evident in the varying minimum ages of criminal responsibility in different countries and the minimum age of criminal responsibility varies across the world. For example, in Belgium and Luxembourg it is 18 years old. In Denmark, Norway, and Sweden it is 15 years old. In Germany and Spain it is 14 years old, and in France, Greece, and Poland it is 13 years old. In a study that included 86 countries, Hazel (2008) demonstrated that the median age of criminal responsibility across these countries was 14 years old. This finding emphasises the discrepancy between the rest of the world and the few countries, such as Australia and England, in which the minimum age of criminal responsibility is still as young as 10 years old, and some American states having no minimum age of criminal responsibility, with the other American states ranging from 6-10 years of age. The findings from this study further emphasise the complex social and economic circumstances that precede and co-occur with YJ system involvement, especially among children who have early contact with the system. This points to the need for further investment in early supports for these children, but also adds further evidence that can be used to inform policy initiatives such as the potential to raise the age of criminal responsibility in recognition of these complex circumstances that place children at further risk for early justice system contact.

In Australia, there is currently discussion around raising the age of criminal responsibility to 14 years old, which would put the country in alignment with most developed countries and with the UN Convention on the Rights of the Child (UN, 1989; YJAA, 2016),

who have called on countries to raise the age to at least 14 years old (Raise the Age, n.d.). Amnesty International Australia, Human Rights Commission, and the Medical Association of Australia have expressed concerns regarding the lack of implementation of recommendations around the low age of criminal responsibility (Flannery, 2019; Raise the Age, n.d.). A high proportion of countries maintain YJ systems where the minimum age is 14 and above and findings indicate no negative consequences in relation to crime rates (Dünkel, 1996; Goldson, 2013).

Long-term research has indicated that imprisoning children does not reduce crime rates, and conversely, raising the legal age of responsibility demonstrates a reduction in the occurrence of repeat offending (Goldson, 2013). Additionally, children who are criminalised at a young age have been shown to be more likely to have long-term involvement with crime (AIHW, 2019; Novak, 2019; Staff, Whichard, Siennick & Maggs, 2015) and have poorer outcomes of physical and mental health (Casswell, French & Rogers, 2012; Novak, 2019). By examining the differences between young people who have early versus late contact with the justice system, this paper contributes to the evidence base necessary for informing prevention and early intervention policy and practice initiatives, and generates further evidence that may inform 'raise the age' debates.

Numerous studies have focused on the impact of the justice system on individual offending pathways and have tested different theoretical perspectives. Deterrence theory proposes that the justice system is a positive turning point, reducing further offending by demonstrating that the punishment surpasses the benefits (Motz et al., 2020). Conversely, labelling theory proposes that YJ is a negative turning point, whereby contact worsens further offending behaviours by instigating a "self-fulfilling prophecy" in which individuals considers themselves to be "bad" (Motz et al., 2020). Recent research by Motz et al. (2020) found that contact with the justice system, through spending a night in custody, being given

an order/mandate, or having a criminal record, promotes rather than deters delinquency. In addition, labelling, criminalisation, and negative social reaction have all been found to be harmful consequences of justice system contact (Kitsuse, 1962). Longitudinal research conducted by McAra and McVie (2007) found that, the more frequently an individual is involved with the justice system, the less likely they were to desist from further offending. Introducing children to YJ from as early as age 10 can obstruct the often 'natural process' of children 'growing out of crime,' as negative social reaction and a lack of support contributes to further offending, especially when contact with the system limits education and employment opportunities, and the likelihood for YJ re-entry is increased (Goldson, 2013). Some have suggested that an effective diversionary strategy would involve increasing the minimum age of criminal responsibility and offering early supports to vulnerable children (McAra & McVie, 2007). Early, targeted intervention to support at-risk children and their families or diversion to mental health and welfare support may better address the needs of young people who are at risk of early justice system contact (Whittington, Haines & McGuire, 2014).

Conclusion

This study is the first to use whole-of-population linked administrative data to examine differences between young people who have early versus late YJ system contact, relative to the general population. The results of this study demonstrated that, compared to the late contact group, young people in the early contact group experienced more serious patterns of YJ contact more disadvantage at birth, had higher levels of CP contact before age 10, and were more likely to experience any mental health or substance related hospitalisation between ages 12 and 18. These complex circumstances that precede and co-occur with YJ involvement were, in most instances, more pronounced among young people who had early

YJ system contact. Many of the findings were consistent with the international literature and evidence base built from the knowledge of comprehensive cohort studies. Together, these findings emphasise the need for investment in early supports for these children.

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Appendices [A – B]

Appendix A: Custodial Analyses

Table A1
Sociodemographic and perinatal characteristics for young people born 1991-1998 who ever experienced custodial supervision by age group at first YJ supervision

	Custodial					
	YJ contact by age					
	Early contact (age 10-13; *n*=395)		Late contact (age 14+; *n*=1,616)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Sex[a]						
Female	97	24.6	403	24.9	1.0 [0.8 – 1.2]	0.875
Male	298	74.5	1209	74.8	1.0 [0.9 – 1.1]	0.769
Aboriginal and/or Torres Strait Islander						
No	180	47.0	620	40.5	1.2 [1.0 – 1.3]	0.022
Yes	203	53.0	910	59.5	0.9 [0.8 – 1.0]	0.022
Mother smoked in pregnancy[b]						
No	7	24.1	31	30.7	0.8 [0.4 – 1.6]	0.496
Yes	22	75.9	70	69.3	1.1 [0.9 – 1.4]	0.496
Low birth weight (<2500g)						

	Custodial					
	YJ contact by age					
	Early contact (age 10-13; *n*=395)		Late contact (age 14+; *n*=1,616)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
No	267	88.7	938	90.3	1.0 [0.9 – 1.0]	0.424
Yes	34	11.3	101	9.7	1.2 [0.8 – 1.7]	0.424
Preterm birth						
No	271	90	934	89.9	1.0 [1.0 – 1.0]	0.944
Yes	30	10	105	10.1	1.0 [0.7 – 1.4]	0.944
Mother number of previous births						
None	72	23.9	340	32.7	0.7 [0.6 – 0.9]	0.004
1	78	25.9	297	28.6	0.9 [0.7 – 1.1]	0.364
2	71	23.6	195	18.8	1.3 [1.0 – 1.6]	0.065
3	37	12.3	112	10.8	1.1 [0.8 – 1.6]	0.462
4	17	5.6	54	5.2	1.1 [0.6 – 1.8]	0.759
5 or more	26	8.6	41	3.9	2.2 [1.3 – 4.1]	0.001
Insufficient antenatal care						
No (7+ visits)	168	64.6	674	72.7	0.9 [0.8 – 1.0]	0.011
Yes (<7 visits)	92	35.4	253	27.3	1.3 [1.1 – 1.6]	0.011
Maternal Age						
<19	65	21.6	219	21.1	1.0 [0.8 – 1.3]	0.893
20-24	109	36.2	360	34.6	1.0 [0.9 – 1.2]	0.675
25-29	71	23.6	278	26.8	0.9 [0.7 – 1.1]	0.243

	Custodial					
	YJ contact by age					
	Early contact (age 10-13; *n*=395)		Late contact (age 14+; *n*=1,616)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
30-34	45	15	126	12.1	1.2 [0.9 – 1.7]	0.212
35-39	<20	<5.0	<50	<5.0	0.8 [0.4 – 1.5]	0.425
40+	<5	<2.0[c]	<20	<5.0	#	#
Mother's Marital Status						
Partner	150	49.8	601	57.8	0.9 [0.8 – 1.0]	0.014
No Partner	151	50.2	438	42.2	1.1 [1.0 – 1.2]	0.019
Mother in Labour Force						
Yes	50	17	239	23.4	0.7 [0.6 – 1.0]	0.019
No	244	83	781	76.6	1.4 [1.0 – 1.8]	0.023
Father in Labour Force						
Yes	78	37.1	422	52.9	0.7 [0.6 – 0.8]	<0.001
No	132	62.9	375	47.1	1.3 [1.2 – 1.5]	<0.001
Jobless Family						
No	98	36.0	493	51.2	0.7 [0.6 – 0.8]	<0.001
Yes	174	64.0	470	48.8	1.3 [1.2 – 1.5]	<0.001
Lived in Most Disadvantaged IRSAD Quintile						
No	145	47.7	452	43.2	1.1 [1.0 – 1.3]	0.166

	Custodial					
	YJ contact by age					
	Early contact (age 10-13; *n*=395)		Late contact (age 14+; *n*=1,616)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Yes	159	52.3	594	56.8	0.9 [0.8 – 1.0]	0.166

Note. CI = Confidence Interval; Col % = Column Percentage; [a] Number of participants with sex Not Stated/Inadequately described were less than 10 and for this reason were not reported.; [b] Information on smoking in pregnancy was only collected from 1998 onwards, therefore this variable only includes data on mothers of young people born in 1998 only; [c] Numbers have been perturbed due to small cell sizes in order to protect confidentiality. This perturbation does not alter the interpretation of results.

Table A2

Patterns of child protection contact before 10 among young people born 1991-1998 who ever experienced custodial supervision by age group at first supervision

	Custodial					
	YJ contact by age					
	Early contact (10-13; *n*=327)		Late contact (14+; *n*=886)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Child Protection Contact Before Age 10						
Ever notified						
No	55	16.8	267	30.1	0.5 [0.1 – 1.5]	0.187
Yes	272	83.2	619	69.9	1.0 [1.0 – 1.0]	0.187
Ever investigated						
No	123	37.6	387	43.7	0.9 [0.7 – 1.0]	0.058
Yes	204	62.4	499	56.3	1.1 [1.0 – 1.2]	0.058
Ever substantiated						
No	165	50.5	487	55	0.9 [0.8 – 1.0]	0.163
Yes	162	49.5	399	45	1.1 [1.0 – 1.3]	0.163
Ever in OOHC placement						
No	193	59	611	69	0.9 [0.8 – 0.9]	0.001
Yes	134	41	275	31	1.3 [1.1 – 1.6]	0.001
Highest type of CP contact						
Notified	29	8.9	86	9.7	1.0 [0.7 – 1.5]	0.871
Screened in	47	11.6	138	14	0.7 [0.5 – 1.0]	0.282
Investigated	47	14.4	177	20	0.7 [0.5 – 1.0]	0.026

	Custodial					
	YJ contact by age					
	Early contact (10-13; *n*=327)		Late contact (14+; *n*=886)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Substantiated	70	21.4	208	23.5	0.9 [0.7 – 1.2]	0.447
OOHC	93	28.4	182	20.5	1.4 [1.1 – 1.7]	0.004
OOHC–GOM12	20	6.1	38	4.3	1.4 [0.8 – 2.4]	0.186
OOHC–GOM18	21	6.4	57	6.4	1.0 [0.6 – 1.6]	0.994
Ever experienced physical abuse						
No	272	83.2	771	87	1.0 [0.9 – 1.0]	0.088
Yes	55	16.8	115	13	1.3 [1.0 – 1.7]	0.088
Ever experienced sexual abuse						
No	320	97.9	864	97.5	1.0 [1.0 – 1.0]	0.729
Yes	7	2.1	22	2.5	0.9 [0.4 – 2.0]	0.729
Ever experienced emotional abuse						
No	274	83.8	745	84.1	1.0 [0.9 – 1.1]	0.902
Yes	53	16.2	141	15.9	1.0 [0.8 – 1.4]	0.902
Ever experienced neglect						
No	212	64.8	625	70.5	0.9 [0.8 – 1.0]	0.057
Yes	115	35.2	261	29.5	1.2 [1.0 – 1.4]	0.057

Note. CI = Confidence Interval; Col % = Column Percentage.

Table A3

Patterns of OOHC contact before age 10 among young people born 1991-1998 who ever experienced custodial supervision and OOHC by age group at first supervision

	Custodial					
	YJ contact by age					
	Early contact (10-13; *n*=134)		Late contact (14+; *n*=275)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
First type of OOHC						
Other[a]	127	94.8	252	91.6	1.0 [1.0 – 1.1]	0.254
Family-based	<10	<10.0	<30	<10.0	0.7 [0.3 – 1.6]	0.365
Residential	<5	<2.0[b]	<5	<2.0[b]	#	#
Highest type of OOHC						
Other[a]	85	63.4	170	61.8	1.0 [0.9 – 1.2]	0.752
Family-based only	42	31.3	90	32.7	1.0 [0.7 – 1.3]	0.779
Family-based + residential	<5	<5.0	<20	<5.0	#	#
Residential only	<5	<5.0	<5	<5.0	#	#
Ever in residential care placement						
No	127	94.8	260	94.5	1.0 [0.9 – 1.1]	0.923
Yes	7	5.2	15	5.5	1.0 [0.4 – 2.3]	0.923

	Custodial					
	YJ contact by age					
	Early contact (10-13; *n*=134)		Late contact (14+; *n*=275)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Ever in kinship care placement						
No	127	94.8	242	88	1.1 [1.0 – 1.1]	0.031
Yes	7	5.2	33	12	0.4 [0.2 – 1.0]	0.031
Ever in foster care placement						
No	91	67.9	185	67.3	1.0 [0.9 – 1.2]	0.897
Yes	43	32.1	90	32.7	1.0 [0.7 – 1.3]	0.897

Note. CI = Confidence Interval; Col % = Column Percentage; [a] The 'Other' label includes the categories 'Other,' 'Other Home-Based,' and 'Independent Living'; [b] Numbers have been perturbed due to small cell sizes in order to protect confidentiality. This perturbation does not alter the interpretation of results.

Table A4

Mental health-related hospitalisations between ages 12-18 years among young people born 1991-1998 who ever experienced custodial supervision by age group at first YJ supervision

	Custodial					
	YJ contact by age					
	Early contact (10-13; *n*=395)		Late contact (14+; *n*=1,616)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
Mental health-related hospitalisation						
No	193	48.9	955	59.1	0.8 [0.7 – 0.9]	<0.001
Yes	202	51.1	661	40.9	1.3 [1.1 – 1.4]	<0.001
Reason for Mental Health Hospitalisation[a]						
Mental and behavioural disorders due to substance use (F10-F19)						
No	269	68.1	1,207	74.7	0.9 [0.8 – 1.0]	0.008
Yes	126	31.9	409	25.3	1.3 [1.1 – 1.5]	0.008
Neurotic, stress-related and somatoform disorders (F40-F48)						
No	287	72.7	1,283	79.4	0.9 [0.9 – 1.0]	0.004
Yes	108	27.3	333	20.6	1.3 [1.1 – 1.6]	0.004
Symptoms and signs involving emotional state (R45)						
No	311	78.7	1,381	85.5	0.9 [0.9 – 1.0]	0.001
Yes	84	21.3	235	14.5	1.5 [1.2 – 1.8]	0.001
Behavioural and emotional disorders with early onset (F90-F98)						

	Custodial					
	YJ contact by age					
	Early contact (10-13; *n*=395)		Late contact (14+; *n*=1,616)			
	n	Col %	*n*	Col %	Unadjusted RR [95% CI]	*p*
No	315	79.7	1,381	85.5	0.9 [0.9 – 1.0]	0.005
Yes	80	20.3	235	14.5	1.4 [1.1 – 1.8]	0.005
Intentional self-harm (X60-X84)						
No	339	85.8	1,491	92.3	0.9 [0.9 – 1.0]	<0.001
Yes	56	14.2	125	7.7	1.8 [1.4 – 2.5]	<0.001
Mood disorders (F30-F39)						
No	364	92.2	1,512	93.6	1.0 [1.0 – 1.0]	0.315
Yes	31	7.8	104	6.4	1.2 [0.8 – 1.8]	0.315
Disorders of adult personality and behaviour (F60-F69)						
No	370	93.7	1,551	96.0	1.0 [1.0 – 1.0]	0.047
Yes	25	6.3	65	4.0	1.6 [1.0 – 2.5]	0.047
Schizophrenia, schizotypal and delusional disorders (F20-F29)						
No	383	97.0	1,555	96.2	1.0 [1.0 – 1.0]	0.483
Yes	12	3.0	61	3.8	0.8 [0.4 – 1.5]	0.483
Other mental health-related hospitalisations[b]						
No	364	92.2	1,530	94.7	1.0 [0.9 – 1.0]	0.055
Yes	31	7.8	86	5.3	1.5 [1.0 – 2.2]	0.055

Note. CI = Confidence Interval; Col % = Column Percentage; [a] Mental health reason in any primary or additional diagnosis code (or external cause code for self-harm). Individuals can be represented in more than one diagnosis categories as children can have multiple diagnoses; [b] Other mental health-related hospitalisations include the ICD-

10-AM classifications of behavioural syndromes associated with physiological disturbances and physical factors (F50-F59) and sleep disorders (G47.0-G47.9), mental retardation (F70-F79), disorders of psychological development (F80-F89), unspecified mental disorder (F99-F99), mental disorders and diseases of the nervous system complicating pregnancy, childbirth and the puerperium (099.3) and other symptoms and signs involving general sensations and perceptions (R44).

Appendix B: ICD-10-AM Codes Supplementary Table

Table A5
ICD-10-AM codes used to identify mental health-related hospitalisations in children aged 12-18 years.

Condition/Category of Conditions	ICD-10-AM Code/s
Diagnosis Codes	
Mental and behavioural disorders due to psychoactive substance use	F10-F19
Neurotic, stress-related and somatoform disorders	F40-F48
Signs and symptoms involving emotional state (e.g. nervousness, demoralisation and apathy)	R45
Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	F90-98
Mood disorders (e.g. depression)	F30-F39
Disorders of adult personality and behaviour[a]	F60-69
Schizophrenia, schizotypal and delusional disorders	F20-F29
Behavioural syndromes associated with physiological disturbances and physical factors (e.g. sleep disorders, harmful use of non-dependence producing substances and eating disorders)	F50-F59, G47.0-G47.2, G47.8, G47.9
Mental retardation	F70-F79
Disorders of psychological development (e.g. Autism)	F80-F89
Unspecified mental disorder	F99
Mental disorders and diseases of the nervous system in pregnancy, childbirth and the puerperium	O99.3
Symptoms and signs involving general sensations and perceptions (e.g. auditory and visual hallucinations)	R44
External Causes of Morbidity and Mortality	
Intentional self-harm[b]	X60-X84

Note. [a] Some of these codes are only used for those aged 15 years and older; [b] These are external cause codes.

Contribution Statement

M.M., C. M., and P.D. conceived and designed the study. J.L., R.P., A.M., and C.M. were involved in the acquisition of data. M.M. analysed the data, with support from P.H.R.S, A.M., and C.M. C.M. directed the investigation and supervised the findings of this work. M.M. drafted the initial manuscript, under the supervision and direction of C.M., P.H.R.S., and R.P. All authors were involved in the interpretation of the results. C.M., R.P., and P.D. provided critical revision of the manuscript.

Criminology Instructions to Authors

EDITORIAL POLICY

The journal is interdisciplinary, devoted to the study of crime, deviant behavior, and related phenomena, as found in the social and behavioral sciences and in the fields of law, criminal justice, and history. The major emphases are theory, research, historical issues, policy evaluation, and current controversies concerning crime, law, and justice.

MANUSCRIPTS

Manuscripts must be submitted online at our secure site http://mc.manuscriptcentral.com/criminology**.**

Papers accepted for publication should comply with the American Psychological Association's guidelines for bias-free language. See: https://apastyle.apa.org/style-grammar-guidelines/bias-free-language. For papers published in *Criminology*, the APA's General Principles for Reducing Bias should be applied when discussing individuals who have participated in crime, experienced victimization, and/or have had contact with the criminal legal system. For details, see: https://apastyle.apa.org/style-grammar-guidelines/bias-free-language/general-principles.

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MANUSCRIPT STYLE SHEET

In preparing the final draft of your manuscript, please note the following:

1. ARTICLE TITLE:

   Sentence case, except proper nouns and abbreviations

   Aligned to the left

2. AUTHOR BYLINE:

   Upper case and lower case

   Aligned to the left

   Do NOT use * (asterisk) for corresponding author

   Example:

   Andrea Leverentz | Monica Williams

3. AFFILIATION:

   Upper case and lower case

   Short address with Arabic numerals as links

   Aligned left

   No full stop at the end of affiliation address

4. AUTHOR CORRESPONDENCE

   Short address with email ID would suffice; no need for telephone and fax numbers. If telephone and fax details are provided, please delete it.

   Email: Always starts on a new line; standard text “Email” should be used (without hyphen).

   Full stop at the end of the correspondence address, before Email.

   For other categories (Editorial, Letter, etc.) follow existing style for Corresponding section - author names are at the end of the article.

5. FUNDING INFORMATION:

   a) If funding information is supplied as a part of acknowledgements, then the funding agency and grant number are to be tagged and displayed below the Correspondence section on the first page.

   b) If funding information is supplied as a separate section, then the funding agency and grant number(s) are to be tagged and the complete section has to be displayed below the Correspondence section on the first page.

   c) For both points (a) and (b), if the content is longer and cannot be displayed below the Correspondence section on the first page, then place it as a first page footnote.

   d) If funding information is supplied as ‘None’ or something similar to that, then it need not be displayed for PDF or HTML.

For articles where the author names are at the end of the article (e.g.. Editorial, Letter, Correspondence, etc.), the funding information can be displayed in the same section as it is supplied in the input.

6. ABSTRACT:

Abstract heading required

Single paragraph for block abstracts

Do not include floats and references

7. KEYWORDS:

Keywords head in all caps

Bold and standalone

No colon after keywords head

Set keywords in alphabetical order

All keywords are in lowercase, including the first keyword, except abbreviations and proper nouns

No end punctuation

Aligned to the left

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Our style provides for four levels of headings. Leave extra space in the double-spaced draft before all levels of headings. The four heading levels are:

Heading 1:

Unjustified style

Numbered and should be bold; dividing line should be roman

ALL CAPS

Heading 2:

Unjustified style

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Heading 3:

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Please note that if a paper is accepted for publication, all the formatting and layout of tables and graphs will have to be redone in the composition stage of publication. It is therefore requested that table formatting and layout be kept simple and straightforward. Information should be conveyed as simply as possible.

In a draft manuscript, which will undoubtedly undergo revision, please place all tables and figures, even small ones, on separate pages at the end of the manuscript (all figures and tables must be numbered). Tables and figures should be numbered consecutively throughout the article**.** Insert a location note at the appropriate place in the text, e.g. “Table 2 about here” or "Figure 3 about here".

TABLES

Table Caption:

Example: TABLE 1 Exploratory factor analyses of risk-seeking and impulsivity items (two-factor solution), ages 10–30

No full stop at end of legend (except if integral part of title, as abbreviation etc.)

Use ALLCAPS (TABLE 1)

Use Arabic numerals for table numbers

Unjustified, sentence case

Table 2 continued style: “(Continues)” – in roman at the end of the page and “TABLE 1 (Continued)” at the start of the next, which should be in roman

2/3rd tables are allowed; caption unjustified style

Table Entries:

Alternate grey shades for table rows

Column headings bottom align; entries left align with operator/decimal align

Table note:

Use superscript alphabetic for table footnotes; asterisk used for levels of probability

Order of table footnotes (on separate lines):

- General notes
- Abbreviations and their definitions
- Linked table footnotes

- Levels of probability

* The heading ‘Note.’ is used for general statements (this heading is not required if there are only labelled and linked footnotes):

Note. Xxxxx.

Table Citation:

Spell out in full (even in parenthesis)

For example:

Table 1 shows....

As shown in table 1 ...

... in the overview (table 1).

When citations are in parentheses, place at end of sentence if possible.

Use ‘and’ between two table numbers in the text and parentheses.

Citations to tables from other sources should be lower case (e.g.: table 3)

FIGURES

Figures submitted with the final draft must be of professional quality and ready for reproduction.

Figure Caption:

Example: FIGURE 2 Organizational life-cycle phases and characteristics

Use ALLCAPS (FIGURE 1)

No full stop at end of legend

Figure caption unjustified in sentence case

2/3rd figures allowed; caption unjustified

Flush left at the bottom of the image in bold. Figure" is followed by a space, the number, and no period

Figure image:

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Follow uppercase for AMA and lower case for APA

Figure Labelling and Citation:

Comma separates the figure parts (e.g. Figure 1a,b; Figure1A,B; (a,b)). No space after the comma.

Multi-part figure labels:

- Lowercase labels enclosed in parenthesis
- In caption: Lowercase labels, enclosed in parenthesis

Example: (a) Histological section of… (b) Comparison of…

- In citations: Lowercase labels, close-up with number

Example: Figure 1a, Figure 1a-c, Figures 2b and 2d

In-text citations

- Spell out in full (even in parenthesis)

For example:

Figure 1 shows…

As shown in figure 1…

in the illustration (figure 1).

Citations to figures from other sources should be lower case (e.g.: figure 3)

If tables/figures originate in a program other than MS Word or WordPerfect, please supply the native format files, for example, PowerPoint or Excel. Please be sure to provide a sample size (N) in each table.

Additional table guidelines:

(1) Each table should have only three full horizontal rules (underscores), one between the title and top of the table, another between the column heading and the first row, and the other at the end of the body of the table.

(2) *Make sure that all columns have headings. Do not leave any blank columns or rows.* Headings and columns can be arranged in whatever format best presents the data, as long as all data within a column are aligned with the heading and with other data in the column.

(3) Note the use/order of table footnotes in the following sample table:

Table 1. **Sample Descriptive Statistics, by Adolescent Violent Victimization: Means (Standard Errors) and *t* Tests[a, b]**

Variable				Nonvictims		Victims	
		Mean	(SE)	Mean	(SE)	Mean	(SE)
Focal Variable							
Violent victimization		.192	—	—	—	—	—
Demographic Characteristics							
Age at first interview		15.963	(.112)	15.915[c]	(.115)	16.165	(.124)
Female		.495		.546[c]		.282	
Race/ethnicity							
White		.687	—	.709[c]	—	.593	—
Black		.149	—	.135[c]	—	.210	—
Hispanic		.111	—	.102[c]	—	.149	—
Asian		.036	—	.037	—	.029	—
Native American/other		.016	—	.016	—	.019	—
Immigrant		.061	—	.062	—	.057	—
Family SES		4.571	(.110)	4.674[c]	(.115)	4.137	(.111)
Urban		.514[†]	—	.495[c]	—	.594	—
Region							
Northeast		.138	—	.140	—	.130***	—
Midwest		.320	—	.324	—	.303	—
South		.381	—	.381	—	.378	—

West		.161	—	.155	—	.188	—
Family Environment							
Live with biological parents		.582	—	.612[c]	—	.459	—
Autonomy		3.189	(.049)	3.175	(.049)	3.250	(.065)
Lie to parents		.231	—	.202[c]	—	.350	—
Deviant Behavior							
Violent perpetration		.714*	(.020)	.480[c]	(.013)	1.699	(.037)
Nonviolent delinquency		.286	(.006)	.231[c]	(.007)	.517	(.014)
Alcohol use		1.111	(.041)	.972[c]	(.042)	1.694**	(.063)
Drug use		.158	—	.124[c]	—	.299	—
Disposition							
Depressive symptoms		10.661	(.134)	10.095[c]	(.132)	13.046	(.216)
Instrumental problem solving		2.791	(.010)	2.799[c]	(.010)	2.759	(.017)
Relative pubertal development		.249	(.015)	.225[c]	(.015)	.347	(.038)
Religious importance		2.019	(.029)	2.052[c]	(.031)	1.882	(.036)
Expect to marry by age 25		2.234	(.022)	2.260[c]	(.023)	2.127	(.030)
N of respondents[d]		16,077		12,907		3,170	

Note: This table is a sample.
SE = standard error (omitted for dummy variables); SES = socioeconomic status.
[a] Means for dummy variables can be interpreted as the proportion of the sample coded 1 on that indicator.
[b] All analyses are weighted and corrected for survey design.
[c] Statistically significant difference ($p < .05$) between nonvictims and victims.
[d] Unweighted *N*.
[†]$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed).

10. EQUATIONS

Equations must be typed. Expressions should be aligned, and compound subscripts and superscripts should be clearly marked if there is any potential for confusion. Indicate boldface characters by drawing a wavy line under them; a single underline indicates italics to the printer. Clarify all symbols with notes in the margin of the manuscript.

Equation Citations:

In-text citations

- Spell out in full (even in parenthesis)

For example:

- Equation 1 shows…
- As shown in equation 1…
- In the illustration (equation 1).
- Citations to equations from other sources should be lowercase and contracted (e.g. eq. 5)

11. CITATIONS AND REFERENCES

Citations in Text

In-text citations include the author and date, either both inside parentheses or with the author names in running text and the date in parentheses.

After the intervention, children increased in the number of books read per week (Smith & Wexwood, 2010).

Smith and Wexwood (2010) reported that after the intervention, children increased in the number of books read per week.

*****Note the use of "&" when both author and year are inside parentheses, while "and" is used when only the year is in parentheses.

For multiple citations within parentheses, alphabetize the studies as they would appear in the reference list and separate them by semicolons.

Studies of reading in childhood have produced mixed results (Albright, Wayne, & Fortinbras, 2004; Gibson, 2011; Smith & Wexwood, 2010).

Use of et al.

Below is a chart showing when to use et al., which is determined by the number of authors and whether it is the first time a reference has been cited in the paper. Specifically, articles with one or two authors include all names in every in-text citation; articles with three, four, or five authors include all names in the first in-text citation but are abbreviated to the first author name plus et al. upon subsequent citations; and articles with six or more authors are abbreviated to the first author name plus et al. for all in-text citations.

Number of authors	**First text citation (either parenthetical or narrative)**	**Subsequent text citations (all)**
One or two	Palmer & Roy, 2008	Palmer & Roy, 2008
Three, four, or five	Sharp, Aarons, Wittenberg, & Gittens, 2007	Sharp et al., 2007
Six or more	Mendelsohn et al., 2010	Mendelsohn et al., 2010

Authors – Family name and initials, with space between initials in given names
Initials have full stops.
Multiple authors separated by a comma
Use "&" before last author with preceding comma
Use "(Ed.)" or "(Eds.)" to denote editors
List only up to 7 authors. If more than 7 authors, list first 6 authors, then ellipses followed by the last author.
Journal titles are written in full
For editions, use "(2nd ed.)", "(3rd ed.)", and so forth [follow existing journal style for superscripting of ordinal indicators]
Page ranges are written in full
For page ranges and page count, use "p." for single page and "pp." for multiple pages and page ranges

Formatting: journalTitle and bookTitle in italics. Volume in italics as well. As a general rule, for non-journal or book references where there appears to be 2 titles: one appearing to be a part of the other larger body of work, set the larger body of work in italics. In this case, italic tags will need to be added, as only journalTitle, bookTitle, or bookSeriesTitle will be formatted by the template.

The reference appendix, headed by the word "REFERENCES" (Level A heading; see above), follows the last page of text. All sources cited in the text must appear in the References. Facts of publication for each item must be complete (e.g., authors' first names, Internet websites, government report numbers). For sources with multiple authorship, invert only the name of the first author. Failure to include full names may delay publication. List the first and last names of all authors—do not use "et al." in the appendix.

Type the references single-spaced. Although *CRIMINOLOGY* uses a form of APA style, the journal has some differences. Please consult the style below. For anything not covered here, please follow APA (6th edition):

Reference Styles:

APA – American Psychological Association

References should be prepared according to the *Publication Manual of the American Psychological Association* (6th edition). This means in text citations should follow the author-date method whereby the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998). The complete reference list should appear alphabetically by name at the end of the paper.

A sample of the most common entries in reference lists appears below. Please note that a DOI should be provided for all references where available. For more information about APA referencing style, please refer to the APA FAQ. Please note that for journal articles, issue numbers are not included unless each issue in the volume begins with page one.

Journal article

Example of reference with 2 to 7 authors

Beers, S. R., & De Bellis, M. D. *(*2002*).* Neuropsychological function in children with maltreatment-related posttraumatic stress disorder. *The American Journal of Psychiatry, 159,* 483–486. *https://doi:*10.1176/appi.ajp.159.3.483

Ramus, F., Rosen, S., Dakin, S. C., Day, B. L., Castellote, J. M., White, S., & Frith, U. (2003). Theories of developmental dyslexia: Insights from a multiple case study of dyslexic adults. *Brain*, *126*(4), 841–865. https://doi: 10.1093/brain/awg076

Example of reference with more than 7 authors

Rutter, M., Caspi, A., Fergusson, D., Horwood, L. J., Goodman, R., Maughan, B., … Carroll, J. (2004). Sex differences in developmental reading disability: New findings from 4

epidemiological studies. *Journal of the American Medical Association*, *291*(16), 2007–2012. https://doi: 10.1001/jama.291.16.2007

Book edition

Bradley-Johnson, S. (1994). *Psychoeducational assessment of students who are visually impaired or blind: Infancy through high school* (2nd ed.). Austin, TX: Pro-ed

12. NOTES AND FOOTNOTES

Because the citation-reference style for CRIMINOLOGY eliminates the use of notes for bibliographic material, only substantive comments on the text should appear as notes. In a draft manuscript, place all substantive notes in footnotes (not endnotes), with the in-text footnote numbers following punctuation (e.g., a period, comma, and parentheses) and not in the middle of a sentence. *Please use footnotes sparingly; no more than 12 footnotes per article at no more than 6 lines in length.*

13. AUTHOR BIO

When you submit your manuscript, please include an author biography (of less than 100 words) for each author, listing affiliations and research interests.

14. FORMAT

All material must be typed double-spaced (including indented material, notes, tables, and references) on 8 1/2 x 11-inch paper.

Do not hyphenate at the ends of lines.

Letters used as statistical symbols or algebraic variables should be italicized, for example *t* test; $a / b = c / d$; trial *n*. Greek letters (e.g. Σ, θ) should not be italicized

Do not use word processor auto-numbering functions. These usually cause delays in the composition and publishing phases.

> Please follow the APA (6th edition) style for grammar and formatting, including hyphens, acronyms, numbers, display lists, quotes, punctuation, and concise and consistent language.

15. TITLE PAGE

Please set up title page as follows:

Assessing the effects of body-worn cameras on procedural justice in the Los Angeles Police Department

AMY L. ANDERSON[1] | ROBERT LYTLE[1] | PHILIP SCHWADEL[2]

[1]School of Criminology and Criminal Justice, University of Nebraska—Omaha

[2]Department of Sociology, University of Nebraska—Lincoln

KEYWORDS

death penalty attitudes, hierarchical age–period–cohort analysis, capital punishment

The abstract must be provided in one paragraph, set in italics, and be less than 200 words:

We studied a representative sample of young adult couples from a birth cohort (N= 360). We found abuse was a dyadic process; both partners' personal characteristics increased abuse risk, and both sexes participated in abuse, particularly in clinical abusive couples having injury and/or official agency intervention. Treating only men may not reduce risk completely for most young couples. If replicated, the findings would suggest policy encouraging development and evaluation of programs to reduce physical abuse by women. Prevention programs could aim to reduce abusive behavior by both sexes and promote victim safety among both sexes. Policies against treating women in abusive couples may act counter to prevention.

Please provide a correspondence name and address for one of the authors as follows:

Correspondence

Amy L. Anderson, School of Criminology and Criminal Justice, University of Nebraska–Omaha,

310 Nebraska Hall, 901 N. 17th Street, Lincoln, NE 68588-0561.

E-mail: amyanderson@unomaha.edu

Place any acknowledgments:

The authors would like to thank the anonymous reviewers and Eric Baumer for invaluable feedback during the review process.

16. PUBLISHED AUTHOR OFFPRINTS

Note: Beginning with the February 2012 issue, the ASC Board will offer *Criminology* authors a pdf file of their article as the standard practice and, upon request, 4 hard copies of the entire issue in which their article appears.