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Trends & issues in crime and criminal justice

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Abstract | This study examines the prevalence of adverse childhood experiences (ACEs) in a representative sample of young people under youth justice supervision in South Australia. The analysis showed that not only was the prevalence of ACEs particularly high in this population (89% experienced a combination of maltreatment and household dysfunction), but so too were trauma symptomatology, substance use, and internalising and externalising behaviours (with more than two-thirds of young people scoring in the clinical ranges on each of these measures). When viewed collectively, the data provide a foundation for understanding and responding to the vulnerabilities of young people in the youth justice system. They suggest that developmentally focused and trauma-informed approaches may offer the greatest promise in assisting young people and keeping the community safe from crime.

Adverse childhood experiences and trauma among young people in the youth justice system

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Recent years have seen growing interest, both in Australia and internationally, in how different facets of childhood adversity influence various health and social outcomes, including offending behaviour among young people. Consistent evidence is now available to demonstrate that adverse childhood experiences (ACEs)—a term coined by Felitti and colleagues in 1998 to describe the cumulative effects of both maltreatment (physical, sexual and emotional abuse, and physical and emotional neglect) and household dysfunction (parental separation, domestic violence, mental illness, substance abuse and incarceration) before the age of 18—are prevalent in youth justice populations and that those with a higher number of ACEs are the most likely to engage in serious, violent and chronic offending (Fox et al. 2015).



From a policy perspective, research in this area has potentially significant implications for service delivery, given that the sequelae of ACEs may be key contributing factors to offending behaviour. Specifically, the critical causal pathway from ACEs to offending is thought to involve the experience (and expression) of trauma symptomatology. However, there is limited empirical evidence to demonstrate causal associations between ACEs, trauma and offending. In fact, a recent systematic review by Malvaso et al. (2021) concluded that, although up to 90 percent of justice-involved young people will report exposure to traumatic events, the pooled mean score across 40 studies that specifically assessed post-traumatic stress disorder (PTSD) shows that, on average, these young people will fall short of the diagnostic cut-off for mild PTSD. It is apparent that not every young person who experiences adversity will be 'traumatised' and that not all of those who experience trauma symptomatology will go on to offend.

In practice, this suggests that many young people who have experienced significant adversity will not be eligible for mental health services. From a youth justice system perspective then, a key question is how responses to young people's needs should be informed by an understanding of the developmental impact and complex emotional, behavioural and neurobiological consequences of cumulative traumatic experiences. Further work is needed to determine the extent to which ACEs should be considered a 'red flag' indicator that leads to more comprehensive assessment and where universal and selective intervention programs are most appropriate. Given recent discussions about how ACEs can be misused in screening (Anda, Porter & Brown 2020), disease prediction and clinical decision-making (Baldwin et al. 2021), more work is needed to establish how ACE assessment tools can best be used. Rather than seek to support efforts to better predict offending behaviour (ie risk assessment; see Koh et al. 2021), the initial goal should be to gain deeper insight into whether ACEs, along with other clinically important information (ie trauma symptoms and potentially related needs), can assist youth justice services to match intervention efforts with the needs of young people in their care.

Relatively few Australian studies have examined the ways in which ACEs and offending behaviour may be associated, with much of the existing evidence derived from research conducted in North America. Accordingly, there is a need to conduct local research given the different histories, practices and policies of both child protection and youth justice systems. For example, it has been suggested that South Australia has a longer tradition of diversion than many other jurisdictions (King, Delfabbro & Day 2013). There is a need to consider the specific intergenerational impacts of adversity and trauma among Aboriginal and Torres Strait Islander young people (respectfully referred to as Aboriginal hereafter, as the present study is specific to South Australia, acknowledging the diversity that this term encompasses), who continue to be disproportionately represented across the justice system (Commission for Children and Young People 2021). It is also important to understand whether patterns of trauma symptomatology and related needs are different for young men and young women, as this will have implications for the development of appropriate intervention services and policies. It is commonly reported, for example, that women are more likely to develop internalising disorders (eg depression) in response to trauma, whereas men are more likely to develop externalising disorders (eg substance use; Chong et al. 2020).

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The aim of this study was to collect and report data on the prevalence of ACEs in a sample of young people under youth justice supervision (both in detention and in the community) in South Australia. Specifically, this study sought to: (1) profile the background characteristics of young people under youth justice supervision and their experience of ACEs; (2) measure the needs of the population in terms of trauma, substance use, and social and emotional behaviour; and (3) establish whether different groups of young people can be identified based on their experiences of ACEs and, if so, how

these groups differ according to levels of trauma, substance use, social and emotional problems,

Methods

and offending.

Data were collected through a set of self-report assessments administered to young people under youth justice supervision, which were subsequently linked with administrative child protection and youth justice records.

Young people provided consent to participate in the study and to the research team accessing their administrative records. The study received approval from a university ethics committee (H-2018-232) and was overseen by an advisory group that included Youth Justice executives and senior Aboriginal youth justice advisers. Although this study was not designed to specifically focus on Aboriginal young people, the importance of understanding culturally specific developmental offending pathways was identified. Personal, familial and cultural experiences of adversity and trauma are identified as critical drivers of over-representation linked to the enduring impacts of colonisation, transgenerational grief and loss, racism, discrimination and structural inequality. The decision to present data comparing Aboriginal and non-Aboriginal young people was made by the advisory group, with the caveat that any interpretation of these differences is inevitably influenced by the impacts of colonisation and the absence of culturally validated measures used. (See Day & Malvaso 2021 for a discussion of the design and the methodological and reporting choices made in this research project.)

Participants

All young people under youth justice supervision in the community and in custody in South Australia aged 14 and over were eligible to participate in this study. A total of 211 young people were approached, of whom most (n=184, 87%) consented to participate. Only four young people did not consent to having their administrative records linked. Participation was completely voluntary and no incentives to take part were offered. Most participants were young men (n=155, 84%) and 29 were young women. Over one-third (n=69, 38%) identified as Aboriginal. Participants ranged in age from 14 to 21, with a median age of 16 years. The study sample is broadly representative of the South Australian youth justice population (Australian Institute of Health and Welfare 2020).

Measures and materials

All participants attended an interview with the lead author and were invited to complete self-report assessments, comprising: an adapted version of the Adverse Childhood Experiences Questionnaire (Felitti et al. 1998); Trauma Symptom Checklist for Children (Briere 1996); Adolescent Alcohol and Drug Involvement Scale (Moberg 2005); and the Child Behaviour Checklist-R Youth Self-Report (Achenbach 2001). Further details about these measures and how they are scored can be found in the full report (Malvaso et al. 2021).

Details of all supervision orders were extracted from Youth Justice databases. Details of all offences—agreed to, proven and/or convicted—were extracted and offence types classified according to the third edition of the Australian and New Zealand Standard Offence Classification. A second record extraction was used to measure new offences in the 12 months after participants were interviewed. Details of all notifications, investigations and substantiations of maltreatment, guardianship orders, and placements in out-of-home care (OOHC) were extracted from Department for Child Protection databases and used to supplement self-reported maltreatment.

Procedure

Data collection took place over a 12-month period (March 2019 to February 2020), with the lead author liaising with community Youth Justice case managers and Kurlana Tapa Youth Training Centre staff to identify young people who might be willing to participate. Over half of the young people were interviewed in the community (n=104, 57%) and the others participated while they were in custody (n=80, 43%). Participants were given the option to complete the assessment themselves or have the researcher read out the questions and fill in the responses. If the young person chose to complete the assessment themselves, the researcher first assessed potential literacy issues by asking the young person to read the first set of instructions out loud. If any literacy issues were identified, the researcher then assisted the young person to read the questions and explained their meaning. Most young people (>85%) asked the researcher to verbally administer the assessment but provided verbal responses. Interviews varied in duration from approximately 40 to 60 minutes.

Analysis plan

The analysis proceeded in three stages: (1) descriptive statistics were used to characterise young people under supervision according to their youth justice and child protection histories, ACEs, trauma symptoms, substance use, and social and emotional behaviour; (2) latent class analysis was used to examine whether different groups, based on patterns of ACEs, could be identified; and (3) groups identified through stage 2 were then compared according to the prevalence of trauma symptoms, substance use, emotional and behavioural problems, and offence characteristics.

Results

Describing the population of young people under youth justice supervision

Background characteristics

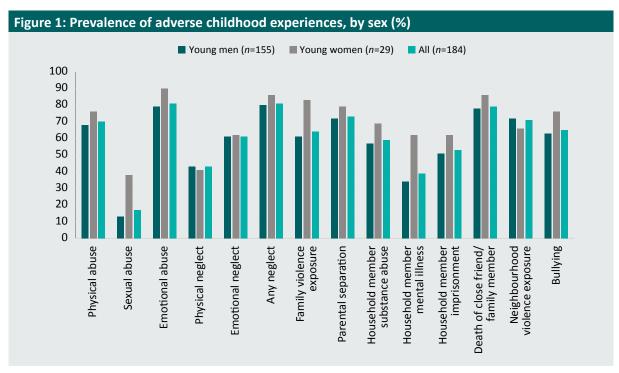
Of the 180 young people who consented to have their administrative data accessed for the purposes of this study, more than three-quarters (83%) identified as having experienced custodial supervision at least once before. The median number of youth justice orders per young person, after accounting for age, was 1.3. For those who had had their first offence proven or agreed to, or who had been convicted, the largest proportion of first offences were theft (26%), followed by property crime (14%) and assault (13%). Overall, more than half (57%) had committed at least one violent offence by the time of the interview.

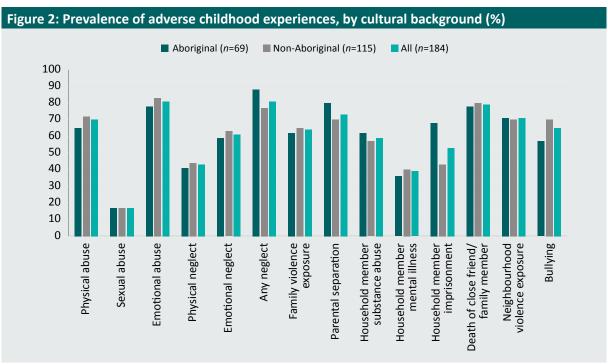
A total of 170 (94%) young people under youth justice supervision were known to child protection. Over three-quarters (83%) had at least one notification for alleged maltreatment, with 57 percent the subject of at least one investigation and 46 percent of at least one substantiation. Almost one-third had ever been in care, and 14 percent were in care on long-term orders until age 18. Almost a quarter had experienced at least one placement in residential care (21%). The median age at first notification was three (range: 0 to 17) and the median age at first OOHC placement was eight (range: 0 to 16). The vast majority of those with child protection contact experienced their first notification (97%) and their first OOHC placement (84%) prior to their first youth justice supervision order.

Prevalence of adverse childhood experiences

Fewer than five young people reported zero ACEs, and 162 (88%) reported four or more. Over three-quarters (89%) experienced a combination of maltreatment and household dysfunction. The prevalence of each ACE according to sex and cultural background is shown in Figures 1 and 2. Prevalence rates ranged from 13 percent for sexual abuse among young men to 90 percent for emotional abuse among young women. Young women had a higher prevalence of each ACE, with the exceptions of physical neglect and neighbourhood violence.

ACEs experienced frequently ('often' or 'very often') included: emotional abuse (64% of young people), neglect (62%), family violence (46%), physical abuse (45%), bullying (44%), neighbourhood violence (39%), and sexual abuse (7%). Overall, 170 participants (92%) were recorded as having experienced at least one of these ACEs frequently.





Trauma symptoms

A total of 146 (88%) young people with valid Trauma Symptom Checklist for Children assessments scored in the symptomatic range for at least one of the scales. Their responses were indicative of clinically significant problems across a broad range of trauma symptom domains, as shown in Figures 3 and 4.

Figure 3: Proportion of young people scoring in symptomatic ranges (clinical or subclinical) on the Trauma Symptom Checklist for Children, by sex (%)

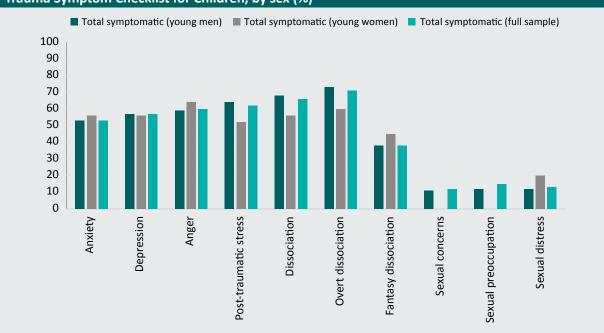
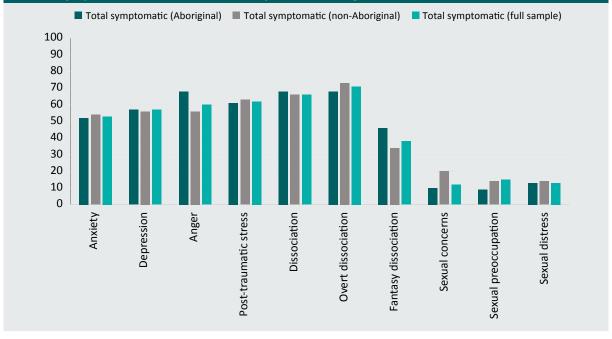


Figure 4: Proportion of young people scoring in symptomatic ranges (clinical or subclinical) on the Trauma Symptom Checklist for Children, by cultural background (%)



Drug and alcohol use

Most young people (86%) scored in the problematic ranges for alcohol and/or other drug use, including 90 percent of young women and 86 percent of young men, and 90 percent of Aboriginal and 84 percent of non-Aboriginal young people. Marijuana use was common among two-thirds of the sample, and over half reported smoking marijuana daily. Almost half of young people had ever used hallucinogens, approximately one-third had used inhalants, and almost one-quarter had used amphetamines. Almost half (43%) reported drinking or using drugs because they felt 'stressed, tense, or full of worry and problems'.

Emotional and behavioural problems

Almost two-thirds of the sample provided responses that reflected the presence of internalising behavioural problems, and there was evidence that more than three-quarters experienced externalising behavioural problems. Few noticeable sex differences were found, with 83 percent of both young men and young women scoring in the clinical ranges for total problems.

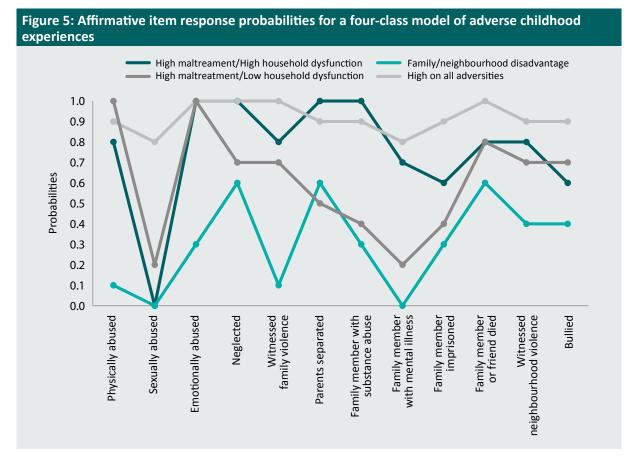
Reoffending

Of the 180 young people who consented to having their administrative records accessed, 141 (78%) had at least one new conviction in the 12 months after their study interview. Of those with at least one conviction, the most serious conviction recorded in almost half of the cases was for assault (48%), followed by theft and related offences (16%) and break and enter (13%). At least one breach of a youth justice supervision order was recorded for almost half of the young people (46%).

Identifying groups of young people according to patterns of adverse childhood experiences

Latent class analysis is a model-based cluster analysis approach that was used to identify underlying groups of young people who share similar characteristics. Two-, three-, four- and five-class latent class analysis models were tested using 12 ACE items, with a four-class model selected based on a combination of face validity checks and fit statistics. This identified four groupings of young people under youth justice supervision according to their patterns of ACEs (Figure 5):

- (1) a **high maltreatment/high household dysfunction** group, which was high on all types of maltreatment (except sexual abuse) and high on measures of household dysfunction (n=66, 36%);
- (2) a **high maltreatment/low household dysfunction** group, which was high on all types of maltreatment (except sexual abuse) and low on measures of household dysfunction (*n*=52, 28%);
- (3) a **family/neighbourhood disadvantage** group, which experienced family (ie neglect, separation, death), peer (ie bullying) and neighbourhood disadvantage (ie witnessing neighbourhood violence; *n*=45, 25%); and
- (4) a **high on all adversities** group, which had high probabilities of all ACEs (including sexual abuse; n=21, 11%).



Differences between groups

Differences between the four groups identified are shown in Table 1. The high on all adversities group had the highest proportion of young women. Aboriginal and non-Aboriginal young people were relatively evenly divided across the four groups. At least half of the young people in each group had committed at least one violent offence, and more than three-quarters had experienced custodial supervision.

The highest proportions of young people who had been on a guardianship order until age 18 and placed into OOHC were in the high on all adversities group and the lowest proportions were in the family and neighbourhood disadvantage group. Between one-quarter and one-third of young people had experienced placement in residential care across all three high maltreatment groups. Although a higher proportion of the high on all adversities group had experienced contact with the child protection system, it appeared that this contact was occurring, on average, at an older age.

The high on all adversities group had the highest proportion (91%) of young people with trauma symptoms across all categories. The two high maltreatment groups had relatively similar proportions of young people with trauma symptoms, which ranged from approximately one-half to two-thirds of young people (excluding the fantasy dissociation subscale and sexual concerns scales). The family/ neighbourhood disadvantage group had the lowest relative proportion of young people with any trauma symptoms (64%), but almost two-thirds of young people in this group also scored in the symptomatic ranges for overt dissociation.

The proportion of young people who had scores indicating problematic substance use was high across all groups (>71%). Nearly all young people in the high maltreatment/high household dysfunction and high on all adversities groups reported problems in this area.

Externalising emotional or behavioural problems were common across all three maltreatment groups (>92%), with over two-thirds of those in the family/neighbourhood disadvantage group also scoring in the symptomatic range for this problem. The high on all adversities group also had the highest proportion (91%) of young people with internalising problems.

Almost three-quarters of young people across all four groups had a new conviction in the 12 months post interview. The highest proportion of young people who reoffended was in the family/neighbourhood disadvantage group (86%).

Table 1: Proportion of children with types of ACEs, by demographic characteristics, trauma symptoms, substance use, and behavioural problems (%) $(n=184)$						
	High maltreatment/ high household dysfunction	High maltreatment/ low household dysfunction	Family/ neighbourhood disadvantage	High on all adversities		
	(<i>n</i> =66, 35.6%)	(n=52, 28.3%)	(n=45, 24.5%)			
Sex						
Male	83.3	82.7	95.6	66.7		
Female	16.7	17.3	4.4	33.3		
Background						
Aboriginal	39.4	34.6	37.8	38.1		
Non-Aboriginal	60.6	65.4	62.2	61.9		
Age						
14–15 years	30.3	32.7	33.3	23.8		
16+ years	69.7	67.3	66.7	76.2		
Offending history prior to interview						
Ever violent offending	59.1	51.9	53.3	66.7		
Ever custody	84.6	75.0	80.0	90.5		
Child protection history						
Ever on long-term guardianship order	13.6	14.3	11.4	23.8		
Ever in OOHC	31.8	34.7	20.5	42.9		
Ever in foster care	10.6	10.2	9.1	14.3		
Ever in residential care	21.2	22.4	15.9	33.3		

Table 1: Proportion of children with types of ACEs, by demographic characteristics, trauma symptoms, substance use, and behavioural problems (%) (n=184) (cont.)

	High maltreatment/ high household dysfunction	High maltreatment/ low household dysfunction	Family/ neighbourhood disadvantage	High on all adversities
	(n=66, 35.6%)	(n=52, 28.3%)	(n=45, 24.5%)	(n=21, 11.4%)
Trauma symptoms				
Any	89.4	75.0	64.4	90.5
Anxiety	53.9	50.0	38.9	84.2
Depression	58.5	56.5	36.1	89.5
Anger	66.2	60.9	38.9	73.7
Post-traumatic stress	60.0	63.0	52.8	84.2
Any dissociation	69.2	60.9	55.6	89.5
Overt dissociation	70.8	67.4	63.9	94.7
Fantasy dissociation	35.4	37.0	30.6	63.2
Sexual concerns	10.8	13.0	5.6	21.1
Sexual preoccupation	12.3	15.2	5.6	15.8
Sexual distress	6.2	19.6	11.1	26.3
Substance use				
Problematic use	95.5	86.5	71.1	90.5
Substance use linked to stress	51.5	47.1	20.0	52.4
Substance use as escape for problems	26.6	21.7	25.0	45.0
Using substances alone	43.1	54.9	20.0	52.6
Substance use linked to fighting or aggressive behaviour	53.0	43.1	42.9	52.3
Behaviour problems				
Internalising	69.7	63.5	44.4	90.5
Externalising	97.0	92.3	66.7	95.2
Total	90.9	82.7	62.2	100.0
Recidivism				
Any new conviction post 12 months	77.2	73.5	86.4	76.2
Any new violent conviction post 12 months	56.9	50.0	47.4	50.0

Note: ACEs=adverse childhood experiences; OOHC=out-of-home care

Discussion

This study provides further evidence that exposure to multiple forms of ACEs is common among young people supervised by the youth justice system. Not only is the prevalence of ACEs particularly high in this population, but so too are levels of trauma symptomatology, substance use, and internalising and externalising behaviour. The prevalence of individual ACEs in this study, though similar to that reported in a recent case file review of Victorian Children's Court files by Baidawi and Sheehan (2019), is up to four times higher than that reported in the international literature (see Malvaso et al. 2021). These differences may reflect the fact that youth justice supervision in South Australia is typically reserved for those who have committed the most serious and repeat offences. Such differences highlight the importance of collecting local data about ACEs rather than relying on knowledge collected in other countries. This provides further impetus to better understand the impact of life events on child and adolescent development and justice system involvement in Australian young people.

Our analyses demonstrate that exposure to ACEs is not uniform across the youth justice population: four distinct groupings were identified based on the pattern of ACEs experienced. Each group was characterised by a combination or clustering of multiple types of ACEs. However, a close inspection of differences between the groups revealed more similarities than differences. The majority of young people in each group experienced trauma symptomatology, substance use problems, and externalising behavioural issues. These findings add further strength to arguments to implement more holistic approaches to the assessment and treatment of young people under youth justice supervision. It also points to the importance of early intervention efforts to prevent the accumulation of ACEs. This relates to the second aim of our study, which was to measure the needs of the population that are potentially associated with ACEs, with a focus on trauma symptomatology, substance use, and social and emotional behaviour problems.

The most prevalent trauma symptom in this study was dissociation, and overt dissociation in particular. Dissociation items include derealisation, one's mind going blank, emotional numbing, pretending to be someone or somewhere else, daydreaming, memory problems and avoidance. A series of studies based on custodial populations in the United States have reported correlations between traumatic experiences; dissociation, emotion dysregulation and post-traumatic stress (Modrowski & Kerig 2017); anger and depression (Kerig & Becker 2010); and callous-unemotional traits (Bennett & Kerig 2014; Mozley, Lin & Kerig 2018). Based on these findings, dissociative symptoms can be conceptualised as reactions to traumatic experiences which can be targeted in treatment and are often understood as stemming from histories of maltreatment (Ford et al. 2012). Locating the expression of dissociative and related symptoms in a young person's developmental history, which includes exposure to ACEs, can help to encourage more specialist trauma interventions as part of any risk management strategy in youth justice. Furthermore, given the body of research that shows that substance use and trauma symptoms are highly correlated, interventions that focus on trauma symptoms as a cause or function of substance use may be useful (Levenson & Willis 2018).

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Conceptualising anger-related problems according to their association with historical experiences of traumatic events may lead to new insights into treatment effectiveness (Novaco 2013). In this study, post-traumatic anger symptoms were strongly correlated with externalising behavioural problems, which measure conflict with others and aggressive behaviour. Over half of the young people had committed at least one violent offence. A review by Ford et al. (2012) found that interventions targeting emotion regulation have promise in reducing post-traumatic stress among justice-involved young people and may be most effective when employed in conjunction with behavioural management approaches targeting anger responses. A further consideration—relevant to Australian youth justice populations—is how anger is experienced by Indigenous populations, especially in relation to intergenerational processes associated with pervasive feelings of helplessness and experiences of loss and discrimination (Day et al. 2008).

Due to the cross-sectional design of this study, it was not possible to elucidate potential causal associations between ACEs and offending behaviour or to establish whether trauma symptoms, substance use, and social and emotional behaviour mediate this association. Longitudinal research is needed to better understand when, how and for whom these experiences lead to an increased risk of offending. Nonetheless, this study has several important implications for policy and practice.

Policy and practice implications

From a whole-of-system perspective, the findings of this study are relevant to the development of policy and practice in the following areas: prevention and early intervention; screening, assessment and referral; clinical-level intervention; and youth justice milieu characteristics.

Prevention and early intervention

The challenge for prevention is to identify and target efforts towards high-risk populations to reduce exposure to ACEs, as well as intervening on factors that translate to increased risk of criminal justice system contact among these groups. We have highlighted some of the key factors that may underlie this association, but the complex interplay between risk and protective factors at different time points needs to be better understood to inform a series of preventive interventions along developmental pathways. The work of Ross Homel and colleagues on developmental crime prevention is of particular importance here, as it clearly demonstrates that whole-of-community prevention models—in which a suite of programs are implemented simultaneously across different developmental contexts, such as in families, schools and communities, and which are targeted at key opportunities (eg school transitions)—may be most beneficial (Homel, Freiberg & Branch 2015).

Although a strong diversion system is already in place in South Australia, further alternatives to youth justice supervision that can mitigate the consequences of ACEs should be considered. This may, for example, involve the development of more therapeutic and culturally framed accommodation options for those posing a low risk to the community instead of relying on remand (Commission for Children and Young People 2021). Voluntary therapeutic accommodation placements may have value for young people who do not have access to stable, long-term supported accommodation and whose capacity to engage in therapeutic activities is greatly hindered by a lack of a secure base to reside in.

Screening, assessment and referral

Initiatives to prevent reoffending that are related to screening the needs of young people under supervision are required; this is an activity that should then be linked with further assessment and referral to appropriate treatment. The findings of our study suggest that comprehensive screening packages are required that extend beyond a simple checklist of exposure to potentially traumatic events and that include trauma symptomatology, substance use, and social and emotional behaviour measures. Screening, then, needs to be linked with holistic assessments that can inform case planning and referral to appropriate services. This will also tell us more about the number and characteristics of young people who meet formal diagnostic criteria and who are in need of specialist mental health treatment.

Clinical-level intervention

The need for specialist treatment is highlighted by the co-occurrence of ACEs, trauma symptoms, substance abuse, and social and emotional problems in the majority of young people in this study. Evidence-based therapeutic or educative interventions to assist young people experiencing trauma are rare (Ford et al. 2012), and traditional therapeutic interventions for trauma and other mental health disorders rely heavily on cognitive modalities and may not be sufficiently responsive to the needs of justice-involved young people, especially those with disability-related needs. It is important to note that, because Youth Justice staff assisted the research team to identify young people who would be able and willing to participate in this study, it is possible that young people with severe cognitive impairments were not approached to participate and are thus not represented in our data. Given the prevalence of disability-related needs and language and neuro-developmental disorders among young people in youth justice (Baidawi & Piquero 2021; Youth Justice Assessment and Intervention Services 2020), it is important that researchers, alongside multi-disciplinary experts in these areas, work to identify and respond to these needs.

Logistical challenges are also a concern for youth justice services, such as short orders, insufficient resources, limited time to provide evidence-based treatment, lack of coordination between services, and an inability to engage young people and their families in therapy. This can make it difficult to address complex problems in a timely and meaningful way. Providing the necessary support will thus likely extend beyond the remit of youth justice agencies. Addressing complex needs will inevitably require close coordination and collaboration between Youth Justice and agencies including child protection and mental health. The success of multi-agency responses relies on greater service flexibility (eg not excluding young people based on behavioural issues and contact with the youth justice system) and methods of engagement that are conducive to the needs of 'hard-to-reach' populations (eg assertive outreach). As emphasised by Aalsma and Dir (2021), this is especially critical 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.

Milieu characteristics in youth justice settings

One-size-fits-all approaches to milieu characteristics that lack a trauma-informed overlay, particularly in custodial settings, may not be optimally effective in this population. The ability of many young people to participate successfully in educational, vocational and recreational programs and to respond well to motivational and crisis prevention interventions may be inhibited by their experiences of traumatic events and existing symptoms of complex trauma, including dissociation and unregulated anger responses. Staff in these settings are a key asset and should receive specific support and training in how to interact with young people if they are to serve as role models for self-regulation. For example, Greenwald (2009) has proposed a model of working with young people where staff play a key role in what is termed a 'stabilisation process'. This forms part of a phase-oriented approach where staff help young people identify trauma trigger situations and model responses, which then serve as first steps in preparing for participation in more intensive therapeutic interventions. To the best of our knowledge, this model is yet to be evaluated, but if such approaches can help young people to feel safe and secure in their environment then the benefits are likely to accrue (eg fewer critical incidents and acting-out behaviours and improved emotional functioning).

If youth justice systems are to be responsive to the safety needs of young people in their care and effectively manage perceived threats to personal safety, individually tailored approaches may be needed. Co-design and co-production methods can be used to work alongside young people to gain phenomenological insights into when, where and how each individual will feel most safe or unsafe and which interventions will be most helpful. A next step in this research could be a qualitative study focused on the narratives of young people under supervision. As this was the first study of its kind in South Australia, and because the questions were highly sensitive, we opted for survey methods to gain population insights into these factors but also to reduce the burden on young people who have likely told their story many times to professionals they have worked with over the years. We offered face-to-face feedback to participants after the project was completed. While we do not have ethical approval to share these responses, a number of young people opted to participate in a follow-up interview and were willing to share their views on the findings of the study. We believe that this, along with the high response rate in this study, signifies the willingness of young people to engage with research of this nature and gives us confidence that a qualitative follow-up study would

be feasible.

Conclusion

This study offers empirical evidence that adversity and trauma characterise the South Australian youth justice population. It provides a rationale for both policymakers and practitioners to investigate new ways to work with justice-involved young people that take account of key developmental experiences of adversity. It also strengthens the justification for ongoing efforts to collect high-quality evidence relating to the effectiveness of interventions informed by these insights. However, until now, there have been few well-designed trials of programs for young people in youth justice and this seriously limits our ability to improve outcomes for children and families who are at risk. Our findings emphasise the need for greater attention to be paid to prevention and early intervention and for greater efforts to reduce exposure to ACEs (through improved family and community supports) and their sequelae. Ultimately, the aim should be to divert young people with these experiences away from the youth justice system and to better respond to young people's needs when they do come under youth justice supervision because of the potential to achieve better outcomes for both young people and the broader community.

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