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Original Research

No safe space: Impact of cumulative disadvantage of adversity in the home and exclusion from school on victimisation and offending behaviour within a justice-involved youth sample

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ABSTRACT

Objectives: Youth violence is a serious public health and criminological issue, with adverse childhood experiences (ACEs) and school exclusions identified as key risk factors. This study sought to determine the relative impacts of ACEs and school exclusions on youth offending behaviour.
Study design: Cross-sectional study.
Methods: Analysis of data from a youth justice cohort (N = 214) was undertaken. Analyses explored the relative contribution of ACEs and multiple school exclusions to various outcomes (i.e. youth violence perpetration, child to parent/caregiver violence (CAPVA), child criminal exploitation (CCE), county lines (CL), and risk of re-offending).
Results: ACEs and multiple school exclusions were significantly associated ($p < 0.05$); 98.2 % of those with multiple school exclusions had at least 1 ACE, and 55.4 % experienced 4+ ACEs. Adjusted prevalence of CCE and CL was highest when there were 4+ ACEs and multiple school exclusions. Adjusted prevalence of youth violence was highest amongst those with multiple school exclusions regardless of number of ACEs. Only those with 4+ ACEs and multiple school exclusions had significantly higher odds of CAPVA compared to those with no ACEs or multiple exclusions. Risk of re-offending was associated with having either ACEs and/or multiple school exclusions.
Conclusions: Prevalence of ACEs and multiple school exclusions were substantially higher in the current youth justice cohort compared to national figures in general population samples. Findings from the current study showed that ACEs and school exclusions have different relative contributions to offending and victimisation outcomes. ACEs and school exclusion are preventable risk factors for youth offending and current study findings emphasise the need to address both factors to prevent and reduce youth offending, and achieve positive outcomes for children, and wider benefits for local communities.

1. Introduction

Youth violence and offending is a serious public health, societal, and criminal justice issue globally, and is the fourth leading cause of death for individuals aged 10–29 years of age.[1] Societal costs associated with youth violence are high, with recent work estimating that serious youth violence across England and Wales had a total social and economic cost of £11 billion over an eleven-year period.[2] Furthermore, youth offending is a predictor of offending across the lifecourse and can be associated with more chronic and severe offending.[3,4] Critically, it is important to consider youth offending in the context of cultural and situational contexts, and to understand the vulnerabilities associated with offending

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where young people are often a victim as well as an offender.[5]

During recent decades a plethora of global research has identified the impact of adverse childhood experiences (ACEs) on a range of negative health and behavioural outcomes across the lifecourse.[6–9] ACEs are a range of stressful and potentially traumatic experiences that children can be exposed to while growing up, including all forms of child maltreatment, as well as other markers of household dysfunctions (e.g. household member with mental illness or substance use issues, parental separation, domestic violence).[10] Research has consistently demonstrated the cumulative impact ACEs have on individuals' wellbeing, that is that exposure to an increased number of ACEs increases risk of experiencing adverse outcomes such as exposure to, and involvement in, criminal and antisocial behaviour, both as a perpetrator,[11–14] and a victim.[15,16]

Whilst the original ACE framework focused on adversity within the family environment, there is increasing recognition of a broader range of adversities in other settings (e.g. bullying, witnessing community violence) which may compound the impacts of household adversity.[17] Children who experience adversity are also more likely to have poorer educational outcomes, including school absence, suspensions, and exclusions,[18–20] factors which have also been shown to be associated with youth offending.[21,22] Critically, recent research has demonstrated that resilience resources, in the form of a supportive adult, can mitigate the impact of ACEs.[23–25] However, children who experience adversity are less likely to have supportive relationships within the family environment.[26–28] Findings from a longitudinal study suggest that, beyond immediate family members, the most common positive role model or trusted adult in children's lives is a teacher.[29] Thus, school is an important environment, particularly for children experiencing adversity in the home, to access support, increase resilience, and mitigate impacts of adversity. Furthermore schools, in addition to wider community institutions, may have opportunities to work with families to support them and their children. Therefore, the effects of adversity on children may be compounded by their increased risk of not attending or being excluded from school, thus removing the opportunity for schools to provide supportive relationships both to the child and their family.

Evidence therefore suggests that childhood adversity and school exclusion are two key risk factors for involvement in violence and offending behaviour. However, to date there is a lack of research which considers these risk factors together to explore their relative contributions to youth offending behaviour. The aim of the current study was to: (1) identify the prevalence of ACEs, and school exclusions in a youth justice cohort; and (2) explore the association and possible interaction between ACEs and school exclusions, and offending behaviour and victimisation.

2. Methods

2.1. Data source

Data for the current study was drawn from a sample (aged 10–17 years) of a youth justice service's case records of young people covering one county in England (N = 214). Young people are involved in the youth justice service either as subject to a statutory order (i.e. mandated engagement) or via the DIVERT route (i.e. voluntary engagement). Data from the youth justice service case records were extracted and coded by one independent researcher. Sociodemographics are provided in Supplementary file 1: Table A1.

2.2. Measures

Adverse childhood experiences (ACEs): included physical, emotional, or sexual abuse; physical or emotional neglect; or household adversities such as mental health issues, problematic drug or alcohol use, witnessing domestic violence, parental separation, and having a parent that was incarcerated. The number of ACEs experienced was categorised as no ACEs, 1 ACE, 2–3 ACEs, or 4+ ACEs.

Multiple school exclusions: any school exclusions (including fixed-period exclusions) on more than one occasion.

Youth violence perpetration: defined as history of perpetration of youth violence (i.e. intentional use of force or power to threaten or harm others physically, emotionally, or sexually, perpetrated by young people who are unrelated to and may or may not know the victim).

Child and adolescent to parent/caregiver violence and abuse (CAPVA): defined as lifetime perpetration of CAPVA.

Child criminal exploitation risk: young person considered to be vulnerable to criminal exploitation. Criminal exploitation is broader than county lines (see below) and also includes for instance, children forced to work on cannabis farms or to commit theft.[30]

County lines risk: coded as present if assessment was at risk, suspected to be involved, known to be involved, or had previously been involved. County lines refers to a specific type of exploitation where criminal gangs persuade or coerce children to transport drugs and money.[30]

Youth Offender Group Reconviction Scale (YOGRS): probability that an individual with a given offending history and other factors (e.g. age and gender) will be re-sanctioned for offending within two years. It is calculated to provide a likelihood score (0–100 %), which can be categorised as low (0–43 %), medium (44–76 %), or high (77–100 %) likelihood of re-offending.[31] This is only assessed for statutory cases (not divert).

2.3. Covariates

Covariates included sex (male; female), age (10–14 years; 15–17 years), and case type (statutory; divert).

2.4. Data analyses

Data were analysed using SPSS (v.28). Analyses used descriptive statistics and chi square for independence (with continuity correction for 2x2 tables) was employed for initial bivariate examination of associations between ACEs and school exclusions, and outcome variables (i.e. youth violence perpetration, CAPVA, child criminal exploitation risk, county lines risk, and risk of reoffending). For multivariate analyses, a combined school exclusions and ACE count variable with 4 categories was created (i.e. <4 ACEs/no multiple exclusions; 4+ ACEs/no multiple exclusions; <4 ACEs/multiple exclusions; 4+ ACEs/multiple exclusions). Multivariate analyses used binary logistic regression to examine the independent relationships between the combined school exclusion and ACE count variable and outcomes of interest, after controlling for covariates. Modelled estimates for prevalence of each outcome of interest were calculated for different levels and combinations of school exclusions and ACEs using an estimated marginal means function to adjust estimates for covariates.

3. Results

3.1. Prevalence of ACEs and school exclusions

Overall, 89.6 % of the cohort had experienced at least one ACE, with over four in ten (41.8 %) experiencing 4 or more ACEs. There was a significant association between ACE count and sex and diversion type (Supplementary file 1: Table A2).

Overall, 46.8 % of the cohort had a history of at least one school exclusion, with 27.9 % having multiple school exclusions. There was no significant association between multiple school exclusions and covariates (Supplementary file 1: Table A2).

In bivariate analysis ACE count was significantly associated with multiple school exclusions ($p < 0.05$). Of those who had multiple school exclusions: 55.4 % had 4+ ACEs, 25.0 % had 2 or 3 ACEs, 17.9 % had 1 ACE, 1.8 % had no ACEs. Of those who had 4+ ACEs, 36.9 % had

multiple exclusions, 24.1 % of those with 2 or 3 ACEs had multiple exclusions, 26.3 % with 1 ACE had multiple exclusions, and 5.0 % of those with no ACEs had multiple exclusions.

3.1.1. County lines and child criminal exploitation

Overall, 26.6 % of the cohort were deemed at risk of county lines involvement and 48.2 % at risk of child criminal exploitation. County lines involvement was significantly associated with sex and diversion type, and child criminal exploitation was significantly associated with diversion type (Supplementary file 1: Table A3). In bivariate analysis, the combined ACE count and school exclusion status variable was significantly associated with child criminal exploitation ($p < 0.001$), and county lines involvement ($p < 0.001$; Table 1).

After controlling for covariates, the highest odds were for young people with 4+ ACEs and multiple exclusions who were 11.79 (CIs, 3.57–38.91) times more likely to have county lines involvement compared to those with <4 ACEs and no multiple exclusions (Table 2). Adjusted prevalence reflects these findings with the highest prevalence amongst those with 4+ ACEs and multiple exclusions (27.0 %), followed by 4+ ACEs and no multiple exclusions (16.0 %), whilst those with <4 ACEs either with, or without, multiple exclusions numbered less than one in twenty individuals (4.0 % and 3.0 % respectively; Fig. 1).

After controlling for covariates, the highest odds were for young people with 4+ ACEs and multiple exclusions who were 4.18 (CIs, 1.62–10.81) times more likely to be at risk of child criminal exploitation compared to those with <4 ACEs and no multiple exclusions (Table 2). Adjusted prevalence reflects these findings with the highest prevalence amongst those with 4+ ACEs and multiple exclusions (62.0 %), followed by 4+ ACEs and no multiple exclusions (54.0 %), whilst for those with <4 ACEs either with, or without, multiple exclusions prevalence was 47.0 % and 28.0 % respectively (Fig. 1).

3.2. Perpetration of youth violence and CAPVA

Overall, 73.0 % of the cohort had perpetrated youth violence and 35.1 % had perpetrated CAPVA. Youth violence perpetration was associated with sex and diversion type (Supplementary file 1: Table A3). CAPVA was not associated with any covariates (Supplementary file 1: Table A3). In bivariate analyses, the combined ACE count and school exclusion status variable was significantly associated with youth violence perpetration ($p < 0.01$) and CAPVA ($p < 0.05$; Table 1).

After controlling for covariates, the highest odds of perpetrating youth violence were for young people with multiple exclusions regardless of whether they had <4 ACEs (AOR, 4.14; CIs, 1.11–15.42) or 4+ (AOR, 4.56; CIs, 1.23–16.97; Table 2). Adjusted prevalence reflects these findings with the highest prevalence amongst those with 4+ ACEs and multiple exclusions (95.0 %), followed by multiple exclusions and <4 ACEs (94.0 %), whilst prevalence was lower amongst those without multiple exclusions either with <4 ACEs or 4+ ACEs (80.0 % and 82.0 % respectively; Fig. 1).

After controlling for covariates, young people with multiple exclusions and 4+ ACEs were 3.55 (CIs, 1.43–8.80) times more likely to have perpetrated CAPVA, compared to those with no multiple exclusions and <4 ACEs (Table 2). Adjusted prevalence showed the highest prevalence was amongst those with 4+ ACEs and multiple exclusions (50.0 %), followed by 4+ ACEs and no multiple exclusions (37.0 %), whilst the prevalence amongst those with <4 ACEs either with, or without, multiple exclusions was 29.0 % and 22.0 % respectively (Fig. 1).

3.3. Risk of re-offending

Of the statutory cases, 50.4 % had a medium or high YOGRS score. Risk of re-offending was not associated with any covariates (Supplementary file 1: Table A3). In bivariate analysis, the combined ACE count and school exclusion status variable was significantly associated with YOGRS score category ($p < 0.01$).

After controlling for covariates, compared to <4 ACEs and no multiple exclusions, young people with multiple exclusions were over six times more likely to be at medium or high risk of re-offending, regardless of whether they had <4 (AOR, 6.62; CIs, 1.81–24.27) or 4+ ACEs (AOR, 6.67; CIs, 1.95–22.76), whilst those without multiple exclusions but with 4+ ACEs were 5.95 (CIs, 2.10–16.89) times more likely (Table 2). Adjusted prevalence reflects these findings with similar prevalence amongst those with multiple exclusions and 4+ ACEs (58.0 %), multiple exclusions and <4 ACEs (58.0 %), and no multiple exclusions and 4+ ACEs (56.0 %), whilst prevalence amongst those with no multiple exclusions and <4 ACEs was just 17.0 % (Fig. 1).

4. Discussion

The aim of the current study was to examine adversity and disadvantage in two settings, the home and school environment, and associations with exploitation and offending behaviour in a youth justice cohort. Prevalence of ACEs in this youth justice cohort was high, with nine in ten young people experiencing at least one ACE, and four in ten experiencing 4 or more ACEs. Critically, in comparison to an adult national household general population cohort, where prevalence decreased as the number of ACEs increased,[7] in this youth justice cohort, prevalence increased as the number of ACEs increased. Just under nine in ten young people in the current study experienced at least one ACE compared to less than half of the national adult household study.[7] Critically, four in ten young people in the current study experienced four or more ACEs, compared to less than one in ten individuals in the national adult household study.[7] School exclusions were also higher in this youth justice cohort, with almost half having experienced at least one school exclusion (including fixed and permanent exclusions), compared to the much lower rate of fixed (313 per 10,000 pupils) and permanent (4 per 10,000 pupils) in the general school population of England in 2022/23.[32]

The current study demonstrates the double disadvantage experienced by this cohort of youth justice involved young people, with school exclusions found to be significantly associated with ACEs. Nearly all of those who experienced school exclusions (98.2 %) had also experienced at least one ACE, and more than half (55.4 %) had experienced four or

Table 1
Violence perpetration, risk of exploitation, and risk of re-offending, by exclusions and ACEs category.

Measure	All		Exclusions and ACEs category									
			No multiple exclusions and <4 ACEs		No multiple exclusions and 4+ ACEs		Multiple exclusions and <4 ACEs		Multiple exclusions and 4+ ACEs		χ^2	p
	%	N	%	N	%	N	%	N	%	n		
County lines	26.6	46	10.3	8	41.3	19	19.0	4	55.6	15	27.875	<0.001
Child criminal exploitation	48.2	93	31.4	27	62.0	31	54.2	13	67.7	21	18.625	<0.001
Youth violence perpetration	73.0	149	60.4	55	75.5	40	88.0	22	90.3	28	14.825	<0.01
CAPVA	35.1	71	25.3	23	41.5	22	32.0	8	54.8	17	10.232	<0.05
Medium/high risk of re-offending	50.4	59	24.3	9	60.0	24	68.8	11	62.5	15	15.099	<0.01

Note. [a]Statutory cases only.

Table 2
Independent relationships between exclusions and ACEs category, and violence perpetration, risk of exploitation, and risk of re-offending.

Measure	n	p	Exclusions and ACEs category (reference category no multiple exclusions and <4 ACEs)					
			No multiple exclusions and 4+ ACEs		Multiple exclusions and <4 ACEs		Multiple exclusions and 4+ ACEs	
			AOR (95 % CI)	p	AOR (95 % CI)	p	AOR (95 % CI)	p
County lines[a]	166	<0.001	6.22 (2.19–17.65)	<0.001	1.43 (0.36–5.61)	NS	11.79 (3.57–38.91)	<0.001
Child criminal exploitation[a]	185	<0.01	2.95 (1.33–6.55)	<0.01	2.22 (0.86–5.75)	NS	4.18 (1.62–10.81)	<0.01
Youth violence perpetration[a]	194	<0.05	1.18 (0.51–2.74)	NS	4.14 (1.11–15.42)	<0.05	4.56 (1.23–16.97)	<0.05
CAPVA[a]	194	<0.05	2.09 (0.95–4.62)	NS	1.48 (0.55–3.96)	NS	3.55 (1.43–8.80)	<0.01
Medium/high risk of re-offending[b]	113	<0.01	5.95 (2.10–16.89)	<0.001	6.62 (1.81–24.27)	<0.01	6.67 (1.95–22.76)	<0.01

Note. AOR; adjusted odds ratio. CI; confidence interval. [a] Adjusted for age, sex, and diversion type. [b] Statutory cases only, adjusted for age and sex.

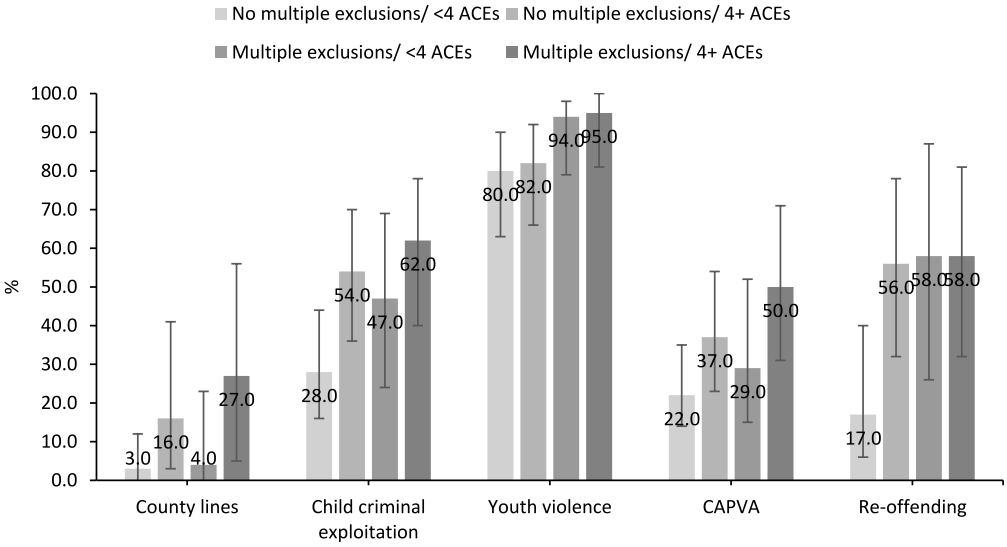

Fig. 1. Adjusted proportion (95 % CIs) of youth justice cohort perpetrating violence and at risk of exploitation and re-offending, by exclusions and ACEs category.

more ACEs. Evidence shows that childhood adversity can lead to a toxic stress response impacting on brain development and lead to increased risk of cognitive deficits, psychopathology, and behavioural problems.[6,33] Furthermore, children experiencing household dysfunction may experience trauma symptoms, and may not have basic needs met and thus could be attending school hungry or without sleep.[34] These factors could have significant impacts on a young person's ability to focus and follow the rules and expectations of a school environment, increasing the likelihood of being disruptive, under-performing academically, and getting suspended or excluded from school.[35–38] Furthermore, exclusion from school may exacerbate existing problems such as mental health issues and social isolation.[18,33] Critically, exclusion from school for children with ACEs limits their opportunity to develop relationships with supportive adults outside the home environment. Supportive adult relationships have been shown to mitigate against the adverse impacts of ACEs across the lifecourse.[23–25] However, those with ACEs are also less likely to have such support in the home,[26–28] underlining the importance of access to other environments, such as school, where such relationships can be developed. Positive peer relationships have also been shown to be a key protective factor against the impact of ACEs.[23,39–41] However, school exclusion creates a greater opportunity for offending by increasing the risk of association with similarly excluded peers, leading to increased risk of exploitation, and perpetration of violence and other criminal behaviours, and subsequent involvement in the criminal justice system.[42–44]

The current study also demonstrated that ACEs and school exclusions can combine in different ways to be associated with increased risk of different types of offending behaviour. Young people with four or more ACEs, regardless of whether there was a history of multiple school exclusions, were more likely to be involved in county lines and child criminal exploitation, but adjusted prevalence was highest when they had both four or more ACEs and multiple school exclusions. Criminal network gangs often target vulnerable young people to engage them in county lines and other criminal behaviour by providing something in exchange including both tangible (money, drugs, or clothes) and intangible (status, protection, or perceived friendship or affection) incentives.[45] Young people without supportive home environments may be drawn to this type of 'support', and particularly so if they are also excluded from school. Involvement in youth violence, was only significantly higher amongst those with a history of multiple school exclusions, regardless of experiencing four or more ACEs or not, suggesting school exclusion is a primary driver of youth violence perpetration. Only those with both four or more ACEs and school exclusions were significantly more likely to have perpetrated CAPVA (compared to those with <4 ACEs/no multiple exclusions). Risk of re-offending was higher amongst those who had either four or more ACEs and/or multiple school exclusions, compared to those who experienced less than four ACEs and no multiple exclusions. This suggests that both factors are independently important to address to reduce risk of re-offending.

Findings from this study have potential implications for policy and practice for both primary prevention of youth offending and preventing re-offending across the lifecourse. ACEs and school exclusions are two risk factors which are malleable and offer realistic targets for intervention. Evidence now exists on strategies and approaches to prevent and respond to ACEs,[6] one of which is delivering curriculum which provides children with opportunities to develop life skills to deal with stress,

negative emotions, and conflict. However, school exclusion policies work against this evidence, removing the opportunity for the most vulnerable young people to access other supportive environments. Trauma-informed approaches in schools may be one approach to addressing and mitigating the impact of ACEs by providing supportive adult relationships and potentially reducing the need for punitive practices, such as school exclusions, to address young people's disruptive behaviour by educating staff on the relationship between trauma and behaviour. However, whilst trauma informed training for school staff has recently begun in the UK,[46] robust evidence on it's effectiveness is currently lacking both in terms of mitigating the impacts of ACEs, increasing academic attainment and attendance, and reducing school exclusions.[47] More generally, schools should implement universal programmes which build resilience and promote mental wellbeing which will both mitigate the impact of ACEs and support early intervention strategies to promote positive development for all children and young people and reduce the risk of future involvement in the youth justice system. Furthermore, schools, in addition to wider youth professional organisations, are vital mechanisms through which support can be provided to empower families to build positive parent-child relationships and develop resilience.

The Timpson Report reviewed and made recommendations about best practice on school exclusions to the UK government.[48] They found that although exclusion from school may be a risk factor for violence and offending, preventing violence cannot be the responsibility of schools alone. Interventions at a community and local level need to be supplemented by government strategies and policies. The Serious Violence Duty has been introduced by the UK government to mandate a multi-agency approach to prevent serious violence, with a specific focus on early intervention presenting the opportunity to tackle risk factors such as ACEs and school exclusions.[49] However, whilst it mandates a multi-agency approach, neither education nor youth justice are mandated partners, although the Duty does state that specified authorities should consult with both sectors in the preparation of their local strategy. Based on the findings in this study, it is imperative that statutory partners do all they can to facilitate engagement from these two key partners. Furthermore, this approach should be developed with consideration of existing legislation on school exclusions. For example, the 2024 Department of Education guidance for schools on use of school exclusion states that it should be used as a 'last resort'.[50] Despite this however, evidence shows that rates of exclusions are increasing year on year in England, with a 20 % increase in permanent exclusions, and an 80 % increase in suspensions in 2022/23 compared to 2018/19.[50,51] Further research and reflection on current policy and practice is needed to identify the best approaches to addressing school exclusion, supporting children who are experiencing ACEs more effectively, and ultimately reducing risk of youth offending.

4.1. Limitations

The sample size in the current study was relatively small and extracted from just one regional youth justice service. However, there is limited existing evidence which considers both ACEs and school exclusions and how together they interact with offending behaviour. Thus, this study provides initial evidence that consideration of both is important and justifies continued investigation of both risk factors. The cross-sectional nature of the current study means it was not possible to determine which factors may precede others (e.g. ACEs as a risk for school exclusion, or vice versa), but current study findings indicate the value in further longitudinal research to better understand these associations and their link with offending behaviour and other outcomes across the lifecourse, including the use of modelling techniques which can further explore the mediating effect of school exclusions and other factors not included here (e.g. substance use, psychopathy[52–54]) on the relationship between ACEs and offending behaviour. Experiences of ACEs and school exclusions in the current study were extracted from case notes and are not routine questions in the assessment. Thus, they may not have been consistently recorded, and this may have impacted study findings. Standardising recording practices in the youth justice system to routinely capture experience of ACEs and school exclusions may be beneficial in informing support pathways and future research.

4.2. Conclusion

ACEs and school exclusions are two of the most preventable risk factors of youth offending behaviour. Evidence from the current study suggests that young people involved in the youth justice system have histories of disadvantage in both the home and school environment and at far higher levels than general population cohorts. The 'school to prison pipeline' is a commonly used term,[55] however there has previously been a lack of consideration of the interaction with ACEs in this relationship. Findings from this study suggest it could be more accurately referred to as the 'ACEs and school exclusion to prison pipeline'. Preventing violence against children, and ensuring inclusive and equitable quality education, are two key targets of the United Nations Development Goals.[56] Findings from this study reinforce the need for attention to these two key areas both to reduce youth offending, and achieve more positive lifecourse outcomes for young people, and wider benefits for communities.

Ethics statement

Formal ethical approval was granted from Liverpool John Moores Research and Ethics Committee (22/PHI/011).

Author contributions

NB designed the current study, analysed the data, and drafted the manuscript. CW extracted, coded, and prepared the dataset, supported data analyses, and contributed to manuscript production. ZQ was the principal investigator for the wider project, leading its design and implementation. EMC managed the delivery of the wider project and completed the data sharing and governance processes. TD and AD commissioned the wider project and contributed to project design. TD supported access to the dataset. All authors contributed to manuscript editing and read and approved the final manuscript.

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Declaration of competing interest

The authors declare that they have no competing interests.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.puhe.2025.106117.

Data availability

The data underlying this article were provided by the youth justice service under licence/by permission. Data will be shared on request to the corresponding author with permission of the youth justice service.

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