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Out-of-school suspension and police contact: Identifying early opportunities to disrupt the school-to-prison pipeline

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Acronyms and abbreviations

95% CI	95% confidence interval
aOR	adjusted odds ratio
AEDC	Australian Early Development Census
I-MTSS	Integrated Multi-Tiered Systems of Support
NSW-CDS	New South Wales Child Development Study
OR	odds ratio
ROSH	risk of significant harm
SSPESH	Survey of School Promotion of Emotional and Social Health
SWPBIS	School-wide positive behaviour interventions and support
uOR	unadjusted odds ratio

Abstract

The aim of this study was to examine the association between out-of-school suspension from primary school and early contact with police (by approximately 14 years of age).

Using data from the New South Wales Child Development Study, this study determined the prevalence and pattern of suspension (by timing, total number, total days, and reason) and police contact (any, person of interest, victim, and/or witness) among 68,121 children who attended NSW public schools during 2012 to 2015 (Years 3 to 6). Associations between suspension and police contact were analysed using a demographically matched sample that compared all 3,291 suspended children with 6,582 like non-suspended peers.

Suspended children had almost quadruple the odds of police contact relative to non-suspended children after controlling for other factors. Children with more suspensions, and suspensions for more serious reasons, had even greater likelihood of police contact, especially as a person of interest. Findings highlight a need for systemic education and interagency reform to enact effective alternatives to suspension.

Executive summary

Background to the report

Extensive research, predominantly from the United States, demonstrates that out-of-school suspension has detrimental effects on students' outcomes: it may weaken school connectedness, contribute to school dropout, exacerbate achievement gaps, worsen mental and physical health, and increase antisocial behaviour and contact with the criminal justice system (Hirschfield 2018; Novak & Fagan 2022; Skiba, Arredondo & Williams 2014; Welsh & Little 2018; Wolf & Kupchik 2017). Students from minority and disadvantaged backgrounds, and students with disability, are disproportionately affected by suspension (Graham et al. 2024), with evidence suggesting that these children are subjected to higher levels of disciplinary exclusion than other students for similar transgressions (Fabelo et al. 2011; Shollenberger 2015) and are more susceptible to experiencing negative outcomes of suspension (Rosenbaum 2020; Vanderhaar, Munoz & Petrosko 2014). These groups are likewise over-represented within the criminal justice system (Nellis 2016; Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability 2020; Weatherburn & Holmes 2010). Indeed, experiences of suspension may contribute to forcing young people out of school and into the criminal justice system, in a process referred to as the 'school-to-prison pipeline' (Wald & Losen 2003; Wolf & Kupchik 2017).

Most studies demonstrating this association between suspension and later justice system involvement (Gerlinger et al. 2021; Novak 2018) have examined suspensions enacted during secondary (middle/high) school, and arrests, convictions and incarceration. Limited prior research, and none in Australia, has investigated the relationship between early experiences of suspension and initial contact with the justice system—namely, suspensions from primary school and early contact with police. Such research is critically needed because early experiences of suspension and contact with police may precipitate particularly poor outcomes for children (Jacobsen, Pace & Ramirez 2019; Mittleman 2018; Novak 2019), and rates of primary school suspensions in Australia are increasing (Graham 2020; Graham, McCarthy et al. 2020; NSW Ombudsman 2017). Identifying relationships between early suspension and contact with police may provide critical insights that can help shape the design of effective preventative strategies and intra- and inter-agency policy reform in the education, justice, health and social service systems to mitigate against suspension and justice system involvement.

Project aims and objectives

This longitudinal study used linked administrative records from education, justice, child protection and health agencies, available in a large population sample of 68,121 children, along with data on school practices to support student wellbeing, to address four aims:

- Aim 1: To determine the association of out-of-school suspension from primary school with early police contact;
- Aim 2: To determine whether early contact with police varied according to the nature of the suspension, including age at first suspension, total number of suspensions, total length of suspension, and the reason for suspension;
- Aim 3: To examine whether the strength of association between suspension and police contact varied according to type of contact with police—as a person of interest, a victim or witness; and
- Aim 4: To identify whether the level of school-based implementation of policies and practices to promote student wellbeing moderated the effect of primary school suspension on early police contact.

Research findings

Approximately one in 20 (4.8%) primary school students experienced suspension during Years 3 to 6, and one in five children (20.6%) had contact with police for any reason by the age of about 14 years. Suspension was used repeatedly (53.2% of suspended children received two or more suspensions), and for relatively minor behavioural infractions (61.6% of children received a short suspension for continued disobedience and/or aggressive behaviour). Almost two-thirds (62.5%) of suspended children had police contact, the majority having contact of multiple types (as a person of interest, victim and/or witness). Children who were male, who were of Aboriginal and/or Torres Strait Islander background, who resided in socio-economically disadvantaged areas, who were in contact with child protection services, who had emotional/behavioural problems, and who had an early developmental vulnerability relating to behaviour, were all over-represented in both suspension and police contact.

Children suspended from primary school had almost quadruple the odds of contact with police by the age of about 14 years relative to non-suspended students, after accounting for the six other important vulnerability factors associated with both suspension and police contact. Relative to non-suspended students, the odds of police contact were greatest among children suspended earlier, on a greater number of occasions, for a higher total number of days, and for more serious infractions, though odds were also significantly increased at even the lowest levels of suspension.

Suspension was significantly associated with police contact of all types (person of interest, victim and witness contacts), with the greatest odds associated with contact as a person of interest. School-based implementation of policies and practices to support student wellbeing moderated the association of suspension and police contact, such that children removed via suspension from the protective environment of a school that had implemented such practices were more susceptible to police contact than children excluded from other schools.

Implications for policy and practice

Study findings provide new evidence that Australian children may indeed be susceptible to a 'school-to-prison pipeline' in which exclusionary discipline pushes students out of school and into contact with police. These insights are critical to informing the design of effective prevention and early intervention strategies, and to shaping intra- and inter-agency policy reform in education, justice, health and social service systems to mitigate against suspension and criminal justice system involvement.

Suspension was used repeatedly for a substantial minority of young children, and for relatively minor behavioural infractions, and increased the risk of these children's subsequent contact with police. Exclusionary school discipline does not teach children the skills they need to comply with behavioural expectations but in fact removes them from the teaching environment (Graham 2020). Managing these infractions through alternative means within the school setting would help to maintain the bond between student and school and safeguard the child's access to learning and prosocial opportunities and role models. Systemic reform should ban the use of suspension in primary school for minor or subjective reasons, with schools instead resourced with the necessary training and infrastructure to implement (and evaluate) evidence-based alternative practices. These practices should include Integrated Multi-Tiered Systems of Support (I-MTSS) models which integrate social-emotional learning of self-regulation skills (de Bruin, Killingly & Graham 2024), restorative practices, and wraparound integrated supports provided through interagency collaboration between education, justice, health and social service agencies (Dryfoos 1994; Mukherjee 1997). Poor design and inaccessibility of support services in health and social services (including child protection services) contribute to pressures on the education system in meeting the needs of children and families.

Legislative safeguards are needed to prevent the over-representation of priority equity groups (Aboriginal and/or Torres Strait Islander students, students with disability and students in out-of-home care) in suspension and police contacts. The findings of the present study highlight the need for an integrated approach that prioritises prevention and early intervention efforts. The primary school years present a critical period in which to foster connections between vulnerable children and supportive adults and prosocial peers. Services offered by government agencies must be augmented by community-based prevention and intervention programs delivered by community-controlled organisations that are trauma-informed and voluntary in nature, particularly for Indigenous young people and communities (Duthie et al. 2019; Lonne et al. 2021). Raising the minimum age of criminal responsibility nationally in Australia to at least 14 years (Haysom 2022) might help engender greater societal recognition of the extended period over which self-regulation skills develop, and that these skills need to be explicitly taught, modelled and practised.

The lack of local evidence of effective alternatives to suspension delays the systemic reform necessary to ensure that schools are resourced to enact these alternatives. Funding for professional development and infrastructure to support both the implementation and evaluation of alternatives to suspension is required (Laurens et al. 2022). Evidence is likewise needed to guide the building of stronger place-based partnerships between schools and health, social services and justice agencies to deliver prevention and early intervention to mitigate suspension and police contact.

Introduction

Extensive research, predominantly from the United States, demonstrates that out-of-school suspension has detrimental effects on students' outcomes: it may weaken school connectedness, contribute to school dropout, exacerbate achievement gaps, worsen mental and physical health, and increase antisocial behaviour and contact with the criminal justice system (Hirschfield 2018; Novak & Fagan 2022; Skiba, Arredondo & Williams 2014; Welsh & Little 2018; Wolf & Kupchik 2017). Students from minority and disadvantaged backgrounds, and students with disability, are disproportionately affected by suspension (Graham et al. 2024), with evidence suggesting that these children are subjected to higher levels of disciplinary exclusion than other students for similar transgressions (Fabelo et al. 2011; Shollenberger 2015) and are more susceptible to experiencing negative outcomes of suspension (Rosenbaum 2020; Vanderhaar, Munoz & Petrosko 2014). These groups are likewise over-represented within the criminal justice system (Nellis 2016; Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability 2020; Weatherburn & Holmes 2010). Indeed, experiences of suspension may contribute to forcing young people out of school and into the criminal justice system, in a process referred to as the 'school-to-prison pipeline' (Wald & Losen 2003; Wolf & Kupchik 2017).

Most studies demonstrating this association between suspension and later justice system involvement (Gerlinger et al. 2021; Novak 2018) have examined suspensions enacted during secondary (middle/high) school, and arrests, convictions and incarceration. Limited prior research, and none in Australia, has investigated the relationship between early experiences of suspension and initial contact with the criminal justice system—namely, suspensions from primary school and early contact with police. Such research is critically needed because early experiences of suspension and contact with police may precipitate particularly poor outcomes for children (Jacobsen, Pace & Ramirez 2019; Mittleman 2018; Novak 2019). Identifying relationships between early suspension and contact with police, as is the focus of this report, can provide critical insights into the design of effective preventative strategies and help shape intra- and inter-agency policy reform in the education, justice, health and social service systems to mitigate against suspension and justice system involvement.

Out-of-school suspension: Use and impact

The prolonged and intensive immersion of children in educational environments underscores a critical role for schools in facilitating socialisation, maintaining social control, and fostering the development of social competencies (Hirschfield 2018). Many Western education systems use exclusionary discipline (comprising fixed-term out-of-school suspensions, and permanent expulsion/exclusion) as a tool within their behaviour management policies to remove children who exhibit behaviour that is unacceptable or problematic (Mongan & Walker 2012; NSW Department of Education 2022; Welsh & Little 2018). Although exclusionary discipline is often described as a last resort in these policies, there is evidence of increased use for minor infractions and with young children (Graham, McCarthy et al. 2020). Such policies have been likened to the punitive trend observed since the 1970s in many Western criminal justice systems, towards the enactment of greater punishment and a reduced emphasis on rehabilitation, adapted to incidents of (perceived) misbehaviour in the educational setting (Cook, Gottfredson & Na 2010; Mallett 2016). In US school systems, this resulted in a proliferation of school-based zero-tolerance policies and a growing presence of school security and school resource officers (Fabelo et al. 2011; Hirschfield 2018; Novak 2018; Owens 2017; Weisburst 2019), alongside rising rates of suspension (Losen & Martinez 2013). In Australia, increased use of out-of-school suspension and expulsion over recent decades has likewise been noted (Graham 2020; Graham, McCarthy et al. 2020).

School systems uphold exclusionary discipline as necessary to deter misbehaviour and to preserve school safety. However, these approaches frequently fall short of achieving behavioural change (Graham 2020), and there is a lack of evidence to support zero-tolerance policies or other exclusionary discipline practices as effective methods of enhancing school safety (Schiff 2018; Sharkey & Fenning 2012). High rates of suspension are associated with school dropout (Lee et al. 2011) and negative impacts on the academic achievement of non-suspended students (Perry & Morris 2014). Exclusion also engenders a significant societal financial burden, with economic analysis from the United States (already almost a decade old) estimating that each one percentage point reduction in the out-of-school suspension rate would yield a US$2.2 billion saving in public expenditure, excluding costs of involvement in the juvenile justice system (Rumberger & Losen 2016). In Australia, indirect estimates of the costs of suspension based on the number of 19-year-olds not completing secondary school (approximately one-fifth nationally) yielded lifetime fiscal cost estimates of $334,600 per early leaver (A$12.6 billion total) and lifetime social costs to the individual and community of A$616,200 per early leaver (A$23.2 billion total at 2014 net present value; Lamb & Huo 2017).

Beyond these costs to school systems and to society, psychosocial impacts of disciplinary exclusion on individuals include greater psychological distress and psychopathology (Eyllon et al. 2022; Ford et al. 2018), emotional disengagement (Pyne 2019), increased nonviolent antisocial behaviour (Hemphill et al. 2012), reduced perceptions of school safety (Steinberg, Allensworth & Johnson 2013), and school support system disruption and alienation (Langenkamp 2009; Pellegrini & Bartini 2000). Exclusion may also compound existing difficulties for children, with suspension associated with subsequent emotional dysregulation, poorer concentration, disruptive behaviour, and lower levels of prosocial behaviour after accounting for the pre-existence of these behaviours at the start of the school year (Cohen et al. 2021). Being excluded from school also increases the risk of repeated exclusion (Gopalan & Nelson 2019; Mittleman 2018; Raffaele Mendez 2003).

This accumulated evidence regarding the adverse consequences of suspension for students, schools and society has spurred variable responses to policy reform across jurisdictions. Australian school systems currently lag behind their US counterparts in enacting necessary reform of disciplinary school exclusion policy, with implications for youth justice and social and healthcare systems.

International and national policy on the use of suspension

The negative consequences of suspension, coupled with nationwide increases in the exclusion and arrest of children from minority backgrounds for minor and nonviolent offences, prompted US Government intervention to curb exclusionary practices. In 2014, the Obama administration issued guidance principles on school discipline to all 50 states through the US Office of Civil Rights. Major reforms to reduce disciplinary exclusion ensued (Anderson 2020; Hinze-Pifer & Sartain 2018). These reforms have variously included a ban on the use of suspensions and expulsions for children in Kindergarten through 8th grade (eg California), shortening the length of suspensions (eg Chicago, Philadelphia), a restriction on suspensions for minor infractions (eg California, Chicago, Philadelphia) and a prohibition on out-of-school suspension for truancy (eg Arkansas), as well as calls to end the use of out-of-school suspension (eg Miami-Dade County Public Schools; Anderson 2020; Hinze-Pifer & Sartain 2018). In large and complex school systems such as Chicago Public Schools and in California, reform has successfully reduced suspension rates, while enhancing school connectedness, school safety and academic outcomes (Hinze-Pifer & Sartain 2018). Reform has also reduced the number of instructional days lost and narrowed racial inequity in the use of suspension (Losen & Martin 2018).

In 2017, a report published by the Australian Institute of Criminology recommended the overhaul of disciplinary procedures in Australian schools, recognising the accumulation of evidence linking the use of exclusionary discipline to young people's involvement in the justice system (Hemphill, Broderick & Heerde 2017). Contemporaneously, multiple inquiries into the use of exclusionary discipline in Australian public school systems were commissioned, including the NSW Ombudsman's Inquiry into Behavioural Management in Schools (2017), the Victorian Ombudsman's Investigation into Victorian Government School Expulsions (2017), and the South Australian government-commissioned independent Inquiry into Suspension, Exclusion and Expulsion Processes in South Australian Government Schools (Graham, McCarthy et al. 2020). The NSW Office of the Advocate for Children and Young People called for a reduction in the use of long suspensions (of up to 20 days duration; Office of the Advocate for Children and Young People 2018), and a NSW parliamentary inquiry sought to abolish unsupervised suspensions (NSW Parliament 2018).

Yet Australian schooling systems have largely not engaged in systemic reform to mitigate harmful pathways associated with suspension. There are indications that the use of exclusionary school discipline is increasing in Australian education systems, especially in primary schools (Graham 2020; Graham, McCarthy et al. 2020; NSW Ombudsman 2017), and that students in priority equity groups (Indigenous students and students with disability or in out-of-home care) are persistently and significantly over-represented (Graham et al. 2024; Laurens et al. 2021). This lack of progress in systemic reform may be in part attributable to the absence of readily available Australian data on the outcomes of disciplinary exclusion.

The limited Australian research that has been conducted to date has demonstrated short-term longitudinal associations (over a 12-month follow-up period) between suspension and later substance use, antisocial behaviour and engagement in criminal acts among Victorian students in Years 7 and 9 (Hemphill, Heerde et al. 2014; Hemphill, Plenty et al. 2014; Hemphill et al. 2013, 2006). However, research that teases out the connection between school suspension and adverse outcomes—over and above the contribution of individual vulnerability factors—is necessary to change long-held attitudes which frame adverse outcomes as inevitable given some students' personal, cultural and socio-economic characteristics. To guide effective systemic reform of policies governing suspension in Australian schools, the present study sought to provide local evidence regarding the extent and pattern of police contact among suspended students, focusing on the association between suspension during primary school and police contact.

The school-to-prison pipeline

Schools actively facilitate the development of children's social skills which, when poorly developed, have been shown to predict a range of adverse outcomes including aggression, delinquency and antisocial behaviour (Beelmann & Lösel 2021). The 'school-to-prison pipeline' contextualises the relationship between exclusionary discipline at school and increased risk of contact with the juvenile justice system (Skiba, Arredondo & Williams 2014; Wald & Losen 2003). Out-of-school suspension may exacerbate the likelihood of justice system involvement via loss of adult supervision, association with other deviant youth, and increased contact with law enforcement (Hirschfield 2018; Novak 2018; Skiba, Arredondo & Williams 2014). By limiting prosocial opportunities and role models, exclusion from school may weaken a child's bonds to this socialising context and compound the young person's disadvantage. Thus, children who encounter exclusions earlier in life or more frequently may have a higher likelihood of engaging in offending behaviour, as they potentially experience an earlier onset of disadvantage, a greater accrual of disadvantage, and hindered prosocial development (Novak & Fagan 2022).

Punitive responses to behavioural infractions applied across the education and criminal justice systems, represented in exclusion from educational institutions (suspension and expulsion) and from society (incarceration), disproportionately affect minors from marginalised and disadvantaged backgrounds (Skiba, Arredondo & Williams 2014). In the United States, children from racial minorities, particularly Black children, experience more exclusionary school discipline than White students (Bradshaw et al. 2010; Fabelo et al. 2011; Jacobsen, Pace & Ramirez 2019; Losen et al. 2015; Shollenberger 2015; Welsh & Little 2018) and are more likely to have worse outcomes than suspended White students, including greater involvement in the criminal justice system (Nicholson-Crotty, Birchmeier & Valentine 2009; Okonofua & Eberhardt 2015; Rosenbaum 2020; Vanderhaar, Munoz & Petrosko 2014; Yaluma, Little & Leonard 2021).

Australia may be grappling with its own school-to-prison pipeline, but domestic evidence is limited. In a previous investigation conducted on behalf of the Australian Institute of Criminology, suspension of Year 7 and 9 students in Victoria was associated with a 1.5 times increase in the odds of antisocial behaviour and a 1.7 times increase in the odds of violent behaviour 12 months later (Hemphill, Broderick & Heerde 2017). As in the United States, disciplinary exclusion from school may be exacerbating poor outcomes for Australian students from disadvantaged backgrounds (Graham 2020; Graham, McCarthy et al. 2020; Graham et al. 2023; NSW Ombudsman 2017; Rudolph 2023; Victorian Ombudsman 2017). Findings show that exclusionary school discipline is imposed on children from certain subgroups of the population at a higher rate than others. Those most likely to be suspended include boys, children who identify as Aboriginal and/or Torres Strait Islander or as having another minority ethnic background, children with disability (particularly emotional/behavioural disability), children who reside in poor or rural areas, and children who reside in out-of-home care (Graham et al. 2023; Graham et al. 2024; Hand et al. 2024; Hemphill et al. 2010; Hemphill, Plenty et al. 2014; Laurens et al. 2021; O'Brien & Trudgett 2020). Similar patterns of over-representation of these priority equity groups have been identified in early contacts with NSW police prior to the age of 13 years, including contacts as a person of interest (a suspected perpetrator of an offence) and contacts as a victim of or witness to crime (Athanassiou et al. 2021; Dean et al. 2021; Whitten et al. 2020).

Most prior research investigating the outcomes of suspension has focused on secondary (middle/high) school students (Losen & Martinez 2013; Welsh & Little 2018), with limited investigation into whether exclusionary school discipline may have different effects for primary school students. From a prevention and early intervention perspective, suspension from primary school raises the prospect of earlier encounters with law enforcement and the criminal justice system. To inform effective policy reform in Australia, local research is needed to identify the characteristics of suspension use (such as the timing, frequency, length of, and reason for its use) that are associated most strongly with experiences of early police contact, and whether the strength of the associations differ according to the nature of the police contact—namely, as a potential perpetrator, victim or witness of crime. To overcome perceptions that police contact is an inevitable consequence of some students' personal, cultural and socio-economic characteristics rather than suspension, this research seeks to determine the connection between suspension and police contact after accounting for the contribution of individual vulnerability factors.

Justice system involvement following disciplinary school exclusion

Experiences of exclusion are widespread among youth in the justice system (Novak & Fagan 2022), with a US-based investigation of 555 juvenile justice involved youth (mean age 16.4 years) indicating over half had been expelled and approximately four in five had been suspended (Krezmien, Mulcahy & Leone 2008). Exclusion from school has been associated with increases in juvenile justice referrals (Cuellar & Markowitz 2015; Nicholson-Crotty, Birchmeier & Valentine 2009; Sorenson, Bushway & Gifford 2022), juvenile arrest (Fabelo et al. 2011; Mittleman 2018; Monahan et al. 2014; Mowen & Brent 2016; Novak & Fagan 2022), juvenile incarceration (Vanderhaar, Munoz & Petrosko 2014), adult arrest (Bacher-Hicks, Billings & Deming 2019) and adult incarceration (Arum & Beattie 1999; Hemez, Brent & Mowen 2020).

Systematic literature reviews (Mallett 2016; Novak 2018; Skiba, Arredondo & Williams 2014) indicate an increased likelihood of justice system involvement among suspended students relative to non-suspended students, with odds ratios ranging between 1.72 and 5.17 (moderate to large effects). These associations are present after controlling for factors including academic performance, prior behaviour and disciplinary incidents, mental health concerns, school engagement and demographic characteristics (Novak 2018). Yet proponents of suspension adhere to the alternative hypothesis: that the adverse outcomes observed among suspended students are attributable to selection into suspension rather than suspension itself. That is, they argue that suspended students are more likely than their non-suspended peers to experience poor outcomes due to greater pre-suspension risk-taking and sociodemographic disadvantage.

To counter this claim, a recent investigation further controlled potential selection bias by matching suspended middle/high school students with non-suspended peers on 60 variables that might confound the association between suspension and justice system involvement, including age, academic achievement, delinquency, substance use and adverse experiences (Rosenbaum 2020). The study examined outcomes for suspended relative to matched non-suspended students five and 12 years after first suspension, with the elevated risk of criminal justice system involvement among suspended students observed to compound over time. Five years after their first suspension, suspended youth were 1.40 times more likely to have been arrested, 1.94 times more likely to have been arrested as a minor, and 3.75 times more likely to have been convicted as a minor than similar non-suspended youth. Twelve years after their first suspension, suspended youth were 1.30 times more likely to have been arrested just once and 1.51 times more likely to have been arrested two or more times, 1.23 times more likely to have been in prison, and 1.49 times more likely to have been on probation than similar non-suspended youth (Rosenbaum 2020).

Early suspension and justice system involvement

Limited research has examined justice outcomes for students suspended from primary school, perhaps due to the bulk of suspensions occurring during secondary school (Graham et al. 2023; Graham et al. 2024; Losen & Martinez 2013). Nonetheless, significant numbers of primary students are affected. Cross-sectional data on all students enrolled in NSW public schools during 2021 indicated that primary students accounted for 24.4 percent (*n*=10,515) of students receiving a short suspension (4 days or less), and 14.5 percent (*n*=2,115) of students receiving a long suspension (up to 20 days; NSW Department of Education 2023).

Longitudinal data following individual students' experiences of suspension during primary school are limited. Previous research from the NSW Child Development Study (Laurens et al. 2021) conducted using a sample of almost 52,000 NSW public primary school children followed over the four-year period from 2012 through 2015 (Years 3 to 6) reported 5.3 percent of children received at least one suspension. From the Fragile Families and Child Wellbeing Study of almost 5,000 urban elementary school children in the United States (Jacobsen, Pace & Ramirez 2019), 11 percent of children had been suspended or expelled by nine years of age (approximately equivalent to Year 4 in Australian schools). At this early stage of development, children are being socialised to school norms and are less likely than adolescents to engage in serious misbehaviour (Jacobsen, Pace & Ramirez 2019), representing a period ripe for preventative intervention. However, children of this age are also vulnerable to the adverse effects of suspension, particularly in relation to academic development, as the first six years of school are when the foundations of literacy, numeracy and trusting relationships with teachers are laid (Graham 2020; Graham, McCarthy et al. 2020).

A few international studies document negative justice outcomes of suspension from primary school. A retrospective longitudinal study of primary school children followed until the end of secondary school in England found that almost a third (30.4%) of children excluded between Kindergarten and Year 7 had records of offending behaviour by the point of leaving school (Parsons et al. 2001). Using data on urban US elementary students from the Fragile Families and Child Wellbeing Study, Mittleman (2018) compared later arrest rates for suspended and non-suspended children aged nine years who were matched on a variety of risk factors for suspension (family background and home environment, child behaviour and temperament, and school and neighbourhood contexts) and on factors linking suspension and arrest (problematic behaviour, school disengagement, and additional exclusionary discipline). By the age of 15 years, 19 percent of suspended children had been arrested—double the rate of their matched non-suspended peers (Mittleman 2018).

Most prior studies have operationalised suspensions as a binary variable only (suspended vs not suspended) without considering the timing of suspension or the potentially cumulative effects of multiple suspensions (Mowen, Brent & Boman 2020; Novak & Fagan 2022). Limited evidence from the United States has indicated that previous disciplinary infractions and longer periods of suspension may heighten the likelihood of subsequent exclusions (Gopalan & Nelson 2019; Mowen, Brent & Boman 2020; Novak & Fagan 2022), and that children suspended early (by age 9 years) were likely to experience repeated suspensions, which accounted for over half of the association between early suspension and arrest (Mittleman 2018). Given the increasing number of suspensions being issued during primary school in Australia, and the potential for early suspension to foreshadow poor outcomes in the future, there is a need for local research that focuses on these formative years (Graham 2020; NSW Ombudsman 2017; Parsons et al. 2001). This research needs to determine not only whether the strength of associations between early (primary school) exclusionary discipline and police contact varies according to the nature of the suspension (age at first suspension, frequency of suspension, length of suspension and reason for suspension), but also whether associations vary according to the type of police contact (as a person of interest, victim, or witness of crime).

Suspension and early police contact

Though extensive research documents the association between exclusionary school discipline and formal criminal justice system contact (arrest, conviction, incarceration), substantially less work has detailed the proximate processes through which early suspension may propel children into justice system involvement. The focus of most prior research has been on adult arrests and incarceration, overlooking contact with the justice system that does not result in criminal sanctioning. One of the few studies exploring the relationship of disciplinary school exclusion with police interactions during adolescence revealed a positive relationship between disciplinary exclusion and risk of encountering police stops at a younger age, undergoing multiple stops, and experiencing intrusiveness from officers during the stops (Jackson et al. 2022).

As in the United States (Brame at al. 2012), significant numbers of Australian children experience early contact with police (Whitten et al. 2020). Within the large population-representative sample of children residing in New South Wales (from the NSW Child Development Study; Whitten et al. 2020), almost one in six children (15.6%) were in contact with the police by 13 years of age (either as a person of interest, victim or witness of crime). Such rates are important signals for preventative intervention, as contact with police at an early age increases the risk of further contacts with the criminal justice system (Piquero, Brame & Lynam 2004). Prior research in New South Wales has indicated that contact with the criminal justice system before 14 years of age more than doubled the average number of court contacts by age 33 years (Weatherburn & Ramsey 2018). Similar patterns were apparent in a Queensland birth cohort (born 1983–1984), in which an earlier age of first police caution related to a greater likelihood of subsequent police caution or court appearance by age 17 years (Dennison, Stewart & Hurren 2006). The substantial numbers of Australian children who experience suspension from primary school and/or early contact with police highlights the pressing need for local research to inform policy responses within and between the education and justice systems to mitigate these adverse experiences.

To gain new insights into the paths through which suspended children may enter the criminal justice system, broader research is needed that explores additional forms of initial justice system involvement, such as witness and/or victim contacts with the police (Jackson et al. 2019; Jackson et al. 2022). Children who witness or fall victim to crime are more likely to participate in future criminal activities (Fox et al. 2015; Jennings, Piquero & Reingle 2012). In fact, considerable overlap has been noted among the reasons for early contact with police among NSW children aged up to 13 years, with each type of police contact strongly related to the other types of police contact. For example, compared to children without any previous police contact, those who had been in contact with police as victims were approximately eight and a half times more likely to be in contact with the police as persons of interest, and nearly seven times more likely to be a witness of crime (Whitten et al. 2020). Contact with police as a witness was associated with a ninefold increase in the odds of police contact as a person of interest (Whitten et al. 2020).

Among limited research examining victimisation, one US study identified a relationship between suspensions in secondary school and self-reported criminal victimisation in adulthood, after accounting for various individual, familial, school-related and behavioural variables, and academic performance and eventual achievement (Wolf & Kupchik 2017). Children who were suspended had a 20 percent increase in the odds of being victimised later in life compared to students who were never suspended (Wolf & Kupchik 2017). Gaining a comprehensive understanding of the links between early exclusions and different forms of police interactions (as a person of interest, witness or victim) may aid in crafting a suite of preventative school-based initiatives to disrupt the school-to-prison pipeline.

School-based initiatives to reduce exclusionary school discipline

School-wide positive behaviour interventions and support (SWPBIS) is among the most widely researched of student wellbeing initiatives to reduce exclusionary discipline (Algozzine et al. 2012; Bradshaw, Waasdorp & Leaf 2012; Flannery et al. 2014; Gage, Whitford & Katsiyannis 2018; Muscott, Mann & LeBrun 2008; Nelson, Martella & Marchand-Martella 2002). SWPBIS is designed to use positive behaviour supports in a tiered system to decrease exclusionary school discipline and enhance student outcomes. The first (lowest) tier focuses on universal practices and support delivered to all students, the second tier focuses on targeted intervention and supplemental support for groups of students at risk of problem behaviour, and the third tier delivers intensive intervention and support to individuals engaging in problem behaviour (Bradley, Danielson & Doolittle 2007).

Gage, Whitford and Katsiyannis's (2018) review of SWPBIS programs conducted in 90 elementary and high schools reported a significant and substantial reduction in school suspensions. Similarly, a quasi-experimental evaluation of SWPBIS conducted in seven elementary schools relative to 28 comparison schools in the same US district found significant decreases in both suspensions and office disciplinary referrals, contrasting with increases in these incidents in the comparison schools (Nelson, Martella & Marchand-Martella 2002). Nonetheless, not all trials found reductions in exclusionary school discipline despite improved student behaviour, highlighting that exclusionary discipline reflects discretionary adjudication of student behavioural infractions. For example, in a randomised control trial conducted in 37 elementary schools, Bradshaw, Waasdorp and Leaf (2012) found significant improvements in students' behaviour and social-emotional wellbeing, but no difference in suspension rates between SWPBIS and comparison schools.

There is evidence of other school-based interventions leading to reductions in disciplinary exclusion. In a systematic review of 37 randomised control trials of school-based interventions (Valdebenito et al. 2018), four intervention types significantly decreased rates of disciplinary exclusion: enhancement of academic skills, counselling, mentoring/monitoring, and skills training for teachers. However, these interventions were more successful at decreasing expulsion and in-school suspension than other forms of exclusion (including out-of-school suspension), and the significant drop in exclusions did not persist after approximately the first six months following the school-based intervention (Valdebenito et al. 2018).

The quality with which the interventions are implemented seems critical. A recent meta-analysis of 14 randomised control trials of school interventions to reduce suspension or arrest demonstrated significant reductions in rates of suspension only for interventions that experienced few implementation problems, not for interventions with explicitly reported implementation problems (Mielke & Farrington 2021). Further, high school interventions significantly reduced suspensions, while elementary school interventions did not, suggesting that different programs may be required at different ages. School-based interventions were linked to only small and non-significant reductions in arrest (Mielke & Farrington 2021). Another systematic review concluded that, though there is evidence and potential for school-based programs to reduce exclusions, these programs tend to have limited success in eliminating sociodemographic disparities in disciplinary outcomes (Welsh & Little 2018). This highlights the need to implement student support initiatives alongside systemic reform to constrain the use of exclusionary school discipline.

Randomised controlled trials are needed to build a robust evidence base for the local Australian context regarding effective school-based interventions to reduce school exclusion. Such data were not available for use in the present report. Instead, as part of a series of investigations to characterise the association between primary school suspension and early police contact, this report examined whether the extent to which a school has implemented policies and practices to bolster student wellbeing moderates the association of suspension with police contact. In other words, this research asked whether children who were suspended from school were more or less likely to have contact with police (relative to non-suspended children) according to a school's level of implementation of student wellbeing policy and practice.

The current study

With rising rates of suspension during primary school potentially contributing to earlier contact with police, determining whether and how suspension from primary school is associated with early police contact (up to the age of approximately 14 years) is critical to informing policy reform in Australian education and justice systems. Determining how this association may vary according to the characteristics of suspension and/or type of police contact, and whether the association is affected by the implementation of school-based practices to bolster student wellbeing (particularly social-emotional wellbeing), can provide important information to guide this policy reform.

In a series of four investigations that aim to provide local evidence regarding these questions, the current study used linked administrative records from education, justice, child protection and health agencies, along with data on school practices to support student wellbeing. These data were available in a large population-based cohort of children attending school in New South Wales. The study is an associational investigation that cannot establish causal relationships. The specific aim addressed in each of the four investigations comprising this report is outlined below.

Research aims

- Aim 1: To determine the association of out-of-school suspension from primary school with early police contact;
- Aim 2: To determine whether early contact with police varied according to the nature of the suspension, including age at first suspension, total number of suspensions, total length of suspension, and the reason for suspension;
- Aim 3: To examine whether the strength of association between suspension and police contact varied according to type of contact with police—as a person of interest, a victim or a witness; and
- Aim 4: To identify whether the level of school-based implementation of policies and practices to promote student wellbeing moderated the effect of primary school suspension on early police contact.

Methodology

Record linkage procedures

Data for this report were drawn from the second wave of inter-agency record linkage conducted for the New South Wales Child Development Study (NSW-CDS; https://www.unsw.edu.au/research/nsw-cds; Green et al. 2018a). The NSW-CDS follows the development of a large population cohort of children (*n*=91,635) by bringing together information on children and their parents held by health, education, justice, welfare and other government agencies. These administrative records have been linked with data on the children gathered from two cross-sectional surveys conducted in early and middle childhood respectively. The first was a teacher-reported survey of children's development—the 2009 Australian Early Development Census (AEDC; Brinkman et al. 2014)—that was conducted during the children's first year of full-time school (Kindergarten; age approximately 5–6 years). The second was a self-reported survey of mental health and wellbeing—the 2015 Middle Childhood Survey (Laurens et al. 2017)—that was conducted during the children's final year of primary school (Year 6; age 11–12 years). In conjunction with the Middle Childhood Survey, school-level data were obtained via a survey of primary school principals (school leaders) in 2015—the Survey of School Promotion of Emotional and Social Health (SSPESH; Dix et al. 2019; Laurens et al. 2022). The SSPESH gathered information on the implementation of school-based policies and practices to promote student wellbeing (social, emotional and behavioural) for children in the NSW-CDS cohort.

An independent agency, the Centre for Health Record Linkage (https://www.cherel.org.au/), linked administrative and survey records using ChoiceMaker software and probabilistic record linkage methods. Children's and parents' records were linked using names, dates of birth, sex and residential postcode/suburb. False positive linkages (matches) were low, with a rate of 0.5 percent (5/1,000 persons) obtained for both the child and parent data linkages (Green et al. 2018a). To ensure privacy and confidentiality, linkage processes separated personal identifiers from research content. The research team received only de-identified data.

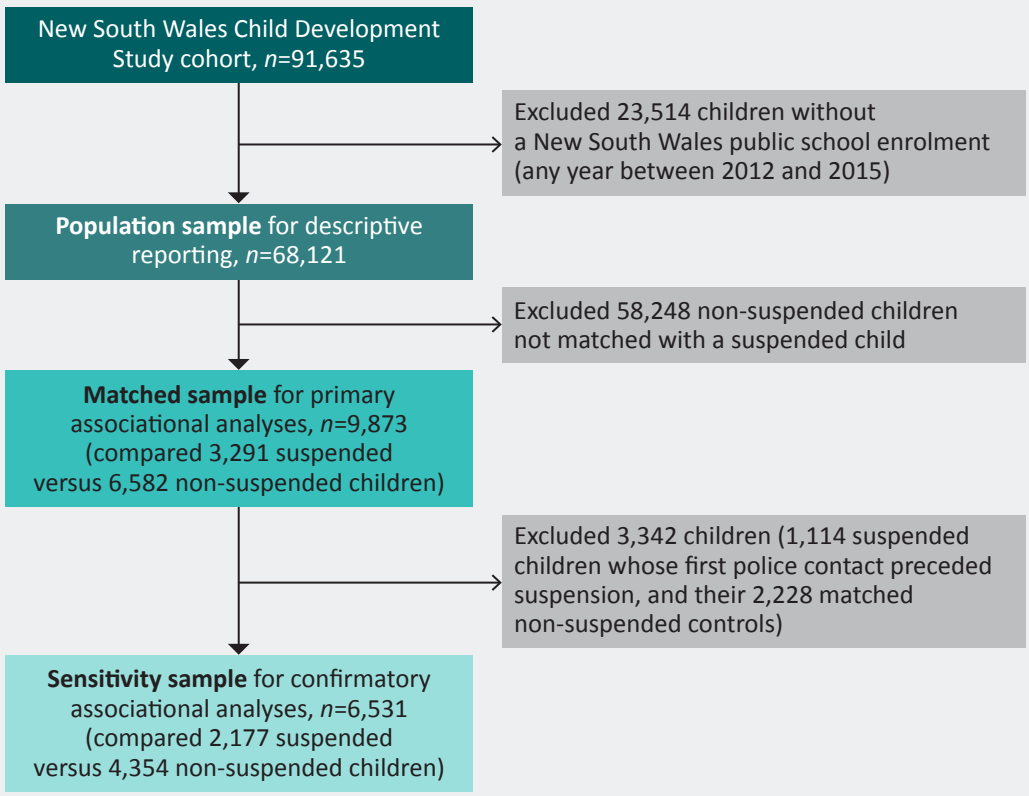
Ethical approvals

The NSW Population and Health Services Research Ethics Committee (PHSREC AU/1/1AFE112) granted approval for the linkage under the waiver of consent conditions specified in the Australian National Health and Medical Research Council's *National Statement of Ethical Conduct in Human Research* (NHMRC 2018), with Aboriginal Health and Medical Research Council of NSW approval (1241/16) also obtained. Data custodian approvals were granted by the relevant government departments. To prevent coincidental reidentification of individuals in the NSW-CDS cohort, these approvals prohibit the reporting of data in instances where the cell size is smaller than 15.

Participants

As summarised in Figure 1, participants in this study were the subset of all children from the NSW-CDS (Wave 2 Linkage) cohort who were enrolled at a NSW government primary school in any calendar year between 2012 and 2015 (Years 3to 6), for whom school enrolment records were available (*n*=68,121, 74.3%). Records were unavailable for the 23,514 children of the NSW-CDS cohort who attended only non-government (Catholic or independent) primary schools during these years. This population sample of all 68,121 public school students was used to characterise the prevalence and pattern of suspension, police contact and covariates. A series of selected samples were then derived from this population sample to determine associations between suspension and police contact according to the study aims, as detailed in the following sections.

Figure 1: Flow diagram summarising the derivation of the population sample and the matched and sensitivity samples



Samples for analyses of Aims 1 and 2

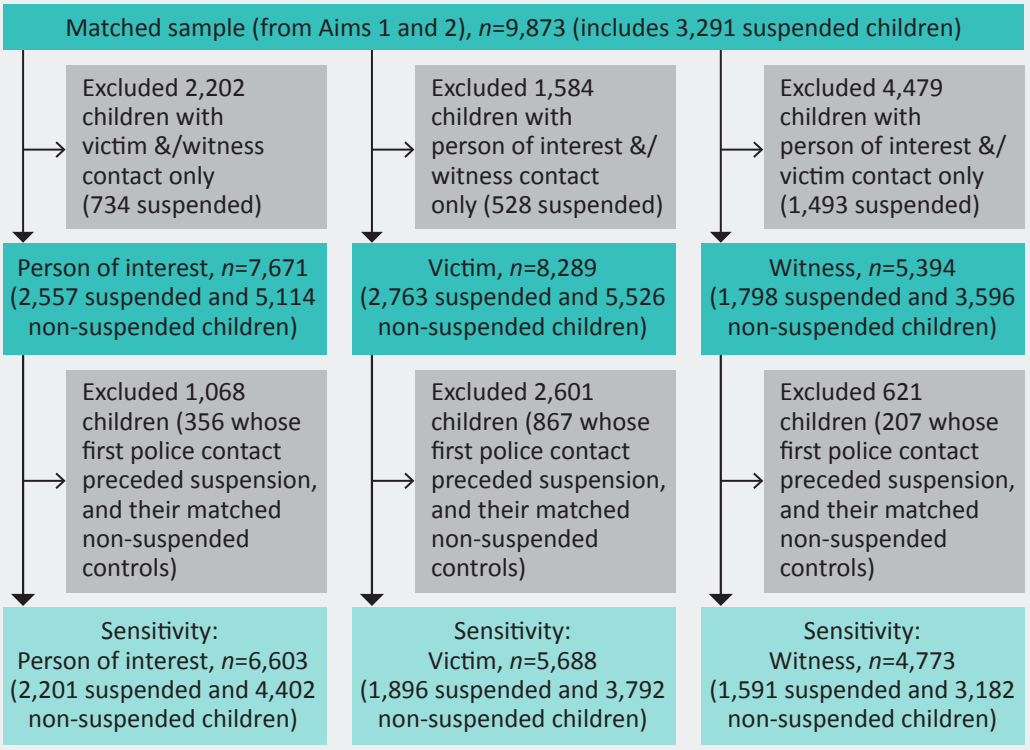
Associational analyses for Aims 1 and 2 used a matched sample (*n*=9,873) that comprised all students in the population sample who had received a suspension (*n*=3,291) and a group of non-suspended comparison students with similar demographic characteristics to the suspended students (*n*=6,582). The sample was derived by matching each suspended student according to sex (male, female) and Aboriginal and Torres Strait Islander background (yes, no) with two students who did not receive a suspension. Analyses conducted in this sample provide the core findings of this report.

These associations were subsequently confirmed in a sensitivity sample (*n*=6,531) that constrained the temporal order of the exposure (suspension) and outcome (police contact) among suspended students to more robustly estimate a causal effect of suspension on police contact. These analyses excluded 1,114 students who received their first suspension subsequent to a first contact with police (for any reason), along with their two matched non-suspended student counterparts. The sensitivity sample thus comprised 2,177 suspended children and 4,354 matched non-suspended children. Details of these confirmatory analyses are presented in the *Appendix*.

Samples for analyses of Aim 3

Analyses for Aim 3 were conducted on three subsamples of students with different types of police contact (person of interest, victim and witness) to determine the association of suspension with each type of contact. Accordingly, the matched and sensitivity samples were adapted to exclude children who had police contact only of another type (Figure 2). For example, analyses examining the association of suspension with person-of-interest contacts excluded 2,202 children who had police contact only as a victim or witness (734 suspended children and their 1,468 matched non-suspended counterparts), yielding a subsample of 7,671 children. Children with no contact with police constituted the common reference group within each contact type subsample. As before, sensitivity analyses for Aim 3 were conducted in a subsample that excluded children whose first contact with police preceded their first suspension, along with their matched non-suspended counterparts.

Figure 2: Flow diagram summarising the further refinement of the matched and sensitivity samples for the analyses of person of interest, victim and witness contacts conducted for Aim 3



Sample for analyses of Aim 4

Analyses for Aim 4 determined whether the association of primary school suspension and early police contact varied according to a school's implementation of policies and practices to promote student wellbeing. These were conducted in an intervention sample that included all children for whom associated SSPESH school-level data were reported by their school principal. Figure 3 details derivation of this intervention sample; this excluded 71,498 children from the NSW-CDS cohort for whom no SSPESH data were available, and a further 5,750 children with no NSW government school enrolment between 2012 and 2015 or an enrolment at a government school with fewer than five students. The resulting intervention sample comprised 14,387 students who had complete data on suspensions, police contact, covariates and the SSPESH (reported by 472 primary school principals).

Figure 3: Flow diagram summarising the derivation of the intervention sample for Aim 4 analyses

Note: NSW=New South Wales; SSPESH=Survey of School Promotion of Emotional and Social Health

Measures

Out-of-school suspensions (exposure)

Suspension data spanning Years 3–6 were obtained from the NSW Department of Education Suspension and Expulsion Records (2012–2015). Data on any suspension occurring prior to 2012 (corresponding to the three years between Kindergarten and Year 2) were not available in linkable format. Under the NSW Department of Education policy in operation during the study period (Suspension and Expulsion of School Students—Procedures 2011, Student Discipline in Government Schools [PD 2006 0316]), out-of-school suspensions were issued to students as 'short suspensions' of one to four days for either of two reasons, and as 'long suspensions' of one to 20 days for any of six reasons. Table 1 describes behaviours associated with each reason. Expulsions (permanent exclusions) were not examined due to the small number of children in our sample who were expelled during primary school (<15).

Analyses for Aims 1, 3 and 4 used a dichotomous variable that coded whether the student had received any suspension (ie at least one suspension for any reason) versus no suspension (reference group).

Analyses for Aim 2 further differentiated suspensions into levels (dosage) of suspension according to the timing, total number, total days, and most serious reason for suspension, as described in Table 2. All analyses included a common reference group of children who received no suspension.

Table 1: Reasons for suspensions issued to students enrolled in NSW government schools during the period of interest (2012–2015)

Reason	Description and examples
Short suspensions (1–4 days)	
Continued disobedience	Including, but not limited to, breaches of the school discipline code such as: refusal to obey staff instructions, defiance, disrupting other students, use of alcohol or repeated use of tobacco.
Aggressive behaviour	Including, but not limited to, hostile behaviour directed towards students, members of staff or other persons, including: damaging the property of the school or students; bullying (including cyberbullying); verbal abuse and abuse transmitted electronically such as by email, Facebook, Twitter, SMS text messages, or other electronic means.
Long suspension (1–20 days)	
Physical violence	Resulting in injury, or which seriously interferes with the safety or wellbeing of other students and staff (including sexual or indecent assault).
Persistent or serious misbehaviour	Including, but not limited to: repeated refusal to follow the school discipline code; threatening to use a weapon in a way that might seriously interfere with the safety and wellbeing of another person; making credible threats against students or staff; behaviour that deliberately and persistently interferes with the rights of other students to learn or teachers to teach including bullying, harassment and victimisation.
Use or possession of a prohibited weapon, firearm or knife	Use or possession of a weapon which is listed in Schedule 1 of the Weapons Prohibition Act 1998 (NSW), including laser pointers, or similar articles with a power output of more than one milliwatt, not including harmless children's toys such as plastic imitation guns that are clearly intended to be toys; use of or possession of a knife without reasonable excuse as defined by the Summary Offences Act 1988 (NSW); use or possession of a firearm of any type including live ammunition and replica firearms.
Use of an implement as a weapon	Use of an implement as a weapon to assault or injure another person (including use of an offensive implement, which is any implement made or adapted to cause injury to another person).
Possession, supply or use of a suspected illegal substance	Does not include alcohol or tobacco, but does include supplying other students with illegal drugs or restricted substances such as prescription drugs.
Serious criminal behaviour related to the school	Includes malicious damage to property (school or community), or against the property of a fellow student or staff member on or outside of the school premises. If the incident occurred outside the school or outside school hours, there must be a clear and close relationship between the incident and the school.

Source: Adapted from the NSW Department of Education's *Suspension and Expulsion of School Students—Procedures 2011, Student Discipline in Government Schools* [PD 2006 0316]

Police contact (outcome)

Data on children's contact with police were obtained from the NSW Police Force Computerised Operational Policing System for the years 2000 to 2018. This data collection provided records of all criminal and non-criminal events and incidents reported to or detected by the NSW Police Force, and specified the type of police contact—as a person of interest, witness or victim. A person of interest was defined as a person who was of significance to police during their investigation of an event or incident but who had not necessarily been formally charged or arrested for an offence; a victim was a person who suffered harm arising directly from an act committed (or alleged to have been committed) by another person during the course of an offence; and a witness was a person who saw, heard or experienced something related to an offence. Data were available up until 22 May 2018, when most students had commenced Year 9 at school and the mean age of the sample was 14.6 years (*SD*=0.4; 90.0% were aged 14.0–15.2 years, with outliers to 12.7 and 17.1 years).

Analyses for Aims 1, 2, and 4 used a dichotomous variable that coded whether the student had contact with police for any reason (as a person of interest, victim and/or witness, including either criminal or non-criminal incidents) versus no contact (reference group).

Analyses for Aim 3 differentiated police contact types into three dichotomous variables, each of which had a common reference group of children who had no contact with police:

- contact as a person of interest versus no police contact for any reason (reference group);
- contact as a victim versus no police contact for any reason (reference group);
- contact as a witness versus no police contact for any reason (reference group).

Children who had more than one type of contact with police were represented in each relevant variable.

Table 2: Levels of suspension characteristics examined in association with police contact (Aim 2)

Suspension characteristic	Levels
Timing of first suspension during primary school	Three levels: • no suspension (reference group); • first suspension during Years 3 or 4; and • first suspension during Years 5 or 6.
Total number of suspensions during primary school	Six levels: • no suspension (reference group); • a single suspension only; • 2 suspensions; • 3–4 suspensions; • 5–9 suspensions; and • 10 or more suspensions.
Total days suspended during primary school	Five levels: • no suspension (reference group); • 1–2 days; • 3–4 days; • 5–10 days; • 11–20 days; • 21–40 days; • 41 days or more.
Reason for suspension	Six levels: Mutually exclusive levels constructed to represent a crude 'hierarchy' that considered both the seriousness (long > short suspensions) and prevalence of suspension reasons. To support analyses of less prevalent reasons, children with suspensions for multiple reasons were preferentially assigned to the less prevalent but more serious and/or persistent behaviour, in the following order: • no suspension (reference group); • aggressive behaviour (short suspension); • continued disobedience (short suspension); • physical violence (long suspension); • persistent or serious misbehaviour (long suspension); and • the combination of any of the remaining four reasons (all associated with long suspensions): possession/use of a prohibited weapon; use of an implement as a weapon; possession/supply/use of a suspected illegal or restricted substance; and/or serious criminal behaviour related to the school. Thus, children represented in the aggressive behaviour category (first level) had all received suspensions for this reason only, whereas children represented in the final level (any of the four reasons combined) might have additionally received a suspension for any other reason.

Covariates

Six variables associated with both out-of-school suspensions (Laurens et al. 2021) and police contact (Whitten et al. 2020) were considered potential confounders of the relationship and included as covariates in analyses. The dichotomous coding of these six variables is described in Table 3.

Table 3: Covariates used in analyses of association between suspension and police contact

Covariate	Levels
Sex	As assigned at birth, derived from all available NSW-CDS records (Green et al. 2018a): • female (reference group); • male.
Aboriginal and/or Torres Strait Islander background	Derived from all available NSW-CDS records (Green et al. 2018a): • not of Aboriginal or Torres Strait Islander background (reference group); • Aboriginal and/or Torres Strait Islander background.
Area socio-economic disadvantage	Derived from the Australian Bureau of Statistics' Socio-Economic Index for Areas Index of Relative Socio-Economic Disadvantage, which indexes disadvantage nationally by postcode, based on the average employment status and income in that area (Pink 2013). This score was obtained for each child's residential postcode during their first year of full-time school (as recorded in the 2009 AEDC) and recoded from national quintiles: • less disadvantaged areas (quintiles 2 to 5; reference group); • most disadvantaged areas (quintile 1).
Child maltreatment	Derived from records in the NSW Department of Communities and Justice Case Management System – Key Information Directory System for years 2001–2016. Reports meeting the 'risk of significant harm' (ROSH) threshold were used as an indicator of child maltreatment—including children with at least one placement in out-of-home care, children with a substantiated ROSH report that indicated actual harm or risk of harm verified by child protection caseworkers, and children with an unsubstantiated ROSH report that met the threshold for further investigation but for whom the risk of harm or actual maltreatment could not be sufficiently determined or the report was not prioritised for investigation owing to resource constraints: • no report or a report that did not meet the ROSH threshold (reference group); • a report that met the ROSH threshold and/or a placement into care.
Emotional and/or behavioural problem	Derived from two questions in the 2009 AEDC assessment (Brinkman et al. 2014) completed by teachers of children in their first year of full-time school (child age: approximately 5–6 years). Teachers' ratings of problems were based on medical diagnosis or information provided to the teacher by a parent, guardian or Indigenous cultural consultant: • no emotional or behavioural problem (reference group); • any emotional and/or behavioural problem.

Table 3: Covariates used in analyses of association between suspension and police contact (cont.)

Covariate	Levels
Early developmental vulnerability related to behaviour	Derived from the 2009 AEDC assessment, in which children falling below the score equivalent to the 10th percentile in the 2009 AEDC data collection were categorised as 'developmentally vulnerable', children falling between the score equivalent to the 10th and 25th percentile in the 2009 AEDC data collection were categorised as 'developmentally at risk', and all other children were categorised as 'developmentally on track' on a particular domain or subdomain. Informed by prior analyses of AEDC data (Green et al. 2018b), a composite indicator of early developmental vulnerability relating to behaviour was created for this study according to developmental vulnerability on any one or more of three AEDC subdomains – Responsibility and respect (follows rules and instructions; respects adults, other children, property; demonstrates self-control; accepts responsibility for actions; tolerates others' mistakes), Aggressive behaviour (disobedient; kicks, bites, hits, fights, bullies or is mean to others; steals; has tantrums) and Hyperactive and inattentive behaviour (distractible; inattentive; restless; impulsive; difficulty settling to task; difficulty awaiting turn): • developmentally on track or at risk on all three subdomains (reference group); • developmentally vulnerable on any of the three subdomains.

Whole-school promotion of student wellbeing

The SSPESH (Dix et al. 2019; Laurens et al. 2022) was completed in 2015 by the principals of 598 NSW government and non-government primary schools which were demographically representative of all NSW primary schools. Part of the survey comprised a 13-item index that provided a psychometrically robust implementation score (Dix et al. 2019). This score differentiated schools into three levels according to their degree of implementation of policies and practices to support student wellbeing. School leaders rated the extent to which they had implemented policy and practice to create a positive school community (3 items), teach students social-emotional learning (3 items), engage the parent community (3 items), and support students experiencing mental health difficulties (4 items). Responses were recorded using a four-choice response format: not yet in place (scored 0), introducing (1), taking hold (2) or completely in place (3). The 13 items were summed to a total implementation score (range: 0–39) that was differentiated into three implementation levels: high (total score ≥33), moderate (score between 21 and 32) and low (score ≤20). Schools scoring in the high range included those in which most policies and practices were 'completely in place', schools scoring in the moderate range included those in which most policies and practices were either 'taking hold' or 'completely in place', while schools scoring in the low range included those in which many policies and practices were described as 'not yet in place' or 'introducing'. Two variables for analysis were derived, which contrasted:

- high implementing schools (total score ≥33) relative to low implementing schools (score ≤20; reference group); and
- moderate implementing schools (score between 21 and 32) relative to low implementing schools (score ≤20; reference group).

Statistical analyses

Analyses were conducted using SPSS version 28 (IBM 2021). The prevalence and pattern of suspensions, police contacts and covariates were determined in the population sample of 68,121 children.

For analyses of Aims 1, 2 and 3, logistic regressions provided bivariate (unadjusted) associations, as well as fully adjusted associations from multivariable models that included suspension simultaneously with the six covariates (representing the odds of police contact for each variable independently of the effects of the other variables). Odds ratios (ORs) were regarded as statistically significant if the 95% intervals (95% CIs) did not cross 1.00. Effect sizes were categorised as small (1.00–1.50), medium (1.51–2.50), large (2.51–4.00) and very large (>4.00) respectively (Rosenthal 1996). For conciseness, this report describes the results of the adjusted analyses. The *Appendix* to the report provides detail of all unadjusted and adjusted ORs (with 95% CIs).

Analyses of Aim 4 used multilevel logistic regression to determine whether the association between suspension and police contact varied according to the principals' reported level of school implementation of policy and practice to support student wellbeing (contrasting high vs low, and moderate vs low). All models accounted for the clustering of individual student data within schools. Further detail regarding this analytical method is provided in the *Appendix*.

Findings: Prevalence and patterns of suspension, police contact and covariates

The prevalence and patterns of primary school suspension and police contact are reported in the population sample of 68,121 NSW primary school students who had complete data available on exposures, outcomes and covariates. Prevalence of the six covariates (sex, Aboriginal and/or Torres Strait Islander background, area socio-economic disadvantage, child maltreatment, emotional and/or behavioural problems, and early developmental vulnerability related to behaviour) are reported in the population sample, and among children who received at least one suspension and children who had at least one contact with police.

Out-of-school suspensions

Prevalence of suspensions

Within the population sample, almost one in 20 children (4.8%, *n*=3,291) received an out-of-school suspension during primary school (Years 3 to 6). Almost nine in 10 of these children received at least one short suspension of up to four days (88.5%, *n*=2,911), and almost two in five received at least one long suspension of up to 20 days (38.5%, *n*=1,266).

Characteristics of suspensions

Table 4 presents the numbers of children receiving suspension according to the timing of first suspension, total number of suspensions, total days suspended, and most serious/persistent reason for suspension (where students with suspensions for multiple reasons were assigned hierarchically to the highest level only).

A majority of suspended children (>51.0%) received an early suspension (during Years 3 and 4), received multiple suspensions, and were suspended for a total of five or more days during primary school. Almost a third of suspended children received suspension for aggressive behaviour only (31.9%). One in 12 (8.2%) received a suspension for any of the four most serious behaviours meriting a suspension (possession/use of an implement/weapon or illegal/restricted substance, or criminal behaviour related to the school).

Table 4 further distinguishes these characteristics of suspension among suspended children who did and did not have contact with police, with this detail discussed later in the report as part of the presentation of findings relating to Aim 2.

Table 4: Prevalence of children in the population sample receiving suspensions, by characteristics of suspension and police contact

Suspension characteristics	Population sample (*n*=3,291)		Child with no police contact (*n*=1,233)		Child with police contact (*n*=2,058)		
	n	(%)	*n*	(%)	*n*	(%)	(row %)
Timing of first suspension							
Years 3 or 4	1,723	(52.4)	577	(46.8)	1,146	(55.7)	(66.5)
Years 5 or 6	1,568	(47.6)	656	(53.2)	912	(44.3)	(58.2)
Total number of suspensions							
1 suspension only	1,539	(46.8)	763	(61.9)	776	(37.7)	(50.4)
2 suspensions	570	(17.3)	218	(17.7)	352	(17.1)	(61.8)
3–4 suspensions	521	(15.8)	137	(11.1)	384	(18.7)	(73.7)
5–9 suspensions	434	(13.2)	93	(7.5)	341	(16.6)	(78.6)
10 or more[a]	227	(6.9)	22	(1.8)	205	(10.0)	(90.3)
Total days suspended							
1–2 days	797	(24.2)	417	(33.8)	380	(18.5)	(47.7)
3–4 days	816	(24.8)	372	(30.2)	444	(21.6)	(54.4)
5–10 days	700	(21.3)	249	(20.2)	451	(21.9)	(64.4)
11–20 days	407	(12.4)	109	(8.8)	298	(14.5)	(73.2)
21–40 days	313	(9.5)	58	(4.7)	255	(12.4)	(81.5)
41 days or more[b]	258	(7.8)	28	(2.3)	230	(11.2)	(89.1)
Reason for suspension hierarchy							
Aggressive behaviour (short suspension)	1,049	(31.9)	517	(41.9)	532	(25.9)	(50.7)
Continued disobedience (short suspension)	976	(29.7)	341	(27.7)	635	(30.9)	(65.1)
Physical violence (long suspension)	556	(16.9)	203	(16.5)	353	(17.2)	(63.5)
Persistent or serious misbehaviour (long suspension)	441	(13.4)	103	(8.4)	338	(16.4)	(76.6)
Possession/use of a prohibited weapon; and/or use of an implement as a weapon; and/or possession/supply/use of a suspected illegal or restricted substance; and/or serious criminal behaviour related to the school (long suspension)[c]	269	(8.2)	69	(5.6)	200	(9.7)	(74.3)

a: The maximum number of suspensions received by any single child during school Years 3 to 6 was 34

b: The maximum total number of days suspended for any single child during this period was 189

c: Long suspensions relating to these four separate reasons were combined for analysis into a single category, given their relatively low prevalence during primary school

Note: All percentages are column percentages (%), except where indicated as row percentages (row %)

Police contact

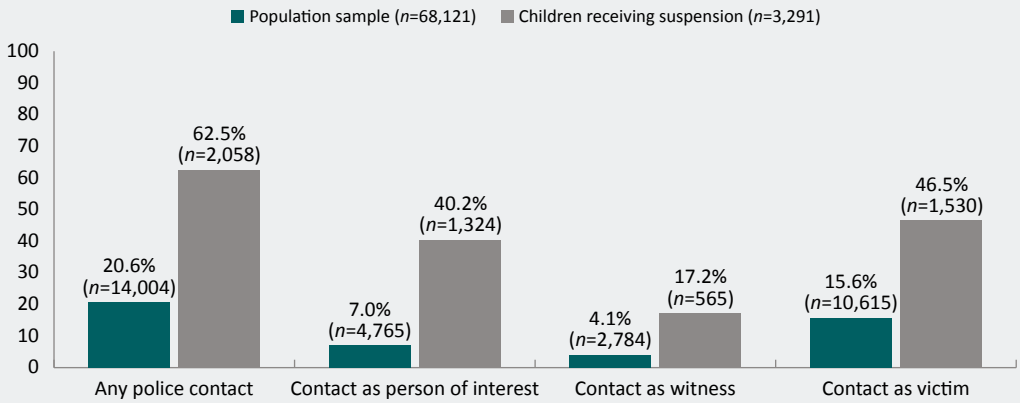
Prevalence of any police contact

One in five children (20.6%, *n*=14,004) in the population sample of 68,121 children had contact with police for any reason up to the age of approximately 14 years (on average). Among the 3,291 children who had received a suspension, almost two-thirds (62.5%) had police contact (vs 18.4% among non-suspended children, *n*=11,946).

Police contact as a person of interest, victim or witness

Figure 4 differentiates the prevalence of police contact according to type for the population, and among the subset of children who received suspension. In the population and among suspended children, contact as a victim was the most common type, and as a witness the least common type. Rates of each type of contact were highest among suspended children: two in five had a contact as a person of interest (vs one in 14 in the total population), more than one in six as a witness (vs one in 25 in the population), and nearly half as a victim (vs one in six in the population).

Figure 4: Prevalence of police contact by type and experience of suspension

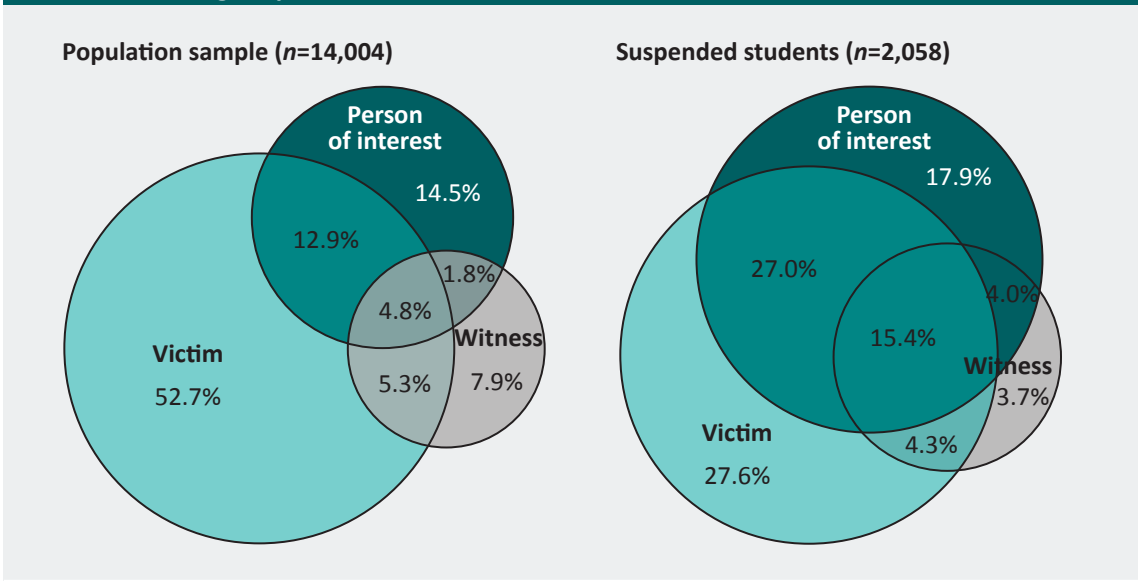


Patterns of police contact

The overlap between contact types in the population and within the subset of children who received a suspension is illustrated in Figure 5. Of the 14,004 children in the population with a police contact, approximately one-quarter (24.9%, *n*=3,482) had contacts of multiple types, with almost one in 20 having all three types of contact (as a person of interest, victim and witness). Most children (52.7%) in the population who had contact with police did so solely as a victim.

Among the 2,058 suspended children who had a police contact, half (50.7%, *n*=1,044) had contacts of multiple types, with more than one in seven having contacts of all three types. Almost two-thirds (64.3%) recorded a person-of-interest contact. Though contact with police solely as a victim was common among suspended children (27.6%), a larger proportion of suspended children had contact as a victim in conjunction with contact of at least one other type (46.7%).

Figure 5: Overlap between police contact types in the population sample and among children receiving suspension



Timing of contact

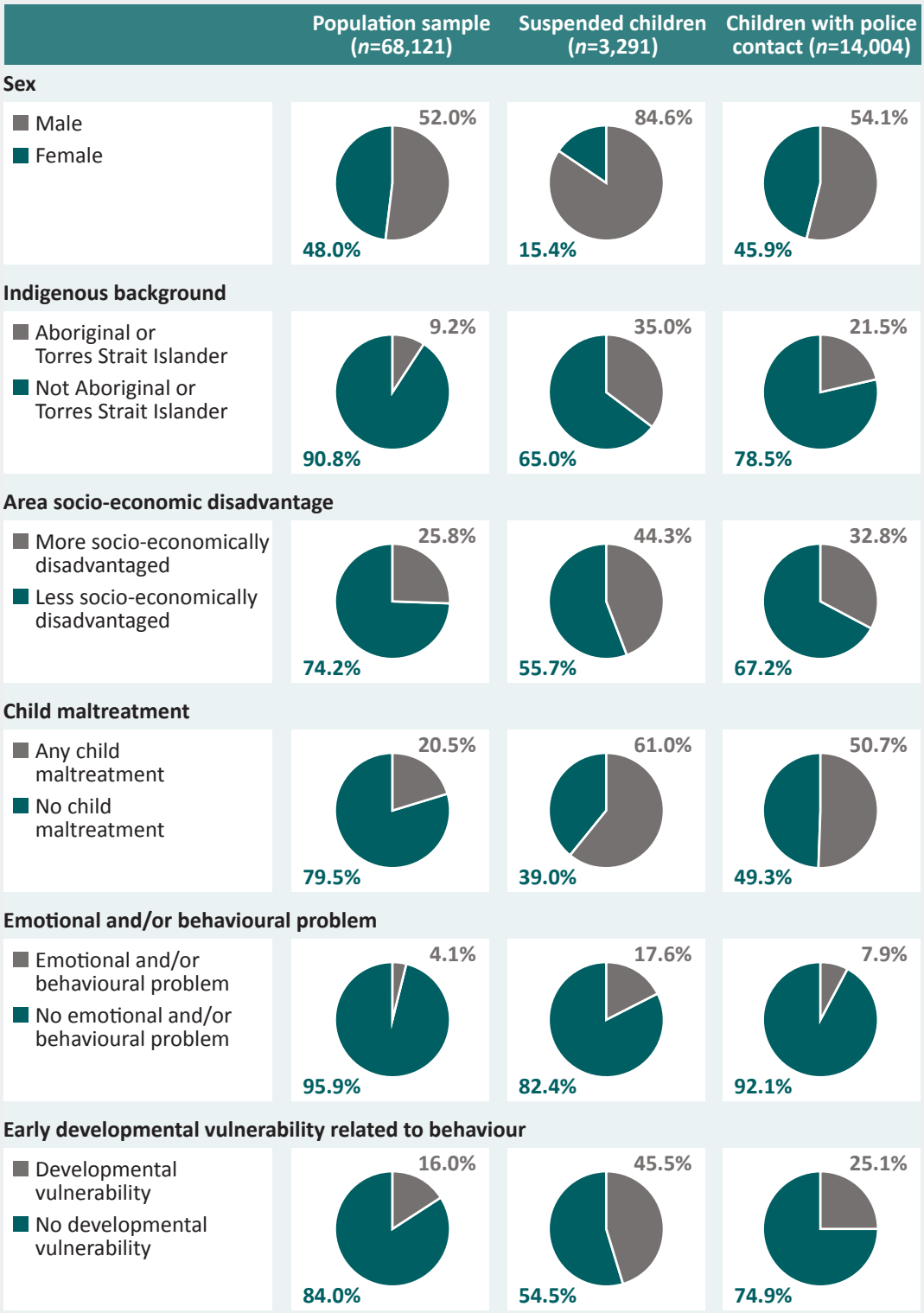
Among children who received a suspension during primary school, just over half of those with a police contact (54.1%, *n*=1,114) had their first contact with police prior to receiving their first suspension. This was primarily attributable to a large number of suspended children who had police contact as a victim, among whom 56.7 percent (*n*=867 of 1,530) had a police contact that preceded their first suspension from school. In contrast, most children who had person-of-interest contact had a first contact with police subsequent to their first suspension (73.1%, *n*=968 of 1,324 children), as did most children who had contact as a witness (63.4%, *n*=358 of 565 children). As previously described in the *Methodology*, all analyses were repeated in a sensitivity sample that excluded data from suspended children whose first police contact preceded their first suspension (and their matched non-suspended counterparts), with detail of these associations provided in the *Appendix*.

Covariates

Figure 6 summarises the prevalence of the six covariates within the population sample (*n*=68,121), the subset of children who received a suspension (*n*=3,291), and the subset of children who had any police contact (*n*=14,004). Rates were published previously for the first three covariates in the entire NSW-CDS cohort of 91,635 children (51.8% boys, 7.0% of Aboriginal and/or Torres Strait Islander background, and 24.7% from socio-economically deprived areas; Green et al. 2018a), demonstrating the representativeness of the public school sample available for this study.

Notable in Figure 6 (see also Laurens et al. 2026) is the over-representation among children who received a suspension, relative to the population sample, of children who are male, of Aboriginal and/or Torres Strait Islander background, from socio-economically deprived areas, who have experienced child maltreatment, who had an emotional/behavioural problem recorded on the AEDC at school entry, and who had developmental vulnerability on the AEDC Responsibility and respect, Aggressive behaviour, and/or Hyperactivity and inattentive behaviour subdomains. Over-representation of these groups is similarly apparent among children with any police contact.

Figure 6: Prevalence of covariates within the population sample, among children with suspensions and among children with police contact



Findings: Statistical tests of association

Aim 1: Association of out-of-school suspension with any police contact

The first aim of this report was to determine the association between out-of-school suspension from primary school and early police contact (for any reason; up to the age of approximately 14 years). The adjusted odds of police contact, accounting for covariates, indicated an almost fourfold increase in the odds of police contact among suspended children relative to matched non-suspended students (OR=3.71; 95% CI [3.34, 4.12]). Appendix Table A1 fully details the unadjusted and adjusted odds of police contact associated with any suspension and each of the six covariates.

Aim 2: Association of suspension characteristics with police contact

The second aim of the study was to determine whether the odds of early contact with police varied according to the nature of the suspension, including with respect to age at first suspension, total number of suspensions, total length of suspension (in days), and the most serious reason for suspension. As detailed in the subsequent sections, the odds of contact with police (for any reason) were most pronounced when first suspension happened earlier in primary school, when suspensions were greater in number, with a greater number of total days suspended, and for more serious infractions. In each section, the adjusted odds of police contact accounting for covariates are reported, with unadjusted odds detailed in Appendix Tables A2 to A5.

Timing of suspension

Two-thirds of children (66.5%) in the population who received their first suspension from primary school during Years 3 and 4 had contact with police for any reason (Table 4; row %), as did almost three in five children (58.2%) who received their first suspension during Years 5 and 6. Fewer than one in five children who did not receive suspension had any police contact (18.4%).

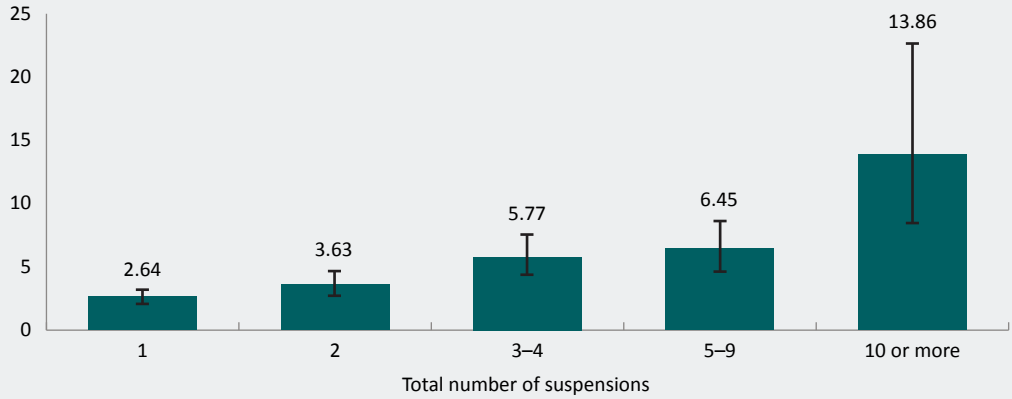
Full detail of ORs and 95% CIs for unadjusted and adjusted associations is available in Appendix Table A2. The adjusted odds of any police contact among children who received their first suspension in Years 3 and 4 were increased fourfold relative to those of non-suspended children (OR=4.03, 95% CI [3.54, 4.60]), and more than threefold among children who received their first suspension in Years 5 and 6 relative to non-suspended children (OR=3.42, 95% CI [3.00, 3.89]).

Frequency of suspension

The prevalence of contact with police according to the total number of primary school suspensions received is summarised in Table 4. Among suspended children, the lowest prevalence of police contact was apparent for children receiving a single suspension only, half of whom (50.4%) had contact with police. Almost all children (90.3%) who received a suspension on more than 10 occasions had contact with police.

Figure 7 summarises the adjusted odds of any police contact according to the total number of primary school suspensions received (full detail of ORs and 95% CIs for unadjusted and adjusted associations is available in Appendix Table A3). Associations followed a dose-response pattern, whereby the odds of police contact increased as the number of suspensions increased. The odds of police contact ranged from large in magnitude for children who received a single suspension (for whom the odds of police contact were more than two and a half times those of children without suspension) up to very large in magnitude among children receiving 10 or more suspensions (for whom there was an almost 14-fold increase in the odds of police contact relative to non-suspended children).

Figure 7: Adjusted odds ratios of any police contact among suspended children relative to non-suspended children, by number of school suspensions



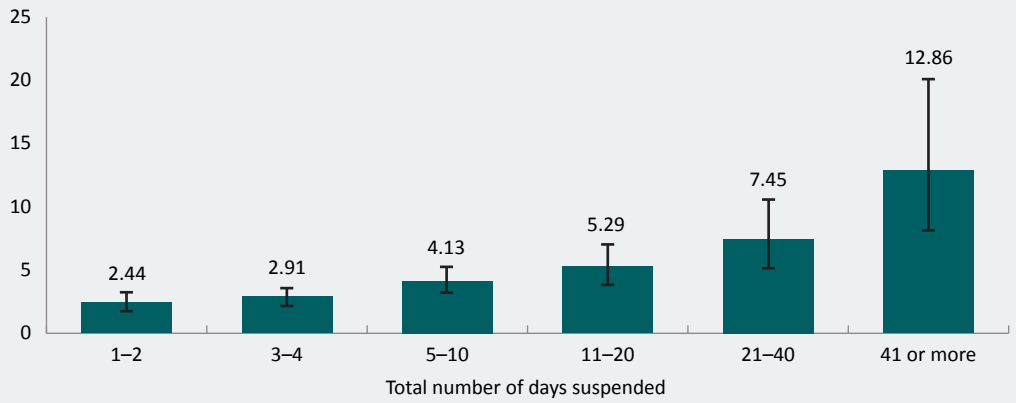
Note: Error bars depict 95% confidence intervals

Total days of suspension

Table 4 also summarises the prevalence of police contact according to the total number of days suspended during Years 3 to 6 of primary school. Among suspended children, almost half who received one to two days of suspension had contact with police (47.7%), rising to nine in 10 children (89.1%) receiving suspensions totalling more than 40 days.

The adjusted odds of any police contact according to the total number of days suspended are illustrated in Figure 8; see Appendix Table A4 for full detail of unadjusted and adjusted odds ratios. Associations followed a dose-response pattern in which the odds of police contact increased as the total days of suspension increased. The odds of police contact among children receiving one to two days of suspension ranged from moderate to large in magnitude (at almost two and a half times those of children without suspension) up to the very large effect observed for children receiving more than 40 days of suspension, for whom there was an almost 13-fold increase in the odds of police contact relative to non-suspended children.

Figure 8: Adjusted odds ratios of any police contact among suspended children relative to non-suspended children, by total number of days suspended



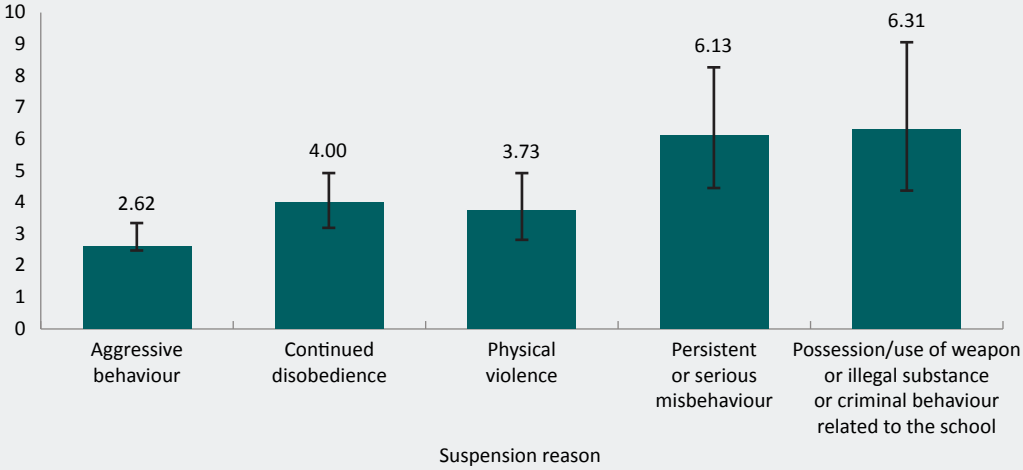
Note: Error bars depict 95% confidence intervals

Reason for suspension (by 'seriousness' hierarchy)

The number of children receiving suspensions during primary school is presented in Table 4 according to reason for suspension. Children who received suspensions for multiple reasons were assigned preferentially to the reason that reflected the less frequent but typically more serious/persistent event, thus providing mutually exclusive categories for analysis. Almost a third of children (31.9%) in the population sample received a short suspension solely for aggressive behaviour, with half of these children (50.7%) having contact with police. Long suspensions were less prevalent, with suspensions least frequently issued for the category that combined four reasons: possession of a prohibited weapon, use of a weapon, possession or use of a suspected illegal/restricted substance, and serious criminal behaviour related to the school. One in 12 children (8.2%) received a suspension in this combined category, among whom three-quarters (74.3%) had contact with police.

Relative to non-suspended children, the adjusted odds of police contact for children receiving suspensions for the hierarchy of reasons is illustrated in Figure 9 (full detail of the unadjusted and adjusted associations is presented in Appendix Table A5). Odds ranged in magnitude between large and very large, with the odds of police contact for suspended relative to non-suspended students ranging from more than two and a half for aggressive behaviour (95% CI [2.52, 3.04]) up to a six and a third for the combined reasons of possession/use of a prohibited weapon or suspected illegal substance or criminal behaviour related to the school.

Figure 9: Adjusted odds ratios of any police contact among suspended children relative to non-suspended children, by suspension reason



Note Error bars depict 95% confidence intervals

Police contact as a person of interest

Most prior research on the outcomes of suspension has focused on contact with the criminal justice system as a perpetrator, without consideration of contact as a victim or witness. For comparability with this prior research, analyses according to suspension characteristics were repeated for police contact as a person of interest specifically.

Given the more restricted sample of children available for analyses of contact as a person of interest (excluding children with contact as a victim or witness only), the levels of the suspension variables coding total number of suspensions and total days suspended were revised as follows:

- Total number of suspensions was recoded into five levels (from the six used in the analyses of any police contact) by combining the top two levels: no suspension (reference group); single suspension only; two suspensions; three to four suspensions; and five or more suspensions;
- Total days suspended was recoded into five levels (from the seven used in the analyses of any police contact) by reconfiguring the top four levels into two: no suspension (reference group); 1–2 days; 3–4 days; 5–15 days; and 16 days or more.

The prevalence of children with a suspension (*n*=2,557) within the population sample available for the person-of-interest analyses (*n*=58,882, after excluding 9,239 children with victim and/or witness contacts only) is detailed in Appendix Table A6, according to the timing of first suspension, total number of suspensions, total days suspended and reason for suspension. As was the case in the entire population sample of 68,121 children, more than half of suspended children (53.1%) received a suspension during Years 3 and 4, received multiple suspensions (54.8%), and were suspended for a total of five days or more (52.8%). Almost a third (30.7%) received a suspension for aggressive behaviour only, and almost one in 10 children (9.1%) received a suspension for any of the combination of most serious reasons (possession/use of a weapon, use of an implement as a weapon, possession/supply/use of an illegal/restricted substance, and/or serious criminal behaviour related to the school).

Unadjusted and adjusted associations between these suspension characteristics and person-of-interest contact with police are detailed in Appendix Tables A7 to A10 for timing, total number, total days, and reason for suspension, respectively. The patterns in these analyses remained consistent with those described above for any police contact, but with larger effect sizes (being all very large in magnitude). The adjusted odds of person-of-interest contact among children receiving a suspension during Year 3 or 4 relative to non-suspended children were increased more than 10-fold, and at least 13-fold for each of the highest level of total number of suspensions (≥5), total days of suspension (≥16), and reason for suspension (the combination of the four most serious reasons).

Aim 3: Association of out-of-school suspension with type of police contact

The third aim of this study was to examine whether the strength of the associations between suspension and police contact varied according to the type of contact with police—as a person of interest, victim or witness. Significant associations were observed between suspension and police contact of all three types. Figure 10 summarises the odds of each of the different types of police contact among children who received a primary school suspension relative to children who did not. Full detail of unadjusted and adjusted associations is reported in Appendix Tables A11 (person of interest), A12 (victim) and A13 (witness), alongside the unadjusted and fully adjusted associations of each of the six covariates with the three types of police contact.

Figure 10: Adjusted odds ratios of police contact as a person of interest, victim and witness for suspended relative to non-suspended children

Note: Error bars depict 95% confidence intervals

Overall, Figure 10 illustrates a pattern of associations in which the greatest adjusted odds were observed for police contact as a person of interest. The odds of suspended children having contact as a person of interest were nine times those of non-suspended children (a very large effect). This was followed by contact as a witness, with the odds of suspended children having this type of contact seven times those of non-suspended children (also a very large effect). Finally, the odds of police contact as a victim among suspended children were four times those of non-suspended children (a large effect).

Results of sensitivity analyses

Full detail of all sensitivity analyses is provided in Appendix Tables A1 to A5 and A7 to A15, alongside the results of primary analyses conducted in the full matched sample.

All effects reduced in size but remained significant in the sensitivity analyses that excluded children whose first contact with police preceded their first suspension (thereby temporally constraining the direction of effect to more robustly estimate the causal effect of suspension on police contact). The smallest odds of any police contact from adjusted analyses in the sensitivity sample were obtained in the associations of children receiving a single suspension, a total of 1–2 days of suspension during primary school, and suspension for aggressive behaviour (almost one and a half times the odds for these children relative to matched non-suspended children). The largest odds of any police contact were increased almost sevenfold for children suspended 10 or more times during primary school relative to matched non-suspended children.

In relation to the odds of police contact by type in the sensitivity sample, these similarly followed the pattern described previously in the full matched sample. Suspended children had seven times the odds of person-of-interest contact, four and a half times the odds of witness contact and twice the odds of victim contact relative to matched non-suspended children.

Associations of covariates with police contact

Although these associations were not the focus of this study, detail of the unadjusted and fully adjusted associations of each covariate with any police contact and with each type of police contact are provided in Appendix Tables A1 (any contact), A11 (person of interest), A12 (victim) and A13 (witness), respectively. The fully adjusted associations of each covariate with any police contact and with police contact as a person of interest, respectively, in the analyses of particular suspension characteristics, are detailed in Appendix Tables A14 and A15.

In all adjusted analyses (after accounting for the effect of suspension and all other covariates), odds of police contact were greater for children with a ROSH report to child protection services relative to children with no report or a report to child protection services that did not meet the ROSH threshold. These effects were all large or very large in magnitude. Odds of police contact were also greater for children of Aboriginal and Torres Islander background relative to non-Indigenous children (typically, medium associations). Boys, relative to girls, had a significantly reduced odds of contact with police as a victim and as a witness. Early developmental vulnerability related to behaviour (from the AEDC, reported by teachers in the children's first year of full-time school) was associated with a small increase in the odds of any police contact, and contact as a person of interest and a victim (though the association with victim contact became non-significant in the sensitivity analysis). No significant associations between teacher-reported emotional/behavioural problems (from the AEDC) and police contact were identified in the adjusted analyses, except a small increase in the matched sample for children with emotional/behavioural problems in the odds of police contact as a victim, which was not present in sensitivity analyses.

Aim 4: Moderating effect of school implementation of practices to support student wellbeing on the association of suspension with police contact

The fourth aim of this study was to identify whether school-based implementation of policies and practices to promote student wellbeing moderated the effect of primary school suspension on early police contact. Table 5 demonstrates the comparability of the intervention sample (*n*=14,387) to the population sample (*n*=68,121) with respect to the prevalence of suspensions (4.3% vs 4.8%), police contact (20.9% vs 20.5%), and the three demographic covariates controlled in these analyses (limited to sex, Aboriginal and/or Torres Strait Islander background, and area socio-economic disadvantage). The prevalence of suspension, police contact and the three demographic covariates were comparable across schools with high, moderate and low implementation status.

Table 5: Prevalence of suspensions, police contact and demographic covariates in the intervention sample, by school implementation of policies and practices to support student wellbeing

	Implementation sample (*n*=14,387)		School implementation level					
			High (*n*=2,911)		Moderate (*n*=7,909)		Low (*n*=3,567)	
	n	(%)	*n*	(%)	*n*	(%)	*n*	(%)
Any suspension	620	(4.3)	116	(4.0)	336	(4.2)	168	(4.7)
Any police contact	3,008	(20.9)	610	(21.0)	1,670	(21.1)	728	(20.4)
Sex (male)	7,276	(50.6)	1,417	(48.7)	3,984	(50.4)	1,875	(52.6)
Aboriginal or Torres Strait Islander	1,243	(8.6)	255	(8.8)	658	(8.3)	330	(9.3)
Area socio-economic disadvantage	3,944	(27.4)	729	(25.0)	2,138	(27.0)	1,077	(30.2)

Table 6 summarises the results of the multilevel logistic regression assessing the moderating effect of school implementation status on the association of suspension and police contact (adjusted for the three covariates). The odds of police contact for suspended children were almost three and a half times those of non-suspended children. There were no significant differences in the odds of police contact for children attending schools with high implementation status or schools with moderate implementation status (each relative to schools with low implementation). However, school implementation was a significant moderator of the association between suspension and police contact, as indicated by the significant interaction between suspension and high implementation status and the trend interaction ($p<0.06$) between suspension and moderate implementation status (each relative to low implementation).

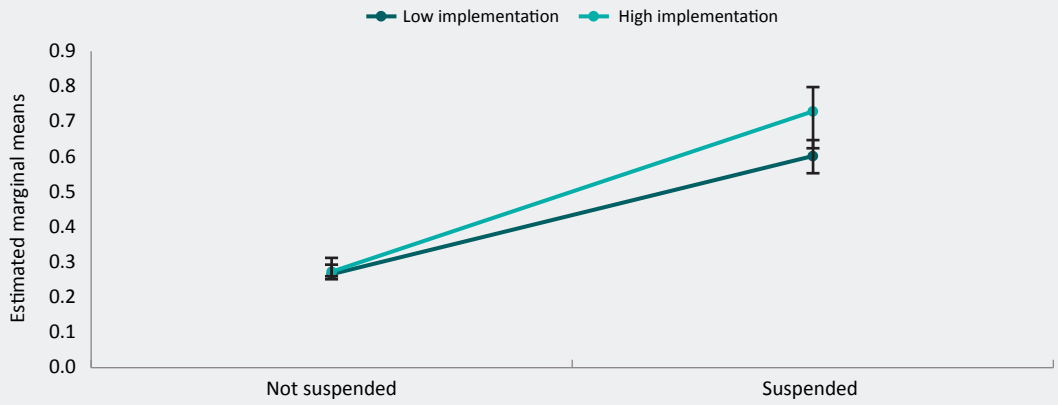
The significant interaction effect for high versus low implementation level is illustrated in Figure 11. Children who received a suspension from a high implementing school had greater odds of contact with police than children who received a suspension from a low implementing school. The odds of police contact did not differ according to school implementation level for students who were not suspended. This finding was not attributable to a higher 'severity' of suspension among children at high implementing schools relative to those at low implementing schools, as demonstrated in Appendix Table A16 by the distribution of the various suspension characteristics according to school implementation level. In further checks (not reported in detail here), high, moderate and low implementing schools also did not differ on a range of sociodemographic features, including the school Index of Community Socio-Educational Advantage score, the geographical location of the school (metropolitan, provincial or remote), staff-to-student ratio, enrolment size, the percentage of Aboriginal and/or Torres Strait Islander students enrolled at the school, and the percentage of students who spoke a language other than English at home.

Table 6: Adjusted odds ratios of any police contact according to suspension, covariates, implementation, and the interaction of suspension and implementation

	OR (95% CI)
Any suspension	**3.44 (2.46, 4.80)*** **
Sex (male)	1.01 (0.93, 1.10)
Aboriginal or Torres Strait Islander	2.55 (2.24, 2.91)***
Area socio-economic disadvantage	1.18 (1.07, 1.31)***
Implementation (High vs Low)	1.04 (0.87, 1.24)
Implementation (Moderate vs Low)	1.03 (0.90, 1.19)
Suspension × implementation (High vs Low)	**1.71 (1.01, 2.90)***
Suspension × implementation (Moderate vs Low)	1.48 (0.99, 2.24)

***statistically significant at $p<0.001$, **statistically significant at $p<0.01$, *statistically significant at $p<0.05$
Note: OR=odds ratio; CI=confidence interval. Reference group=children with no police contact

Figure 11: Differential effect of school implementation level on the odds of police contact for children who received a suspension from school, which is not present among non-suspended children



Note: Error bars depict 95% confidence intervals

Discussion

Summary of main findings

This research investigation, conducted on data from a large, population-based sample of public primary school students in New South Wales, tracked the experience of out-of-school suspension for individual children over a four-year period spanning Years 3 to 6 (2012–2015 inclusive) and related this to these children's contacts with police. The findings provide new insights regarding the prevalence and strong association of early experiences of suspension and police contact. All associations held robustly in sensitivity analyses that were restricted to the children whose police contact occurred after their suspension, providing evidence to suggest that primary school suspension may contribute to early police contact.

A substantial minority of children experience suspension from primary school

Though fewer than a quarter of suspensions issued annually in NSW public schools under the behaviour policy in effect during the study period were of primary school students (NSW Department of Education 2023), the longitudinal design of this investigation determined that experiences of primary school suspension for individual students followed over time were not uncommon. Approximately one in 20 children in this population sample experienced at least one suspension from primary school during the four-year period. Almost nine in 10 of these children experienced at least one short suspension of up to four days (for aggressive behaviour or continued disobedience), and almost two in five experienced a long suspension of up to 20 days for a more serious behavioural infraction (typically for physical violence or for persistent or serious misbehaviour). Fewer than one in 20 suspended children received a long suspension for any of the four most serious reasons (possession/use of a prohibited weapon, use of an implement as a weapon, use/possession/supply of a suspected illegal or restricted substance, and serious criminal behaviour related to the school).

Suspensions were not restricted to the most senior years of primary school, with most suspended children excluded during Years 3 or 4 (the first years of primary school for which data were available in this study). The experience of suspension for individual children was most often repeated. A majority of suspended children received multiple suspensions during these four years, ranging up to a total of 34 suspensions. And, the majority of suspended children were excluded for more than four days in total during primary school (ranging up to a total of 189 days). Thus, when following the experience of children longitudinally through their primary school years, a pattern emerges in which suspension was used repeatedly for a substantial minority of young children for relatively minor behavioural infractions.

Most suspended children have contact with police

Early contact with police (by approximately 14 years of age, on average) was prevalent in this population, being experienced by one in five children who attended a public primary school in New South Wales in any year between 2012 and 2015. Most children in the population had contact with police solely as a victim of crime, though almost one in 20 had contact with police for all three reasons (as a person of interest, victim and witness). The prevalence rates of police contact among suspended children were all notably greater. Almost two-thirds of suspended children had a police contact, and contacts of multiple types were more common than not. Half of these children had contacts of two or more types, and almost one in six had police contact of all three types.

The sequence of suspension and police contact varied according to contact type. For most children with police contact as a victim, contact preceded their first suspension. Conversely, suspension typically preceded a first contact with police as a person of interest (for almost three-quarters of children with this contact type) or as a witness to crime (almost two-thirds of children with witness contact).

Primary school suspension is associated with early police contact

In a matched sample that compared all children in the population who received a suspension from a NSW public primary school with demographically similar non-suspended children, children suspended from primary school had 3.71 times the odds of contact with police by about the age of 14 years relative to non-suspended students. This strong and significant association accounted for the effects of six important indicators of vulnerability to suspension (Laurens et al. 2021) and police contact (Whitten et al. 2020).

Dosage of suspension is associated with early police contact

There was evidence of a dosage effect underpinning this relationship, with the adjusted odds of police contact in the population sample of NSW public primary school students being greatest among children suspended early (during Years 3 and 4; odds of 4.03), children suspended 10 or more times (odds of 13.86), children receiving suspensions totalling more than 40 days (odds of 12.86), and children suspended for any of the four most serious reasons (odds of 6.31), all relative to non-suspended children. Nonetheless, significant and large adjusted associations with police contact were present also at the lowest levels of all suspension variables relative to non-suspended children: a first suspension during Years 5 and 6 (odds of 3.42); a single suspension only (odds of 2.64); for a total of one to two days (odds of 2.44); and a short suspension for aggressive behaviour only (odds of 2.62).

Primary school suspension is associated with each type of police contact

Irrespective of the type of police contact, very large and significant associations were consistently observed in analyses adjusted for the effect of the covariates. Relative to non-suspended children, suspended children had nine times the odds of police contact as a person of interest, seven times the odds of contact as a witness and quadruple the odds of contact as a victim.

Priority equity groups are over-represented in suspension and police contact

In this study of NSW public primary school students, among both suspended children and children in contact with police, there was pronounced over-representation of boys, Aboriginal and/or Torres Strait Islander children, children from socio-economic disadvantaged areas and children with experience of child maltreatment, emotional/behavioural problems, and early developmental vulnerability related to behaviour. Most suspended children and children in contact with police were male and were involved with child protection services. All other covariates characterised over a third of suspended children and over a fifth of children in contact with police (except emotional/behavioural problems reported by teachers of the children's first year of full-time school). Among the covariates, the greatest odds of police contact were observed for maltreated children (typically, these odds were more than tripled in adjusted analyses), and for children of Aboriginal and/or Torres Strait Islander background (typically, a doubling of the odds in adjusted analyses). Notably, all associations between suspension and police contact (across the various levels of suspension characteristics, and all three types of contact with police) were significant after accounting for the contribution of these six vulnerability factors to police contact.

School implementation of policies and practices to support student wellbeing moderates the association between suspension and police contact

Robust evidence indicates that quality implementation of school policies and practices to support student wellbeing reduces problem behaviours (Cipriano et al. 2023). In this study, however, principals' reports of their implementation of these practices did not relate to suspension. Similar rates and characteristics of suspension were evident in schools that reported low, moderate and high levels of implementation. Neither implementation quality nor detail of the specific behavioural infraction eliciting suspension were measured in this study, and it was not possible to ascertain whether different thresholds of behavioural infraction elicited suspension in schools with low, moderate and high levels of implementation.

Interestingly, a school's level of implementation was a significant moderator of the association between suspension and police contact. Odds of police contact among children suspended from NSW public primary schools for whom principals reported a high level of implementation were significantly greater than those of children suspended from schools for whom principals reported low implementation. Children suspended from a high implementing school were approximately 70 percent more likely than their counterparts at low implementing schools to have police contact. Prior research from the NSW-CDS demonstrated that high implementing schools were significantly more likely than schools with a low level of implementation to report that they actively teach students social-emotional learning, engage parents with information on supporting student mental health and wellbeing, and support students experiencing mental health difficulties (Dix et al. 2019). To the extent that this active promotion of student wellbeing reflects a culture that prioritises fostering strong prosocial connections with school, peers and teachers, particularly poor outcomes may ensue for vulnerable students who are suspended from these schools (relative to their suspended counterparts in low implementing schools, where less strong prosocial connections with school, peers and teachers might be developed).

Further research is needed to explain these preliminary findings that students suspended from high implementing schools were more likely to experience early contact with police than students suspended from low implementing schools. For example, research could gather reports of the personal experiences and perceptions of students suspended from different school contexts. This might explore the psychological impacts of being excluded from a school that prioritises whole-school mental health and wellbeing promotion, such as the exacerbation of feelings of marginalisation among vulnerable students who may additionally require, but not receive, targeted supports. Future research might also explicitly consider the type of police contact that ensues—as a person of interest, victim or witness—to ascertain whether these might be differently associated with school implementation of policies and practices to promote student mental health and wellbeing.

Implications for policy and practice

The findings of this study provide new evidence that Australian children may indeed be susceptible to a 'school-to-prison pipeline', in which exclusionary discipline pushes students out of school and into contact with police. Children who received suspensions earlier in primary school, or who received multiple suspensions, for a greater number of total days, and for more serious infractions, had very large odds of police contact. These insights are critical to informing the design of effective prevention and early intervention strategies, and to shaping intra- and inter-agency policy reform in education, justice, health and social service systems to mitigate against suspension and justice system involvement.

Education policy and practice

There is a relationship between the use of exclusionary school discipline and the quality of school environments, with lower suspension rates in inclusive schools that employ fair and unbiased disciplinary structures (Huang et al. 2021; Welsh, Rodriguez & Joseph 2023). However, the demand on and subsequent effectiveness of these discipline structures is underpinned by the implementation of key strategies to prevent the creation of aversive school climates and the problem behaviours they produce (Graham 2018). These strategies include empathy training (Okonofua et al. 2022) and high-quality inclusive practice (Graham, McCarthy et al. 2020), including implementation of frameworks like I-MTSS to enable educators to meet the diversity of student needs across all three developmental domains: behavioural, academic and social-emotional (Nese et al. 2021). Of all three, social-emotional development and wellbeing has received the least attention in Australian schools, where educators' focus has been strongly directed to literacy and numeracy due to the pressure exerted by the National Assessment Program—Literacy and Numeracy (NAPLAN), and the publication of quasi-league tables enabling the comparison of schools on the basis of student performance in these limited domains (Gilbert 2019).

There has been recent debate over the effectiveness of universal school-based mental health interventions, with qualified arguments presented both in support of (Birrell et al. 2025; Carter 2025; McCrone 2025) and against (Andrews & Foulkes 2025; Foulkes et al. 2024) these practices. The interventions considered in this debate are typically secondary school programs aimed at preventing psychological symptoms such as depression and anxiety, rather than the universal school-based teaching of social-emotional skills that is mandated by the Australian Curriculum for every Australian primary and secondary school student, from the first year of full-time school through to Year 10 (building social awareness and relationship skills, self-management of emotions and behaviours, and responsible decision making). Research from the NSW-CDS indicates that many Australian primary schools are not delivering whole-school social-emotional learning programs to develop students' social-emotional skills, or are delivering programs that have no evidence of effectiveness or show no positive effects on students' skill development (Laurens et al. 2022). Students receiving such programs do not develop the equivalent social-emotional skills demonstrated by students who receive evidence-based programs (Carpendale et al. 2025). Education systems must support school leaders to select and implement evidence-based programs and practices that support all students to develop these skills.

This alone, however, will be insufficient to mitigate suspensions. Research is urgently needed to determine the right mix of supports for students who are vulnerable to or already experiencing suspension. This will require targeted support and intensive interventions on top of the universal programs delivered to all students to foster these foundational skills. Such research may reveal unmet needs that help to explain why students suspended from schools that reported greater implementation of practices and policies to support student mental health were more likely than their peers at low implementing schools to experience police contact.

The findings of this report indicate that suspension was used repeatedly for a substantial minority of young children, and for relatively minor behavioural infractions, increasing these children's risk of subsequent contact with police. Continued disobedience accounted for a substantial proportion of exclusions issued to this population of NSW public primary school students and has been criticised as too broad and non-specific a category, which can serve as a 'catch-all' in some schools for minor disengaged and disruptive behaviours which could instead be addressed proactively (Graham, McCarthy et al. 2020). A national study involving educators from one-quarter of New Zealand secondary schools (*n*=95) sought to understand how the continual disobedience category was being interpreted and the types of behaviours educators associated with this category (Dharan & Mincher 2022). Responses included a wide range of behaviours such as defiance, non-compliance, disrespect, hindering other children, truancy, poor attendance, tardiness, talking out of turn and other disruptions. Critically, suspension does not teach children the skills they need to comply with behavioural expectations and in fact removes them from the teaching environment, which the child can perceive as rewarding (Graham 2020). Managing these infractions through alternative means within the school setting would help to maintain the bond between student and school, and safeguard the child's access to learning and to prosocial opportunities and role models.

Reforms in many US public school systems over the past decade have engaged directly with this problem by banning the use of suspension for minor or subjective reasons (Anderson 2020; Hinze-Pifer & Sartain 2018). Suspension for wilful defiance, for example, has been banned in several US school systems for two key reasons: firstly, to reduce the level of suspension overall due to its known ill effects on child development and, secondly, to reduce racial disparities in the use of suspension, which is most evident in the over-representation of African American students. California has progressively increased these bans, from an initial ban in 2015 on the use of suspension for a range of minor reasons (including wilful defiance) in Kindergarten to 2nd grade, leading to a 77 percent decline in suspensions for defiant behaviour (Grasley-Boy, Gage & Lombardo 2019). Since 2015, this ban has extended to the end of middle school (Grade 8). Importantly, declines in out-of-school suspension have been matched by increases in the use of in-school suspension, with the explicit purpose of building social-emotional competencies through evidence-based interventions (Grasley-Boy, Gage & Lombardo 2019).

Other US public school systems have implemented similar reforms. Chicago Public Schools, for example, has explicitly defined problem behaviours across six levels of severity, stipulating levels for which out-of-school suspension is permissible (Severe, Levels 4–6) and levels for which it is not (Lower, Levels 1–3)—see Table 7 for descriptions (Hinze-Pifer & Sartain 2018). Many of the behaviours outlined in Levels 1–3 correspond with the behaviours captured in the two short suspension categories for NSW government schools—continued disobedience and aggressive behaviour—which were outlined in Table 1 (disruption, bullying, inappropriate internet use etc). Suspension is no longer permissible for these behaviours in the Chicago Public School system. Importantly, alternatives to suspension are also defined and, like California, these include in-school skill-building to enable students to learn the self-management skills they need to avoid overstepping the rules. These rules are explicitly taught and are consistent across classrooms and schools, with many schools implementing I-MTSS and/or SWPBIS (de Bruin, Killingly & Graham 2024). Chicago Public Schools has since recorded significant reductions in the use of out-of-school suspension together with improvements in school safety and academic achievement (Hinze-Pifer & Sartain 2018).

Table 7: Chicago Public Schools code of conduct disciplinary infractions

Infraction levels	
Lower: No out-of-school suspension permitted	
1	Running/noise in halls, leaving or skipping class, persistent tardiness, disrupting class, loitering, unsanctioned computer use, cell phones.
2	Posting bills, leaving school, walkouts/sit-ins, minor physical actions, breaking other school rules, profanity/obscenity, tobacco use/possession, ignoring school personnel, no ID, unauthorized parking, non-educational computer use.
3	Disrupting bus, gambling, fighting (no injury), forgery, plagiarism, display of gang affiliation, bullying, obscenity/profanity/harassment with bias, second occurrence of level 1 or 2, disruptive use of cell phone, JROTC (Junior Reserve Officers Training Corps) uniform violations, seriously disruptive internet use, other seriously disruptive behaviour.
Severe: Out-of-school suspension requires approval	
4	Extortion, assault, vandalism, battery, theft, false fire alarm (no evacuation), fireworks, trespassing, spreading computer viruses, weapon possession, alcohol or drug use/possession, physical contact with staff during fight, other very seriously disruptive behaviour.
5	Aggravated assault, burglary, theft over $100, credible threats and severe bullying, gang activity, inappropriate sexual contact (including consensual), other disruptive illegal behaviour, sexual harassment, false fire alarm (with evacuation), repeated weapon possession, battery with injury, cyberbullying, hacking school networks, vandalism over $500, drugs, repeated alcohol, mob action.
6	Firearm or lookalike, use of any weapon to harm, crashing school network, arson, bomb threat, robbery, drug or alcohol sale, repeated drug possession, theft over $1000, sexual assault, aggravated battery, kidnapping, attempted murder, murder.

Source: Hinze-Pifer & Sartain 2018: 232

Prior research on the school-to-prison pipeline has highlighted the relationship between school suspension and increased opportunities for police contact due to lack of adult supervision and association with deviant peers (Hemphill, Broderick & Heerde 2017). Importantly, the present study distinguishes between types of police contact. Our analyses show that suspended children are most often victims of crime themselves, highlighting the vulnerability of those being suspended from NSW government schools. These findings underscore the need for early intervention and wraparound supports, which could be delivered through system-wide implementation of an I-MTSS model (de Bruin, Killingly & Graham 2024) and full-service schools in disadvantaged communities where evidence-based interventions are provided through interagency collaboration between education, health and social service agencies (Dryfoos 1994; Mukherjee 1997). These interventions should not simply target behaviour (as in SWPBIS) but should instead be informed by assessment of children's competencies across all three developmental domains (academic, social-emotional and behavioural; as in I-MTSS) as all three are interconnected and difficulties in one domain can mimic or mask difficulties in another (de Bruin, Killingly & Graham 2024). For example, academic difficulties can affect social-emotional wellbeing, as well as disengagement from and disruptive behaviour in school. Although it is commonly understood that behaviour is a form of communication, particularly externalising behaviours like disengagement and classroom disruption, school responses most often come from the behaviour management toolkit, which leaves underlying problems like poor reading proficiency or social-emotional competencies in place (Graham, White et al. 2020).

For children to comply with behavioural expectations, expected behaviours must be learnt to the point of automaticity, which means that they must be continually modelled and practised. As exclusionary discipline removes children from teaching, they have limited opportunity to learn alternative behaviours to those that led to the suspension. Recent research on the impact of discipline reforms in Chicago Public Schools suggests there is an opportunity cost to the use of exclusionary discipline which, if addressed, could break the school-to-prison pipeline (Adukia, Feigenberg & Momeni 2023). This research found that implementing restorative practices in schools substantially changed student behaviour, with flow-on effects for police arrest. Alongside improvements in school climate, which included measures of student perceptions of trust, safety, behaviour, and connectedness, that study found no declines in student achievement, indicating that retaining instead of excluding students did not have an adverse effect on their peers. Importantly for the present study, Adukia, Feigenberg and Momeni (2023) drew on person-level arrest data from the Chicago Police Department to ascertain the broader impact of Chicago Public Schools' discipline reforms. The authors identified an 18 percent reduction in the number of out-of-school suspension days, together with a 19 percent decrease in overall arrests. Improvements were found both during school hours and on school grounds (−35%) and outside of school (−15%), and in both violent (−18%) and nonviolent (−20%) offences. These findings underscore the importance of linking policy change to reduce the use of exclusionary discipline with resourcing for and intensive training in alternatives, such as social-emotional learning and restorative practices, so that alternatives can be implemented effectively.

From 2024, NSW public schools implemented new suspension and expulsion procedures (NSW Department of Education 2024) that supersede the policy governing suspensions examined in the present study. Future work will need to evaluate whether these revisions led to a decrease in the use of suspension in NSW schools, particularly during the primary school years. The revised NSW Student Behaviour Policy removed 'short' and 'long' suspensions and introduced maximum consecutive and annual days of suspension, which vary for students in different year groups. The maximum is five consecutive school days for students in Kindergarten to Year 2, and 10 consecutive school days for students in Years 3 to 12. The revised NSW Student Behaviour Policy also introduced an increased role for Directors, Educational Leadership, including in co-approving expulsions. Principals must inform the Director when extending suspensions for a further period of five days and must receive approval from the Director where suspensions or extensions exceed 30 days for students in Kindergarten to Year 2, and 45 days for students in Years 3 to 12. The Director may access additional system support for the student and the school to effect the student's successful return to school. In addition, Student Wellbeing Support receive a system notification when Kindergarten students are suspended for the first time, or when a student reaches the threshold of a maximum number of days (more than 30 days within a school year for students in Kindergarten to Year 2, or more than 45 days for students in Years 3 to 12), triggering a response. Early intervention support can be sought outside of these circumstances by the school contacting the Assistant Principal Learning and Support or the Learning and Wellbeing Officer.

The revised NSW Student Behaviour Policy also required all schools to develop a 'school behaviour support management plan' by 2025. These plans must outline a strategic, integrated whole-school approach that incorporates multi-tiered systems of support for all students along a continuum of care, including a focus on prevention, early intervention, targeted and individual interventions. The school behaviour support management plan includes effective strategies to model, explicitly teach, recognise and reinforce positive, inclusive and safe behaviours. It also includes effective strategies to identify, prevent and respond to disruptive student behaviours, including bullying and cyberbullying, and behaviours of concern when they occur.

Interagency collaboration across education, youth justice, health and social service systems

Research has identified that the interventions with the greatest likelihood of success are those involving collaboration between systems to develop an integrated plan of care based on a positive, strengths-based vision and a manageable number of goals and strategies (Malloy et al. 2019). Challenges emerge, however, as the four most relevant systems—education, youth justice, child protection and health—are 'governed by vastly different missions, funding streams, and eligibility requirements, compromising likelihood of effective coordination of care' (Malloy et al. 2019: 409). Although successful outcomes have been achieved through the location of onsite mental health and legal advice clinics, school-integrated health hubs are only just emerging in Australia (eg Nowra in NSW, Yarrabilba in Queensland; Allen-Keeling 2020) and to date there has been little evaluation of their effectiveness (Burman et al. 2023).

The present data highlight a need for increased efforts to safeguard the educational opportunity, wellbeing and safety of vulnerable children, via coordinated interagency partnerships between education, justice, health and social service systems. The covariates used in this study index priority equity groups recognised in the *Alice Springs (Mparntwe) Education Declaration* (Council of Australian Governments Education Council 2019) as meriting additional support at school. The possible social, racial and political injustices reflected in the over-representation of these groups in both suspensions and police contacts in this study, however, imply that insufficient attention has been given to the design and implementation of integrated and culturally appropriate supports to mitigate use of suspension for these groups (Rudolph & Thomas 2023). There remains a clear need to go beyond mainstream understandings and practices of 'education' to enact a culturally supportive and responsive education for Aboriginal and Torres Strait Islander children that fosters their engagement with primary school (Rogers et al. 2022), and to combat experiences of interpersonal and systemic racism that can make schools a site of further trauma (Moodie, Rudolf & Maxwell 2023).

Suspension may be especially ineffective for Aboriginal and Torres Strait Islander students, those with a disability and children living in out-of-home care, or a combination thereof, because the behaviours for which suspension is being issued may well be a manifestation of disability and/or childhood or intergenerational trauma (Graham et al. 2024; Graham et al. 2023; Graham, McCarthy et al. 2020). Australian education providers are obligated under the *Disability Discrimination Act 1992* (Cth) and Disability Standards for Education 2005 to provide reasonable adjustments to enable students with disability to access and participate in education on the same basis as those without disability (Dickson 2022). However, research has found that many students with disability who receive multiple suspensions are either not receiving adjustments or are receiving an inadequate level of adjustments (Graham, McCarthy et al. 2020), which has implications for the child's ability to engage in learning and comply with behavioural expectations. Similarly, research demonstrates that disruptions to education are a common experience for children in contact with youth justice and child protection systems, yet maintaining access and connection to education facilitates social integration and protects against offending (Roche et al. 2023; White et al. 2019).

A study recently completed by the Australian Institute of Family Studies and the Australian Human Rights Commission analysed over 3,000 recommendations from 61 state, territory and Commonwealth reports and inquiries conducted between 2010 and 2022 into child protection and youth justice systems in Australia (Stevens & Gahan 2024). By consolidating these recommendations, the review demonstrated extensive evidence is available to guide effective policy and practice reform to ensure better interagency collaboration between education, child protection, health and justice agencies. Themes relevant to policy and practice reform to disrupt the school-to-prison pipeline include: a need for better cross-system data sharing and coordination; enhanced workforce capacity and support; improved transparency, monitoring and oversight of policy implementation and practice; and stronger First Nations partnership and self-determination. Poor design and inaccessibility of support services in health and social services (including child protection services) contribute to pressures on the education system in meeting the needs of children and families. The findings of the present study, in demonstrating the association between suspension from primary school and early contact with police by the age of approximately 14 years, highlights the need for an integrated approach that prioritises prevention and early intervention efforts. The primary school years present a critical period in which to foster connections between vulnerable children and supportive adults and prosocial peers. Services offered by government agencies must be augmented by community-based prevention and intervention programs delivered by community-controlled organisations that are trauma-informed and voluntary in nature, particularly for Indigenous young people and communities (Duthie et al. 2019; Lonne et al. 2021).

Age of criminal responsibility

In demonstrating the vulnerability of suspended primary school students to early police contact, when these children typically already experience other adversities (Graham et al. 2024), the findings of this study have relevance to ongoing discussions about the age of criminal responsibility. The Attorneys-General of Australia have debated raising the age of criminal responsibility nationally from the federal statutory minimum of 10 years (Standing Council of Attorneys-General 2023), which is one of the lowest ages for criminal responsibility across the developed world (Haysom 2022). The UN Committee on the Rights of the Child (2019) recently issued an update to the International Standards for the Minimum Age of Criminal Responsibility, grounded in a review of scientific evidence on the capacity for abstract reasoning, to encourage state parties to ensure that the minimum age of criminal responsibility is 14 years and continues to be increased. Several Australian jurisdictions (the Northern Territory, the Australian Capital Territory, Victoria and Tasmania) raised, or made commitments to raise, the minimum age from 10 to 12 or 14 years (Australian Institute of Health and Welfare 2023), though progress on these commitments in some jurisdictions has subsequently reversed with changes in government.

Children under 14 years do not have the capacity to advocate for themselves in the criminal justice system, which is systematically biased in how it deals with the youngest offenders (Haysom 2022). As Haysom (2022: 1504) notes:

> The over-representation of Indigenous youth within the justice system is seen at its most extreme in the 10–14 years age group, and contact with the criminal justice system at this age is strongly associated with re-offending, and is considered 'criminogenic'.

She further argues that raising the minimum age will not only decrease overall rates of youth offending but also reduce the over-representation of Indigenous children at all points of contact with the criminal justice system. While raising the minimum age of criminal responsibility will not directly avert either suspensions or police contact, it may encourage within society a greater understanding and appreciation of the developing capacity of children to regulate their behaviour, and the extended period over which these skills can continue to develop when explicit teaching, modelling and opportunities for practice of these skills are made available.

Strengths and limitations

There are both strengths and limitations associated with this study's use of administrative data. Major strengths are afforded by the large sample size and the use of multi-agency linked records. Every child with an enrolment at a NSW public school during the years 2012 to 2015 was represented in the records, yielding a large sample of 68,121 children in which to characterise the prevalence and pattern of suspensions and police contact. This allowed us to derive a matched sample comprising every suspended child, each matched with two demographically similar non-suspended peers. Using records on police contacts rather than charges, convictions or incarceration—on which most prior studies have focused—offered insight into children's initial entry into the criminal justice system, thereby informing opportunities to prevent children from becoming enmeshed within this system. Use of administrative records, accessed via de-identified linkage methods that protected participants' privacy, reduced the risk of the study being subject to information (recall and observer) and attrition (sampling) biases that are typical of studies that measure sensitive information such as suspension and police contact. The multi-agency nature of the data linkage afforded the capacity to determine the strength of associations between suspension and police contact in analyses that also accounted for other relevant factors, including child protection involvement, emotional/behavioural problems, early developmental vulnerability relating to behaviour, and sociodemographic factors. Thus, not only does the present study provide the first evidence for associations between out-of-school suspension and police contact in Australia, it also accounts for the contribution of these important factors, thereby offering greater confidence in estimating the causal relationship between suspension and police contact.

Notwithstanding these strengths, using administrative data not collected for the purpose of this study also presented limitations. For example, data were missing in systematic ways that limit the generalisability of study findings—most notably due to the unavailability of suspension data for children educated outside the public school system in NSW (approximately a quarter of primary school students in NSW), for whom different disciplinary policies and practices are enacted. The study was also insensitive to informal exclusions of children from school, and potential 'elective' movements between the government and non-government sectors for reasons related to student behaviour. Available data on primary school suspensions were limited to those issued during Years 3 to 6, adding error to effect estimates, particularly in the analysis of early versus later timing of suspension (which were also inherently subject to different periods of follow-up in this study). It may also have led to some children being incorrectly excluded from the sensitivity analyses as having a first suspension that followed police contact. The emotional/behavioural impairments examined were those identified by the first year of full-time school only, which is a conservative approach that likely captures the most severe or readily identifiable impairments but misses disabilities identified as children matured. Similarly, the index of socio-economic disadvantage was an area-level indicator from the children's first year of full-time school and does not necessarily reflect the socio-economic status of an individual child.

Despite the comprehensive nature of the data available on individual children, we had no access to other important school-level factors that influence suspension and might interact with individual-level factors, such as how individual schools implement behaviour management and exclusionary discipline policies and the availability of effective alternative methods of discipline. Likewise, we lacked data on teachers' wellbeing, which is an important influence on teaching practice and capacity to enact evidence-based practices to support student learning and wellbeing (Turner & Thielking 2019).

Other limitations relate to the nature of the data on police contacts. Contacts occur for a variety of reasons, including procedural reasons (eg contacts relating to the requirements of formal orders such as bail). Person-of-interest contacts, particularly, do not all correspond to the perpetration of an offence, and thus should not be equated directly to rates of delinquent or criminal behaviour. Variable delays between an incident and the creation of a police report also contribute to error in determining the timing of suspension versus police contact, and also to potential omission of police contacts occurring towards the end of the study period.

Several additional limitations relate to the analyses conducted for Aim 4. Principal reports of school-based implementation of policies and practices to support student wellbeing were limited to a subset of 472 schools (comprising 28.2% of NSW public schools with a Year 6 enrolment in 2015). These schools may not be representative of all NSW schools either in their application of suspension policy or in their support of student wellbeing. Principals' reports of implementation may be biased towards over-estimating the extent of their implementation of supports for student wellbeing, though we note that the reported level of implementation did not relate to the prevalence or characteristics of suspensions in this study. The implementation measure represented a snapshot taken in 2015 only (the final of four years represented in the suspension records), and it was not possible to confirm that individual students remained enrolled at the school through the four years. Therefore, suspensions may have happened at a different school from the one to which the child was assigned for the moderation analysis. The data provide a crude, indirect estimate only of the odds of police contact for students removed from school-based supports via suspension, based on an observational design rather than a randomised controlled trial of interventions specifically targeting reductions in behavioural infractions. Research to evaluate the effects of such interventions on suspension rates, and subsequent police contact, is needed.

This study reports only associations between suspension and police contact and cannot establish causality. Nonetheless, the strength of associations and the presence of dose-response relationships increase confidence that there is a causal relationship between primary school suspension and early contact with police. Sensitivity analyses indicated that the association of suspension with later police contact remained after removing children whose suspension from school might have been influenced by prior contact with police. Further examination of potentially bidirectional associations between suspension and police contact is a topic for future research. The present findings suggest that the type of police contact may be an important consideration in these relationships, given that most police contacts which preceded a first suspension were as a victim of crime, whereas first police contacts that followed a suspension were mostly as persons of interest or witnesses of crime. Such patterns would appear consistent with the notion that school suspension may increase opportunities for police contact due to lack of adult supervision and association with deviant peers (Hemphill, Broderick & Heerde 2017). That is, disconnecting vulnerable children from the protective, socialising influences of school through suspension may leave them exposed to contexts in which they may more readily engage in or witness delinquent and criminal acts.

This study accessed data from a single Australian state only, where changes to suspension policy in NSW public schools have since been enacted (ie subsequent to the data examined here; NSW Department of Education 2023). Accordingly, results may not be directly generalisable to other states and territories in Australia (or internationally), where different suspension policy and practice contexts operate, nor over time in New South Wales. Nonetheless, the study offers valuable evidence to inform system-level policy reform to limit the use of suspension and disrupt the school-to-prison pipeline.

This study provides new insights regarding the prevalence of out-of-school suspension from primary school and police contact, and the strong association between these experiences for Australian children. Further research is urgently needed to provide local evidence of effective alternatives to suspension. For example, research should seek to investigate the positive effect of system-wide implementation of practices such as I-MTSS, not only on improved student behaviour and engagement but also in reducing the use of suspension and subsequent police contact. While insufficient or inequitable funding of schools can limit educators' capacity to achieve positive outcomes for students (Preston 2023), increased funding alone will not achieve reductions in disciplinary exclusion if it is not tied to evidence of effectiveness (Weisburst 2019). Indeed, the lack of local evidence of effective alternatives to suspension delays the systemic reform necessary to ensure that schools are resourced to enact these alternatives. Reforms should include funding for professional development and infrastructure to support both the implementation and evaluation of these alternatives to suspension (Laurens et al. 2022). Evidence is likewise needed to guide the building of stronger place-based partnerships between schools and health, social services and justice agencies to deliver prevention and early intervention to mitigate suspension and police contact.

Specific recommendations for policy and practice

The following recommendations have been informed by research evaluations of policies and practices enacted in a variety of jurisdictions internationally and nationally. As such, these recommendations are not specific to a particular jurisdiction but may offer guidance for systemic reform across government and non-government education sectors around Australia and elsewhere. As detailed earlier in this report (see *Education policy and practice*), recent revision of the policy governing suspension and expulsion procedures in NSW public schools incorporated changes that align with several of the following recommendations (eg 1, 5b, and 7a; NSW Department of Education 2024, 2022).

1. Implement Integrated Multi-Tiered Systems of Support on a system-wide basis to ensure:
    a. all children benefit from universally delivered (Tier 1) high-quality, accessible curriculum, pedagogy and assessment across all three developmental domains (academic, social-emotional, behavioural); and
    b. use of data-based decision making involving validated screening and progress measures to identify children in need of targeted (Tier 2) or intensive (Tier 3) interventions to build academic, social-emotional and/or behavioural skills at the earliest opportunity.
2. Schools to access AEDC data to tailor the intensity of universal (Tier 1) provision required for students entering school within their local context.

3. Systems to support and mandate implementation of rigorous evidence-based within-school skill-building alternatives to out-of-school suspension to teach all children self-regulatory skills and social-emotional competencies.
4. Systems to enact significant reforms to reduce schools' reliance on exclusionary school discipline, including quality, ongoing, evidence-based professional learning in:
    a. implementation of Integrated Multi-Tiered Systems of Support, including core elements of inclusive leadership and data-based decision making;
    b. inclusive practice;
    c. social-emotional learning;
    d. trauma-informed practice; and
    e. culturally responsive pedagogies.
5. Legislative reform to introduce:
    a. safeguards for students in priority equity groups (Indigenous children, children with disability, children in out-of-home care) to ensure appropriate representation;
    b. thresholds (eg more than two suspensions or more than 10 days of suspension in a 12-month period per child) that trigger regional or system review of school support processes, student support plans and intervention fidelity; and
    c. robust accountability mechanisms to ensure policy and practice compliance.
6. Legislative reform to ensure that exclusionary school discipline can only be used:
    a. as a last resort;
    b. for a limited number of explicitly defined reasons;
    c. for limited periods (eg a maximum of five days); and
    d. when quality evidence-based skill-building alternatives have already been implemented.
7. Legislative reform to ensure that exclusionary school discipline cannot be used:
    a. on children in Foundation to Year 3 (ages 4.5 to 8 years);
    b. on children who are homeless or in out-of-home, residential or kinship care;
    c. on children with a disability when the behaviour may be a manifestation of that disability;
    d. counterproductively (eg for disengagement, truancy);
    e. for minor reasons (eg defiance, disobedience); and
    f. more than twice for a short suspension or for more than 10 days total in a 12-month period without triggering review.

8. Legislative reform in all Australian jurisdictions to raise the minimum age of criminal responsibility to 14 years (with a commitment to continue increasing this age).
9. Further provision (with embedded evaluation of effectiveness) of full-service schools in disadvantaged communities, where evidence-based interventions are provided through interagency collaboration between education, health and social service agencies, including with community-controlled non-government organisations.
10. Improved transparency, monitoring and oversight of policy implementation and practice in schools and in school-based partnerships with health justice, and social service agencies.
11. Improved cross-system data sharing and coordination to provide strengths-based early intervention for vulnerable children in early childhood and during transition into primary school.
12. Enhanced workforce capacity and support, including inter-professional learning opportunities.
13. Stronger First Nations partnerships and self-determination.

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Appendix

Statistical analyses for Aim 4

Analyses for Aim 4 determined whether school-based delivery of policies and practices for promoting student wellbeing moderated the effect of primary school suspension on early police contact. A null model was first conducted to determine the proportion of variance in the 'any police contact' variable that could be explained by clustering of students within schools, as indexed by the intraclass correlation coefficient. Intraclass correlation coefficients of 0.05 to 0.09 were interpreted as small, 0.10 to 0.14 as medium, and 0.15 and above as large (Hox, Moerbeek & van de Schoot 2017). Small intraclass correlations obtained from the null model indicated that 7.8 percent of the variation in police contact (for any reason) was accounted for by school-level factors. The remainder of the variation in police contact outcome was attributable to differences at the individual child level.

Subsequently, the multilevel models specified to test Aim 4 proceeded as follows.

- Model 1 tested the bivariate association between the 'any suspension' and 'any police contact' variables in the intervention sample. For simplicity, the bivariate associations between each of three demographic factors only (child's sex, Aboriginal or Torres Strait Islander background, and area socio-economic disadvantage) and any police contact were determined.
- Model 2 was a multivariable model that examined the association between suspension and any police contact when accounting for the three demographic covariates. That is, suspension and the three covariates were entered simultaneously in the model.
- Model 3 was a multivariable model that added the two dummy indicators of school implementation status (high vs low, and moderate vs low). This model also incorporated interaction terms between the 'any suspension' variable and the dummy indicators of implementation status (suspension × implementation status—high vs low; and suspension × implementation status—moderate vs low).

All multilevel models incorporated random coefficients (ie random slope terms) that allowed the associations between the predictors (the suspension and implementation indicators, and their interactions) and police contact to vary between schools. The random coefficients models, in which the effects of the predictors on police contact were allowed to vary across schools, returned non-significant random slope terms in all analyses. Thus, all final models incorporated random intercepts only.

Models 1 and 2 replicated the associations obtained in the matched and sensitivity samples and are thus not detailed in this report. Model 1 confirmed significant bivariate associations between suspension (and each of the three covariates) and any police contact; Model 2 confirmed these associations remained when adjusted for all other predictors in multivariable analyses. The results of Model 3, the focal multivariable analysis for Aim 4 that assessed the moderating effect of school implementation status on the association of suspension and police contact (including full adjustment for the three covariates) is presented in the report (Table 6).

Data tables

Table A1: Odds ratios of any police contact among suspended relative to non-suspended children

		Any suspension	Male sex[a]	Aboriginal/ Torres Strait Islander background[b]	Area socio-economic disadvantage[c]	Child maltreatment[d]	Emotional and/ or behavioural problem[e]	Early developmental vulnerability (behaviour)[f]
Matched sample (*n*=9,873)	uOR	**5.06**	0.75	2.72	1.73	7.32	2.25	2.06
	(95% CI)	**(4.63, 5.54)**	(0.67, 0.83)	(2.50, 2.96)	(1.59, 1.89)	(6.68, 8.03)	(1.96, 2.57)	(1.89, 2.25)
	p	**<0.001**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	aOR	**3.71**	0.90	2.08	1.10	4.40	1.06	1.23
	(95% CI)	**(3.34, 4.12)**	(0.79, 1.03)	(1.88, 2.31)	(1.00, 1.22)	(3.98, 4.87)	(0.90, 1.24)	(1.10, 1.37)
	p	**<0.001**	0.116	<0.001	0.061	<0.001	0.487	<0.001
Sensitivity sample (*n*=6,531)	uOR	**2.51**	0.74	2.77	1.60	5.22	1.75	1.65
	(95% CI)	**(2.25, 2.78)**	(0.64, 0.85)	(2.48, 3.10)	(1.44, 1.79)	(4.66, 5.85)	(1.47, 2.08)	(1.47, 1.84)
	p	**<0.001**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	aOR	**2.02**	0.91	2.06	1.13	3.70	1.02	1.18
	(95% CI)	**(1.78, 2.29)**	(0.77, 1.08)	(1.82, 2.34)	(1.00, 1.27)	(3.27, 4.18)	(0.84, 1.24)	(1.03, 1.34)
	p	**<0.001**	0.276	<0.001	0.059	<0.001	0.807	0.014

a: Relative to female children

b: Relative to children of non-Aboriginal and/or Torres Strait Islander background

c: Relative to children from less disadvantaged areas (quintiles 2–5)

d: Relative to children without a child protection services report or a report that did not meet the threshold of 'risk of significant harm'

e: Relative to children without an emotional and/or behavioural problem

f: Relative to children without developmental vulnerability on the AEDC subdomains of Responsibility and respect, Aggressive behaviour, or Hyperactive and inattentive behaviour

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); green text=non-significant *p*-value (>0.05)

Table A2: Odds ratios of any police contact according to timing of first suspension, relative to non-suspended children

		Timing of first suspension	
		Years 3 or 4	Years 5 or 6
Matched sample (*n*=9,873)	uOR	6.02	4.22
	(95% CI)	(5.37, 6.76)	(3.76, 4.73)
	aOR	4.03	3.42
	(95% CI)	(3.54, 4.60)	(3.00, 3.89)
Sensitivity sample (*n*=6,531)	uOR	3.06	2.02
	(95% CI)	(2.67, 3.51)	(1.75, 2.33)
	aOR	2.34	1.73
	(95% CI)	(2.00, 2.73)	(1.48, 2.03)

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A3: Odds ratios of any police contact according to total number of suspensions received by suspended children, each relative to non-suspended children

		Total number of suspensions received				
		1	2	3–4	5–9	10+
Matched sample (*n*=9,873)	uOR	3.09	4.90	8.50	11.12	28.26
	(95% CI)	(2.75, 3.46)	(4.10, 5.85)	(6.94, 10.41)	(8.78, 14.08)	(18.14, 44.03)
	aOR	2.64	3.63	5.77	6.45	13.86
	(95% CI)	(2.32, 3.00)	(2.98, 4.42)	(4.62, 7.21)	(5.00, 8.32)	(8.74, 22.00)
Sensitivity sample (*n*=6,531)	uOR	1.61	2.67	4.11	4.93	11.75
	(95% CI)	(1.40, 1.85)	(2.17, 3.30)	(3.25, 5.20)	(3.76, 6.46)	(7.29, 18.95)
	aOR	1.44	2.08	3.16	3.36	6.73
	(95% CI)	(1.24, 1.69)	(1.65, 2.63)	(2.44, 4.09)	(2.50, 4.50)	(4.06, 11.16)

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A4: Odds ratios of any police contact according to total days suspended among suspended children, each relative to non-suspended children

		Total days suspended					
		1–2	3–4	5–10	11–20	21–40	41+
Matched sample (*n*=9,873)	uOR	2.76	3.62(	5.49	8.29	13.34	24.92
	(95% CI)	(2.38, 3.21)	3.12, 4.20)	(4.66, 6.48)	(6.61, 10.40)	(9.97, 17.83)	(16.76, 37.03)
	aOR	2.44	2.91	4.13	5.29	7.45	12.86
	(95% CI)	(2.06, 2.88)	(2.46, 3.43)	(3.44, 4.96)	(4.13, 6.76)	(5.46, 10.18)	(8.50, 19.47)
Sensitivity sample (*n*=6,531)	uOR	1.56	1.76	3.08	3.87	5.76	9.35
	(95% CI)	(1.30, 1.88)	(1.46, 2.12)	(2.54, 3.73)	(2.97, 5.05)	(4.14, 8.01)	(6.05, 14.46)
	aOR	1.44	1.48	2.49	2.80	3.78	5.75
	(95% CI)	(1.18, 1.76)	(1.21, 1.81)	(2.10, 3.73)	(2.10, 3.73)	(2.65, 5.40)	(3.61, 9.14)

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A5: Odds ratios of any police contact according to suspension reason, each relative to non-suspended children

		Suspension reason				
		AB	CD	PV	PSM	WP/IM/SU/CBS
Matched sample (*n*=9,873)	uOR	3.12	5.65	5.27	9.95	8.79
	(95% CI)	(2.73, 3.57)	(4.90, 6.52)	(4.40, 6.32)	(7.93, 12.50)	(6.65, 11.62)
	aOR	2.62	4.00	3.73	6.13	6.31
	(95% CI)	(2.52, 3.04)	(3.41, 4.69)	(3.05, 4.56)	(4.78, 7.86)	(4.65, 8.57)
Sensitivity sample (*n*=6,531)	aOR	1.68	2.89	2.60	4.13	4.13
	(95% CI)	(1.42, 1.98)	(2.44, 3.43)	(2.09, 3.23)	(3.16, 5.40)	(2.99, 5.70)
	uOR	1.45	2.30	2.02	2.91	3.43
	(95% CI)	(1.21, 1.73)	(1.91, 2.78)	(1.59, 2.57)	(2.17, 3.90)	(2.41, 4.88)

Note: AB=aggressive behaviour (short suspension); CD=continued disobedience (short suspension); PV=physical violence (long suspension); PSM=persistent or serious misbehaviour (long suspension). WP/IM/SU/CBS (long suspensions, combined reasons)=use or possession of a weapon, firearm or knife; and/or use of an implement as a weapon; and/or possession, supply, or use of an illegal or restricted substance, and/or serious criminal behaviour related to the school. uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A6: Prevalence of children with suspensions, according to the timing, total number, total days and reasons for suspension, within the population sample available for the person-of-interest analysis (*n*=58,882)		
Suspension characteristics	***n***	**(%)**
No suspension	56,325	(95.7)
Timing of first suspension		
Years 3 or 4	1,359	(53.1)
Years 5 or 6	1,198	(46.9)
Total number of suspensions		
1 suspension only	1,155	(45.2)
2 suspensions	431	(16.9)
3–4 suspensions	417	(16.3)
5 or more suspensions	554	(21.7)
Total days suspended		
1–2 days	604	(23.6)
3–4 days	602	(23.5)
5–15 days	739	(28.9)
16 days or more	612	(23.9)
Reason for suspension hierarchy		
Aggressive behaviour (short suspension)	785	(30.7)
Continued disobedience (short suspension)	742	(29.0)
Physical violence (long suspension)	424	(16.6)
Persistent or serious misbehaviour (long suspension)	373	(14.6)
Possession/use of a weapon; and/or use of any object as a weapon; and/or possession/supply/use of an illegal or restricted substance; and/or serious criminal behaviour related to the school (long suspension)	233	(9.1)

Note: This sample excludes 9,239 children whose contact with police was as a victim and/or witness only

Table A7: Odds ratios of police contact as a person of interest according to timing of first suspension, relative to non-suspended children			
		Timing of first suspension	
		Years 3 or 4	**Years 5 or 6**
Matched sample (*n*=7,671)	uOR	13.15	8.01
	(95% CI)	(11.39, 15.17)	(6.91, 9.29)
	aOR	10.56	7.79
	(95% CI)	(8.98, 12.41)	(6.60, 9.19)
Sensitivity sample (*n*=6,603)	uOR	10.09	6.09
	(95% CI)	(8.64, 11.78)	(5.18, 7.17)
	aOR	8.27	5.74
	(95% CI)	(6.96, 9.84)	(4.81, 6.84)

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A8: Odds ratios of police contact as a person of interest according to total number of suspensions received by suspended children, each relative to non-suspended children

		Total number of suspensions received			
		1	2	3–4	5+
Matched sample (*n*=7,671)	uOR	4.98	9.48	19.82	37.02
	(95% CI)	(4.27, 5.81)	(7.67, 11.70)	(15.83, 24.82)	(29.54, 46.41)
	aOR	5.06	8.43	16.32	24.91
	(95% CI)	(4.27, 6.00)	(6.68, 10.64)	(12.75, 20.89)	(19.52, 31.79)
Sensitivity sample (*n*=6,603)	uOR	4.18	7.77	15.03	25.05
	(95% CI)	(3.53, 4.93)	(6.20, 9.75)	(11.82, 19.11)	(19.71, 31.85)
	aOR	4.08	6.70	12.83	17.89
	(95% CI)	(3.41, 4.89)	(5.24, 8.57)	(9.87, 16.68)	(13.80, 23.20)

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A9: Odds ratios of police contact as a person of interest according to total days suspended among suspended children, each relative to non-suspended children

		Total days suspended			
		1–2	3–4	5–15	16+
Matched sample (*n*=7,671)	uOR	4.35	6.00	12.91	37.04
	(95% CI)	(3.57, 5.29)	(4.96, 7.25)	(10.86, 15.36)	(29.82, 46.01)
	aOR	4.58	5.66	11.28	25.24
	(95% CI)	(3.70, 5.68)	(4.60, 4.96)	(9.30, 13.67)	(19.96, 31.93)
Sensitivity sample (*n*=6,603)	uOR	3.65	5.02	10.40	24.68
	(95% CI)	(2.95, 4.52)	(4.09, 6.16)	(8.64, 12.53)	(19.59, 31.10)
	aOR	3.70	4.55	9.15	17.61
	(95% CI)	(2.94, 4.65)	(3.65, 5.67)	(7.45, 11.23)	(13.70, 22.62)

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001.

Table A10: Odds ratios of police contact as a person of interest according to suspension reason, each relative to non-suspended children

		Suspension reason				
		AB	CD	PV	PSM	WP/IM/SU/CBS
Matched sample (*n*=9,873)	uOR	3.12	5.65	5.27	9.95	8.79
	(95% CI)	(2.73, 3.57)	(4.90, 6.52)	(4.40, 6.32)	(7.93, 12.50)	(6.65, 11.62)
	aOR	2.62	4.00	3.73	6.13	6.31
	(95% CI)	(2.52, 3.04)	(3.41, 4.69)	(3.05, 4.56)	(4.78, 7.86)	(4.65, 8.57)
Sensitivity sample (*n*=6,531)	aOR	1.68	2.89	2.60	4.13	4.13
	(95% CI)	(1.42, 1.98)	(2.44, 3.43)	(2.09, 3.23)	(3.16, 5.40)	(2.99, 5.70)
	uOR	1.45	2.30	2.02	2.91	3.43
	(95% CI)	(1.21, 1.73)	(1.91, 2.78)	(1.59, 2.57)	(2.17, 3.90)	(2.41, 4.88)

Note: AB=aggressive behaviour (short suspension); CD=continued disobedience (short suspension); PV=physical violence (long suspension); PSM=persistent or serious misbehaviour (long suspension). WP/IM/SU/CBS (long suspensions, combined reasons)=use or possession of a weapon, firearm or knife; and/or use of an implement as a weapon; and/or possession, supply or use of an illegal or restricted substance; and/or serious criminal behaviour related to the school. uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); all *p*-values significant at ≤0.001

Table A11: Odds ratios of police contact as a person of interest for suspended relative to non-suspended children

		Any suspension	Male sex[a]	Aboriginal &/ Torres Strait Islander background[b]	Area socio-economic disadvantage[c]	Child maltreatment[d]	Emotional and/or behavioural problem[e]	Early developmental vulnerability (behaviour)[f]
Matched sample (*n*=7,671)	uOR	10.42	0.86	2.57	1.21	6.98	2.33	2.30
	(95% CI)	(9.22, 11.77)	(0.74, 0.99)	(2.31, 2.87)	(1.09, 1.35)	(6.20, 7.86)	(1.99, 2.74)	(2.06, 2.57)
	p	<0.001	0.045	<0.001	<0.001	<0.001	<0.001	<0.001
	aOR	9.13	1.19	2.43	1.02	3.82	0.99	1.24
	(95% CI)	(7.95, 10.49)	(0.93, 1.34)	(2.11, 2.79)	(0.89, 1.16)	(3.33, 4.38)	(0.82, 1.20)	(1.08, 1.42)
	p	<0.001	0.230	<0.001	0.823	<0.001	0.934	0.002
Sensitivity sample (*n*=6,603)	uOR	7.96	0.79	2.58	1.17	6.04	1.99	2.07
	(95% CI)	(6.97, 9.10)	(0.67, 0.92)	(2.28, 2.92)	(1.04, 1.32)	(5.30, 6.87)	(1.65, 2.38)	(1.83, 2.35)
	p	<0.001	0.004	<0.001	0.011	<0.001	<0.001	<0.001
	aOR	6.94	1.02	2.27	0.98	3.56	0.90	1.19
	(95% CI)	(5.98, 8.05)	(0.84, 1.24)	(1.95, 2.63)	(0.85, 1.12)	(3.07, 4.12)	(0.73, 1.11)	(1.02, 1.38)
	p	<0.001	0.829	<0.001	0.735	<0.001	0.326	0.024

a: Relative to female children

b: Relative to children of non-Aboriginal and/or Torres Strait Islander background

c: Relative to children from less disadvantaged areas (quintiles 2–5)

d: Relative to children without a child protection services report or a report that did not meet the threshold of 'risk of significant harm'

e: Relative to children without an emotional and/or behavioural problem

f: Relative to children without developmental vulnerability on the AEDC subdomains of Responsibility and respect, Aggressive behaviour, or Hyperactive and inattentive behaviour

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); green text=non-significant *p*-value (>0.05)

Table A12: Odds ratios of police contact as a victim for suspended relative to non-suspended children

		Any suspension	Male sex[a]	Aboriginal &/ Torres Strait Islander background[b]	Area socio-economic disadvantage[c]	Child maltreatment[d]	Emotional and/or behavioural problem[e]	Early developmental vulnerability (behaviour)[f]
Matched sample (*n*=8,289)	uOR	5.58	0.65	2.48	1.22	7.62	2.50	2.16
	(95% CI)	(5.04, 6.18)	(0.57, 0.73)	(2.25, 2.73)	(1.11, 1.34)	(6.86, 8.46)	(2.15, 2.90)	(1.96, 2.39)
	p	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	aOR	4.11	0.75	1.82	1.03	4.64	1.19	1.22
	(95% CI)	(3.66, 4.62)	(0.64, 0.86)	(1.61, 2.05)	(0.93, 1.16)	(4.13, 5.21)	(1.00, 1.42)	(1.08, 1.38)
	p	<0.001	<0.001	<0.001	0.564	<0.001	0.047	<0.001
Sensitivity sample (*n*=5,688)	uOR	2.66	0.63	2.60	1.24	5.12	1.77	1.62
	(95% CI)	(2.35, 3.02)	(0.53, 0.74)	(2.28, 2.96)	(1.10, 1.41)	(4.48, 5.84)	(1.45, 2.15)	(1.42, 1.85)
	p	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	aOR	2.08	0.77	1.76	1.02	3.66	1.07	1.15
	(95% CI)	(1.80, 2.40)	(0.64, 0.92)	(1.52, 2.04)	(0.89, 1.16)	(3.17, 4.22)	(0.86, 1.32)	(0.99, 1.33)
	p	<0.001	0.005	<0.001	0.820	<0.001	0.566	0.071

a: Relative to female children

b: Relative to children of non-Aboriginal and/or Torres Strait Islander background

c: Relative to children from less disadvantaged areas (quintiles 2–5)

d: Relative to children without a child protection services report or a report that did not meet the threshold of 'risk of significant harm'

e: Relative to children without an emotional and/or behavioural problem

f: Relative to children without developmental vulnerability on the AEDC subdomains of Responsibility and respect, Aggressive behaviour, or Hyperactive and inattentive behaviour

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); green text=non-significant *p*-value (>0.05)

Table A13: Odds ratios of police contact as a witness for suspended relative to non-suspended children

		Any suspension	Male sex[a]	Aboriginal &/ Torres Strait Islander background[b]	Area socio-economic disadvantage[c]	Child maltreatment[d]	Emotional and/or behavioural problem[e]	Early developmental vulnerability (behaviour)[f]
Matched sample (*n*=5,394)	uOR	8.75	0.59	2.85	1.26	9.22	1.98	2.11
	(95% CI)	(7.30, 10.48)	(0.48, 0.71)	(2.44, 3.34)	(1.08, 1.47)	(7.67, 11.09)	(1.58, 2.49)	(1.80, 2.48)
	p	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001
	aOR	7.04	0.70	2.12	1.02	5.19	0.89	1.20
	(95% CI)	(5.77, 8.60)	(0.55, 0.88)	(1.76, 2.57)	(0.85, 1.22)	(4.24, 6.35)	(0.68, 1.16)	(0.99, 1.45)
	p	<0.001	0.002	<0.001	0.829	<0.001	0.372	0.062
Sensitivity sample (*n*=4,773)	uOR	5.75	0.56	2.95	1.23	7.55	2.00	1.99
	(95% CI)	(4.70, 7.03)	(0.45, 0.71)	(2.45, 3.55)	(1.02, 1.47)	(6.13, 9.30)	(1.53, 2.61)	(1.65, 2.41)
	p	<0.001	<0.001	<0.001	0.031	<0.001	<0.001	<0.001
	aOR	4.53	0.69	2.06	0.98	4.55	0.97	1.19
	(95% CI)	(3.64, 5.64)	(0.53, 89)	(1.67, 2.55)	(0.80, 1.20)	(3.63, 5.70)	(0.72, 1.30)	(0.96, 1.47)
	p	<0.001	0.004	<0.001	0.835	<0.001	0.832	0.117

a: Relative to female children

b: Relative to children of non-Aboriginal and/or Torres Strait Islander background

c: Relative to children from less disadvantaged areas (quintiles 2–5)

d: Relative to children without a child protection services report or a report that did not meet the threshold of 'risk of significant harm'

e: Relative to children without an emotional and/or behavioural problem

f: Relative to children without developmental vulnerability on the AEDC subdomains of Responsibility and respect, Aggressive behaviour, or Hyperactive and inattentive behaviour

Note: uOR=unadjusted (bivariate) odds ratio (with 95% confidence intervals); aOR=fully adjusted odds ratio (with 95% confidence intervals); green text=non-significant *p*-value (>0.05)

Table A14: Adjusted odds ratios of any police contact for each of the six covariates (fully adjusted for particular suspension characteristics and the other five covariates)

Sample		Male sex[a]	Aboriginal or Torres Strait Islander background[b]	Area socio-economic disadvantage[c]
Timing of first suspension				
Matched sample (*n*=9,873)	aOR	0.89	2.07	1.10
	(95% CI)	(0.78, 1.02)	(1.87, 2.30)	(1.00, 1.22)
	p	0.093	<0.001	0.063
Sensitivity sample (*n*=6,531)	aOR	0.90	2.05	1.13
	(95% CI)	(0.77, 1.06)	(1.81, 2.33)	(1.00, 1.27)
	p	0.221	<0.001	0.060
Total number of suspensions				
Matched sample (*n*=9,873)	aOR	0.86	2.03	1.08
	(95% CI)	(0.76, 0.99)	(1.82, 2.25)	(0.98, 1.20)
	p	0.030	<0.001	0.125
Sensitivity sample (*n*=6,531)	aOR	0.88	2.02	1.11
	(95% CI)	(0.74, 1.03)	(1.78, 2.29)	(0.98, 1.26)
	p	0.117	<0.001	0.093
Total days suspended				
Matched sample (*n*=9,873)	aOR	0.87	2.03	1.09
	(95% CI)	(0.76, 0.99)	(1.83, 2.26)	(0.99, 1.21)
	p	0.032	<0.001	0.087
Sensitivity sample (*n*=6,531)	aOR	0.88	2.03	1.12
	(95% CI)	(0.75, 1.04)	(1.79, 2.31)	(0.99, 1.27)
	p	0.133	<0.001	0.069
Suspension reason				
Matched sample (*n*=9,873)	aOR	0.89	2.05	1.10
	(95% CI)	(0.78, 1.02)	(1.85, 2.28)	(0.99, 1.22)
	p	0.093	<0.001	0.069
Sensitivity sample (*n*=6,5312)	aOR	0.91	2.06	1.13
	(95% CI)	(0.77, 1.08)	(1.81, 2.33)	(1.00, 1.28)
	p	0.272	<0.001	0.057

Table A14: Adjusted odds ratios of any police contact for each of the six covariates (fully adjusted for particular suspension characteristics and the other five covariates)

Table A14: Adjusted odds ratios of any police contact for each of the six covariates (fully adjusted for particular suspension characteristics and the other five covariates) (cont.)

Sample		Child maltreatment[d]	Emotional and/or behavioural problem[e]	Early developmental vulnerability (behaviour)[f]
Timing of first suspension				
Matched sample (*n*=9,873)	aOR	4.38	1.05	1.22
	(95% CI)	(3.96, 4.85)	(0.90, 1.23)	(1.10, 1.36)
	p	<0.001	0.548	<0.001
Sensitivity sample (*n*=6,531)	aOR	3.68	1.01	1.16
	(95% CI)	(3.26, 4.16)	(0.83, 1.23)	(1.02, 1.32)
	p	<0.001	0.903	0.024
Total number of suspensions				
Matched sample (*n*=9,873)	aOR	4.21	1.01	1.20
	(95% CI)	(3.80, 4.66)	(0.86, 1.19)	(1.08, 1.34)
	p	<0.001	0.937	<0.001
Sensitivity sample (*n*=6,531)	aOR	3.57	0.98	1.15
	(95% CI)	(3.15, 4.04)	(0.80, 1.19)	(1.01, 1.32)
	p	<0.001	0.832	0.032
Total days suspended				
Matched sample (*n*=9,873)	aOR	4.19	1.01	1.21
	(95% CI)	(3.79, 4.64)	(0.86, 1.19)	(1.08, 1.35)
	p	<0.001	0.869	<0.001
Sensitivity sample (*n*=6,531)	aOR	3.57	0.99	1.15
	(95% CI)	(3.15, 4.04)	(0.81, 1.20)	(1.01, 1.34)
	p	<0.001	0.908	0.034
Suspension reason				
Matched sample (*n*=9,873)	aOR	4.34	1.05	1.21
	(95% CI)	(3.92, 4.80)	(0.89, 1.23)	(1.09, 1.35)
	p	<0.001	0.568	<0.001
Sensitivity sample (*n*=6,531)b	aOR	3.66	1.01	1.16
	(95% CI)	(3.24, 4.14)	(0.83, 1.23)	(1.02, 1.33)
	p	<0.001	0.932	0.023

a: Relative to female children

b: Relative to children of non-Aboriginal and/or Torres Strait Islander background

c: Relative to children from less disadvantaged areas (quintiles 2–5)

d: Relative to children without a child protection services report or a report that did not meet the threshold of 'risk of significant harm'

e: Relative to children without an emotional and/or behavioural problem

f: Relative to children without developmental vulnerability on the AEDC subdomains of Responsibility and respect, Aggressive behaviour, or Hyperactive and inattentive behaviour

Note: aOR=fully adjusted odds ratio (with 95% confidence intervals); green text=non-significant *p*-value (>0.05)

Table A15: Adjusted odds ratios of police contact as a person of interest for each of the six covariates (fully adjusted for particular suspension characteristics and the other five covariates)

Sample		Male sex[a]	Aboriginal or Torres Strait Islander background[b]	Area socio-economic disadvantage[c]
Timing of first suspension				
Matched sample (*n*=9,873)	aOR	1.09	2.40	1.01
	(95% CI)	(0.91, 1.31)	(2.09, 2.76)	(0.89, 1.16)
	p	0.341	<0.001	0.837
Sensitivity sample (*n*=6,531)	aOR	1.00	2.24	0.98
	(95% CI)	(0.82, 1.21)	(1.93, 2.61)	(0.85, 1.13)
	p	0.967	<0.001	0.758
Total number of suspensions				
Matched sample (*n*=9,873)	aOR	1.02	2.29	0.98
	(95% CI)	(0.85, 1.23)	(1.99, 2.65)	(0.86, 1.12)
	p	0.798	<0.001	0.795
Sensitivity sample (*n*=6,531)	aOR	0.96	2.19	0.95
	(95% CI)	(0.79, 1.16)	(1.88, 2.56)	(0.82, 1.10)
	p	0.645	<0.001	0.503
Total days suspended				
Matched sample (*n*=9,873)	aOR	1.04	2.29	1.00
	(95% CI)	(0.87, 1.26)	(1.98, 2.65)	(0.87, 1.14)
	p	0.648	<0.001	0.978
Sensitivity sample (*n*=6,531)	aOR	0.97	2.19	0.97
	(95% CI)	(0.80, 1.18)	(1.87, 2.55)	(0.84, 1.12)
	p	0.734	<0.001	0.662
Suspension reason				
Matched sample (*n*=9,873)	aOR	1.10	2.37	1.00
	(95% CI)	(0.92, 1.32)	(2.06, 2.74)	(0.88, 1.15)
	p	0.308	<0.001	0.948
Sensitivity sample (*n*=6,531)	aOR	1.02	2.25	0.97
	(95% CI)	(0.84, 1.24)	(1.93, 2.63)	(0.84, 1.12)
	p	0.821	<0.001	0.678

Table A15: Adjusted odds ratios of police contact as a person of interest for each of the six covariates (fully adjusted for particular suspension characteristics and the other five covariates)

Table A15: Adjusted odds ratios of police contact as a person of interest for each of the six covariates (fully adjusted for particular suspension characteristics and the other five covariates) (cont.)

Sample		Child maltreatment[d]	Emotional and/or behavioural problem[e]	Early developmental vulnerability (behaviour)[f]
Timing of first suspension				
Matched sample (*n*=9,873)	aOR	3.77	0.97	1.22
	(95% CI)	(3.29, 4.33)	(0.80, 1.18)	(1.06, 1.40)
	p	<0.001	0.773	0.004
Sensitivity sample (*n*=6,531)	aOR	3.51	0.87	1.17
	(95% CI)	(3.03, 4.07)	(0.71, 1.08)	(1.01, 1.36)
	p	<0.001	0.221	0.042
Total number of suspensions				
Matched sample (*n*=9,873)	aOR	3.44	0.89	1.19
	(95% CI)	(2.99, 3.96)	(0.72, 1.09)	(1.03, 1.37)
	p	<0.001	0.254	0.018
Sensitivity sample (*n*=6,531)	aOR	3.27	0.80	1.14
	(95% CI)	(2.81, 3.80)	(0.64, 1.00)	(0.98, 1.33)
	p	<0.001	0.050	0.098
Total days suspended				
Matched sample (*n*=9,873)	aOR	3.47	0.90	1.20
	(95% CI)	(3.01, 3.99)	(0.74, 1.11)	(1.04, 1.38)
	p	<0.001	0.327	0.013
Sensitivity sample (*n*=6,531)	aOR	3.29	0.82	1.15
	(95% CI)	(2.83, 3.82)	(0.65, 1.02)	(0.99, 1.34)
	p	<0.001	0.076	0.076
Suspension reason				
Matched sample (*n*=9,873)	aOR	3.70	0.96	1.19
	(95% CI)	(3.22, 4.25)	(0.78, 1.17)	(1.03, 1.36)
	p	<0.001	0.666	0.017
Sensitivity sample (*n*=6,531)	aOR	3.48	0.87	1.15
	(95% CI)	(3.00, 4.04)	(0.70, 1.08)	(0.98, 1.33)
	p	<0.001	0.214	0.080

a: Relative to female children

b: Relative to children of non-Aboriginal and/or Torres Strait Islander background

c: Relative to children from less disadvantaged areas (quintiles 2–5)

d: Relative to children without a child protection services report or a report that did not meet the threshold of 'risk of significant harm'

e: Relative to children without an emotional and/or behavioural problem

f: Relative to children without developmental vulnerability on the AEDC subdomains of Responsibility and respect, Aggressive behaviour, or Hyperactive and inattentive behaviour

Note: aOR=fully adjusted odds ratio (with 95% confidence intervals); green text=non-significant *p*-value (>0.05)

Table A16: Prevalence of children in the population and implementation samples receiving suspensions, by suspension characteristics and school implementation status

Suspension characteristics	Population sample (*n*=68,121)		Implementation sample (*n*=14,387)		School implementation status					
					High (*n*=2,911)		Moderate (*n*=7,909)		Low (*n*=3,567)	
	n	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)
No suspension[a]	64,830	(95.2)	13,767	(95.7)	2,795	(96.0)	7,573	(95.8)	3,399	(95.3)
Timing of first suspension										
Years 3 or 4	1,723	(52.4)	287	(46.3)	53	(45.7)	169	(50.3)	65	(38.7)
Years 5 or 6	1,568	(47.6)	333	(53.7)	63	(54.3)	167	(49.7)	103	(61.3)
Total number of suspensions										
1 suspension only	1,539	(46.8)	352	(56.8)	66	(56.9)	184	(54.8)	102	(60.7)
2 suspensions	570	(17.3)	99	(16.0)	15	(12.9)	56	(16.7)	28	(16.7)
3–4 suspensions	521	(15.8)	78	(12.6)	15	(12.9)	46	(13.7)	17	(10.1)
5+ suspensions[b]	661	(20.1)	91	(14.7)	20	(17.2)	50	(14.9)	21	(12.5)
Total days suspended										
1–2 days	797	(24.2)	184	(29.7)	35	(30.2)	96	(28.6)	53	(31.5)
3–4 days	816	(24.8)	174	(28.1)	33	(28.4)	99	(29.5)	42	(25.0)
5–10 days	700	(21.3)	127	(20.5)	24	(20.7)	69	(20.5)	34	(20.2)
11+ days[c]	978	(29.7)	135	(21.8)	24	(20.7)	72	(21.4)	39	(23.2)
Reason for suspension hierarchy										
Aggressive behaviour (short)	1,049	(31.9)	58	(34.5)	46	(39.7)	115	(34.2)	58	(34.5)
Continued disobedience (short)	976	(29.7)	42	(25.0)	35	(30.2)	119	(35.4)	42	(25.0)
Physical violence (long)	556	(16.9)	37	(22.0)	15	(12.9)	39	(11.6)	37	(22.0)
Any of the four most serious reasons (long)[d]	710	(21.6)	31	(18.5)	20	(17.2)	63	(18.8)	31	(18.5)

a: Percentages for no suspension are reported relative to the respective sample totals, while percentages reported within levels of a suspension characteristic are relative to the total on that characteristic for the respective sample

b: Minimum cell size requirements required the combination of the categories for 5–9 suspensions

c: Minimum cell size requirements required the combination of the categories for 11–20 days

d: Minimum cell size requirements required the combination of the four most serious reasons for suspension. These include possession/use of a weapon; use of any object as a weapon; possession/supply/use of an illegal or restricted substance; and serious criminal behaviour related to the school

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