



## What is the relationship between childhood maltreatment and early educational outcomes?

### Findings from the NSW Child Development Study

#### Snapshot

- Children who have experienced maltreatment, no matter the level of involvement with child protection services, are at greater risk of attaining poorer educational outcomes in primary school assessments of reading and numeracy.
- Compared to non-reported children, children known to child protection services were more likely to have below average primary school assessments of reading and numeracy and less likely to achieve above average results.
- Children with substantiated risk of significant harm (ROSH) reports who were not placed into out-of-home-care (OOHC) showed the poorest educational attainment and would benefit from personalised educational supports and educational plans such as those provided for children in OOHC.
- The educational attainment of children placed in OOHC appears to be strongly influenced by other related child, family, and neighbourhood factors (e.g., socioeconomic status) that are known to be associated with OOHC placements.
- Inter-agency policy collaboration is important, particularly between the Department of Education and the Department of Communities and Justice, to develop and invest in effective multidisciplinary programs that support vulnerable children's educational needs.
  - All children in OOHC should participate in the [OOHC Education Pathway](#) that provides collaborative and consistent educational support to help them engage with suitable quality education and reach their full learning potential.
  - Broader provision of educational supports in vulnerable communities, for example under the Government's Brighter Beginnings initiative, may help to address the impact of maltreatment on educational attainment for all children reported to child protection services.

#### Introduction

Children who receive a quality education are likely to live longer and to experience better health outcomes.<sup>1</sup> However, children who have experienced maltreatment show poorer academic attainment and increased rates of repeating grades, absence, and leaving school early than children who have not experienced maltreatment, resulting in long-term occupational, social, and wellbeing impacts.<sup>1,2,3</sup>

Recent research conducted by the NSW Child Development Study (NSW-CDS) has looked at the relationship between childhood maltreatment and educational outcomes in primary school. This Evidence to Action Note outlines the key findings from this research study, 'Reading and numeracy attainment of children reported to child protection services: A population record linkage study controlling for other adversities'.<sup>4</sup> It also discusses the implications of this research for policy and practice.

## What is known about the relationship between childhood maltreatment and educational outcomes?

Large population studies have shown that children with **substantiated** child protection reports (i.e., children with OOHC placements and substantiated ROSH reports where harm or risk of harm is verified by child protection case workers) have poorer academic outcomes.<sup>5,6,7,8,9</sup> In these studies, the educational achievement gap of children with an OOHC placement (compared to their peers without a child protection services report) was reduced when other life adversities that these children may experience were also considered (e.g., socioeconomic position, prenatal and birth factors, and parental factors).

Children with **unsubstantiated** reports to child protection services may also experience poorer educational outcomes.<sup>5,8,10,11</sup> A [recent study](#)<sup>12</sup> from the NSW-CDS examined literacy and numeracy **at school entry**, for all children known to child protection services, including those with unsubstantiated ROSH reports and those reported to child protection services who did not meet the ROSH threshold for further investigation. Although the literacy and numeracy skills of these two groups of children were less affected than that of the children with substantiated child protection reports, these children were more likely to be rated by teachers as having poorer literacy and numeracy (specifically, developmental vulnerability on the Australian Early Development Census Language and Cognitive skills [school-based] domain) in their first year of formal schooling (kindergarten), relative to non-reported children.<sup>5</sup>



## What data did this study use from the NSW-CDS?

This study used linked data from the NSW-CDS to examine associations between maltreatment and childhood educational outcomes.

The [NSW-CDS](#) is a longitudinal population study of the mental health and wellbeing of a cohort of 91,635 children in NSW from birth to 13-14 years. It has (to date) linked administrative records from 2001 to 2016 from multiple NSW agencies, including Health, Education, and Communities and Justice, with cross-sectional survey data. Parental records are also available for children in the study whose births were registered in NSW.

## How did the researchers measure childhood maltreatment?

The researchers measured early childhood maltreatment by identifying children who were the subject of at least one child protection report prior to each educational assessment, using NSW child protection administrative data from 2001-2016.

The researchers allocated the children who had been reported to child protection services into subgroups, based on the highest level of child protection response that they had received. These subgroups are mutually exclusive. For example, if a child had a recorded OOHC placement and a substantiated ROSH report, they were placed in the OOHC group.

The four levels of child protection response were as below.



**OOHC placement:** children with at least one placement in OOHC. This was deemed the highest service response, as it may reflect more severe maltreatment of the child or the inability of a family to continue caring for their child.



**Substantiated ROSH report:** instances of actual or risk of significant harm verified by child protection case workers but not resulting in removal of the child from their family. A child is deemed to be at risk of significant harm if the circumstances causing concern for their safety, welfare or wellbeing are sufficiently serious to warrant a response by a statutory authority, with or without the consent of their family.



**Unsubstantiated ROSH report:** including reports that initially met the threshold for risk of significant harm but no actual or risk of harm was determined during follow-up by case workers, or the report was not further investigated because of resource constraints.



**Non-ROSH report:** children with reports that did not reach the threshold for risk of significant harm.

## How did the researchers measure childhood educational attainment?

Childhood educational attainment was assessed by the National Assessment Program - Literacy and Numeracy (NAPLAN). The NAPLAN is an assessment for Australian children that is delivered nationally to students in Grades 3, 5, 7, and 9 attending government and non-government schools. It tests children's ability in literacy (reading, writing and language conventions) and numeracy. Scaled scores are categorised into six bands of attainment at each year level. For more information see [NAPLAN](#).

This study used NAPLAN **reading** and **numeracy** scores collected when the children were in Grade 3 (around 8 years of age) and Grade 5 (around 10 years of age). Of the six bands, the middle two bands were grouped together and labelled 'average attainment'. The two bands above the average attainment group were labelled 'above average attainment', and the two bands below the average attainment group were labelled 'below average attainment'. The proportion of results in each of these groups is not equal and the distribution is not normal.

## What did the study find?

This study used this linked data to examine the reading and numeracy attainment of children reported to child protection services, compared to their peers who had not been reported to child protection services.

**Table 1: Number of children in Grades 3 and 5 for each level of child protection response**

Child protection response level	Grade 3 N=56,860 (%)	Grade 5 N=56,189 (%)
OOHC placement	616 (1.1)	685 (1.2)
Substantiated ROSH	890 (1.6)	1,176 (2.1)
Non-substantiated ROSH	3,420 (6.0)	4,731 (8.4)
Non-ROSH	427 (0.8)	2,117 (3.8)

The key finding from the study is that children with any level of interaction with child protection (approximately 15.5% of children in this sample by the end of Grade 4), including those deemed not to meet the risk threshold for further investigation, show adverse educational outcomes in Grades 3 and 5. All children reported to child protection services are more likely to attain below average and less likely to attain above average reading and numeracy results in the NAPLAN in Grades 3 and 5 compared to children not reported to child protection services. For children placed in OOHC, some of the increased risk of below average attainment (and all of the decreased likelihood of above average attainment) may be accounted for by other risk factors that are **associated** with being placed in OOHC (e.g., poor literacy and numeracy at school entry, socioeconomic disadvantage).

### There is an association between child protection contact and ‘below average’ reading and numeracy attainment

An initial analysis examined the relationship between child protection response levels and **below average** reading and numeracy attainment, without considering any other factors. Relative to children with no child protection report, children in each of the four child protection response subgroups experienced a significantly increased risk of below average attainment on reading and numeracy at Grades 3 and 5.



Relative to children without a child protection report,



Children with an OOHC placement were **3-4x** as likely to achieve **below average** literacy and numeracy attainment



Children with a substantiated ROSH report were over **3x** as likely to achieve **below average** literacy and numeracy attainment



Children with an unsubstantiated ROSH report were over **2x** as likely to achieve **below average** literacy and numeracy attainment



Children with non-ROSH reports were around **2x** as likely to achieve **below average** literacy and numeracy attainment

**Child protection contact decreases the chance of a child having ‘above average’ reading and numeracy attainment**

Without considering any other factors, children with any form of child protection contact were significantly less likely to attain **above average** reading and numeracy at Grades 3 and 5 relative to children with no child protection reports.

Relative to children without a child protection report



Children with an OOHC placement were **3-4x** less likely to achieve **above average** literacy and numeracy attainment



Children with a substantiated ROSH report were **2.5-3.5x** less likely to achieve **above average** literacy and numeracy attainment



Children with an unsubstantiated ROSH report were **2-2.5x** less likely to achieve **above average** literacy and numeracy attainment



Children with non-ROSH reports were **1.5-2x** less likely to achieve **above average** literacy and numeracy attainment

## Other vulnerability factors impact reading and numeracy outcomes

The analyses were repeated taking into account the possible contribution of a range of other child, family, and neighbourhood factors on children's reading and numeracy attainment at Grades 3 and 5 (see box).<sup>\*</sup> Key findings from this analysis showed:

- **With the inclusion of these other vulnerability factors, the relationship between OOHC placement and below average reading and numeracy skills was significantly reduced (at times no longer statistically significant).** This should not be interpreted as meaning that children with an OOHC placement were no longer at risk of poor academic achievement. This pattern of findings indicates that **children in OOHC have many of these other child, family, and neighbourhood vulnerabilities which are also associated with poor educational attainment.** These vulnerability factors are part of the reason why there is an association between OOHC and poor educational attainment, and could be targeted for interventions (e.g., poor literacy and numeracy at school entry, socioeconomic disadvantage).
- When including other child, family, and neighbourhood risk factors in the analysis, the **greatest risk of below average reading and numeracy attainment was experienced by children with a substantiated ROSH report.**
- The other factor with the strongest association with reading and numeracy skills was the kindergarten teacher's rating of developmental vulnerability on the AEDC language and cognitive skills domain. The AEDC distinguishes 'developmentally vulnerable' children as those scoring in the lowest 10% of the 2009 National AEDC population distribution on that domain.
- Other factors that influenced NAPLAN performance of the study cohort included the presence of one or multiple other AEDC developmental vulnerabilities, socioeconomic disadvantage, Indigenous status and exposure to maternal smoking during pregnancy.

### Other child, family, and neighbourhood vulnerability factors associated with reading and numeracy attainment

There are many other complex vulnerability factors that may impact a child's educational outcomes. The following vulnerability factors have been included in the additional analysis:

- Sociodemographic factors (age at NAPLAN assessment, sex, socioeconomic disadvantage, English as second language, Indigenous status).
- Pregnancy and birth factors (maternal age at child's birth, maternal smoking during pregnancy, late or no antenatal care visits, pre-term birth).
- Parental factors (parental history of any mental illness, parental history of any criminal offending).
- Early (kindergarten) developmental vulnerabilities (recorded developmental vulnerability on the AEDC language and cognitive skills [school-based] domain, a measure of early literacy and numeracy).
- One or more other developmental vulnerabilities identified at kindergarten level on other AEDC domains: physical health and wellbeing, social competence, emotional maturity, and/or communication skills and general knowledge.

<sup>\*</sup> It is important to note that being Aboriginal is not a risk in and of itself. Rather, it is the systematic response of governments, intergenerational trauma and socioeconomic disadvantage experienced by many Aboriginal people that may place them at risk of poorer educational outcomes.

## What does this mean for policy and programs?

Over the past decade there has been an increased attempt to provide cross-agency educational support for children placed in OOHC.<sup>13</sup> One existing program in NSW is the [OOHC Education Pathway](#). The aim of the OOHC Education Pathway is to ensure that all children or young people who enter OOHC undertake Personalised Learning and Support Planning to ensure that their developmental and educational needs are met, monitored and reviewed annually to help them reach their full learning potential. This support is designed to increase educational outcomes and attendance, decrease suspensions and to support their learning needs and goals. Personalised Learning and Support Planning requires regular child-centred and collaborative conversations between all the key people in a child's life including caseworkers, support people, carers, educators and the child themselves if appropriate. Since this study showed that children with substantiated reports who were not placed in care were at greatest risk of poor academic attainment, the cross-agency support and targeted interventions received by children in OOHC might benefit all children with substantiated maltreatment reports.

A range of vulnerability factors were shown in this study to impact educational outcomes. Targeted support for vulnerable student cohorts needs to recognise that this is often linked to the vulnerability of the student's family which may also require greater community and government support. Engaging and including the family in the school community is likely to assist the family and young person to connect and remain engaged in school.



In particular, those children that were identified by their

kindergarten teachers as being vulnerable educationally (in the lowest 10 per cent of the population for literacy and numeracy) at school entry had the greatest risk of poorer educational results later in primary school. That is, they came into schooling substantially behind their peers in literacy and numeracy and are not catching up in the intervening years. Those with poor kindergarten literacy and numeracy skills as well as child protection service contact are particularly at risk. To address this, in NSW, there have been calls for increased investment in effective universal programs, in early learning (preschool) and in early intervention services for vulnerable communities and individuals.<sup>13</sup>

It is well established that access to quality early childhood education (ECE) is important for school readiness and other developmental outcomes, particularly for children who experience disadvantage and vulnerability.<sup>14</sup> In recognition of this, the NSW Department of Education (DoE) appointed the NSW Department of Communities and Justice to co-commission local responses to address non-fee barriers to ECE access. DoE has invested \$6 million over two years. The trial sites are the LGAs of Walgett Shire, Kempsey Shire, Cessnock and Fairfield with the aim of increasing the number of children accessing ECE by 600. This project is a key work stream under the NSW Government's Brighter Beginnings initiative.

## The original research

For more information about the original research you can contact the [NSW-CDS](#).

The original research paper is:

Laurens, KR, Islam, F, Kariuki, M, Harris, F, Chilvers, M, Butler, M, Schofield, J, Essery, C, Brinkman, SA, Carr, VJ & Green, MJ 2020, 'Reading and numeracy attainment of children reported to child protection services: a population linkage study controlling for other adversities'. *Child Abuse & Neglect*, vol. 101, 104326. <https://doi.org/10.1016/j.chiabu.2019.104326>.

## About the NSW Child Development Study

The [NSW-CDS](#) is a longitudinal study of the mental health and wellbeing of a cohort of NSW children who started kindergarten in 2009. It aims to obtain good quality information about the development of these children to map patterns of resilience and vulnerability for later mental health, education, work, and other outcomes. The NSW-CDS will follow these children from birth into early adulthood via successive waves of record linkage.

**Wave 1** record linkage provided information about the early childhood years (from birth to 5 years) for children who were assessed with the Australian Early Development Census (AEDC) in 2009. Wave 1 linked the children's AEDC records with their birth, health, education and child protection data. It also linked the health, crime and mortality data for the parents of a subcohort of children whose births were registered in NSW. The child cohort comprised 99.7% of NSW children who started kindergarten in 2009.

**Wave 2** builds on Wave 1 by incorporating data from the Middle Childhood Survey (MCS), conducted in 2015. The MCS examined the mental health and wellbeing of a subcohort of the same children (aged 11-12 years) who were assessed with AEDC in 2009.

**Wave 3** is proposed for completion in 2021. In addition to expanding the period of longitudinal data, this record linkage will add Commonwealth data sets (e.g., Medicare records for GP visits).

Future waves of record linkage are planned for key developmental stages into adulthood. See [Record Linkage in NSW-CDS](#) for more information.



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## Endnotes

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