Family & Community Services
NSW GOVERNMENT

FACSAR Evidence to Action Note
January 2018

Child maltreatment in early childhood: developmental vulnerability on the AEDC

Snapshot

- Exposure to any form of childhood maltreatment is associated with an increased risk of developmental vulnerability at age five.
- Children exposed to multiple maltreatment types were more likely to be vulnerable on multiple developmental domains, relative to non-maltreated children.
- Other important contributors to early developmental vulnerabilities included being male, maternal smoking during pregnancy, young maternal age, socioeconomic disadvantage, and parental mental illness.
- Associations between child maltreatment and age 5 developmental vulnerability remained strong after controlling for the influence of other contributing factors.
- Early detection and effective intervention for maltreated children could improve development milestones and learning trajectories throughout childhood.

Introduction

In the first five years of life the brain develops rapidly, making it highly sensitive to stress. Exposure to maltreatment during this period may critically impair cognitive milestones and learning opportunities, as well as social development.

The NSW Child Development Study aims to identify vulnerability and protective factors for a variety of health, educational/vocational, social and wellbeing outcomes of children in NSW. This Evidence to Action Note outlines key findings related to age five outcomes, drawing on recently published data from Wave 1 of this study.

The NSW Child Development Study

The NSW Child Development Study is a longitudinal study of child mental health and wellbeing in a cohort of NSW children who commenced school for the first time in 2009 and were assessed using the Australian Early Development Census (AEDC). This child cohort comprises 99.7% of NSW children commencing Kindergarten in 2009 (n=87,026).

The first wave of data from the study (Record Linkage 1) combines AEDC records with birth, health, education and child protection information (from birth to age ~ 5 years). It also links the children's records with health, crime and mortality information for their parents.

Child protection data was available only for those children with **substantiated** risk of significant harm reports, as well as those children placed in out-of-home care or in the Brighter Futures Program.

Linked data for 68,459 children and their parents was used to examine the effects of maltreatment on development at age five, as measured by the AEDC. The analysis focused on the influence of different types of maltreatment, the age maltreatment was first reported, and various other demographic or other risk factors (e.g., parental mental illness, perinatal factors) on developmental vulnerability.

The Australian Early Development Census (AEDC)

The AEDC is a population-based measure of how children in Australia have developed by the time they start school. The AEDC measures five domains of early childhood development that have been shown to predict later health, wellbeing and academic success. These are:

- physical health and wellbeing
- social competence
- emotional maturity
- language and cognitive skills (school-based) and
- communication skills and general knowledge

Teachers complete an Early Development Instrument (similar to a questionnaire) for children in their first year of full-time school across these five domains. Developmental vulnerability represents those scoring in the lowest 10 centiles. More information about each of the domains in relation to children who would be considered developmentally on track, at risk or vulnerable can be found in the About the AEDC Domains fact sheet on the AEDC website: https://www.aedc.gov.au/

What did the study find?

How many children were maltreated in early childhood?

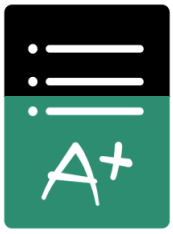
Of the children in the study 3% (2,135) had at least one substantiated maltreatment report before the age of five. Of these, 60% had a maltreatment reported before they turned three (0-18 months: 35%; 19-36 months: 25%). While most children (78%) had been exposed to a single maltreatment type, a substantial proportion (22%) had been exposed to more than one type of maltreatment.

Just over half of the children with a substantiated maltreatment report were in out of home care (54% or 1,143) and a slightly smaller proportion (46% or 987) had participated in the Brighter Futures program[1].

What were the effects of maltreatment in early childhood?

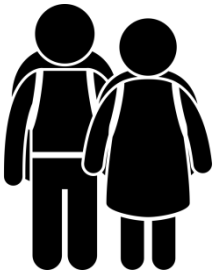
The results show exposure to *any* childhood maltreatment is associated with developmental vulnerability at age five.

30%
of children exposed to substantial harm or risk of harm were **'developmentally on track'** at age 5 years



57%
of children *not* exposed to substantial harm or risk of harm were **'developmentally on track'** at age 5 years

17%
of children exposed to substantial harm or risk of harm were **'developmentally vulnerable'**



10%
of children *not* exposed to substantial harm or risk of harm were **'developmentally vulnerable'**

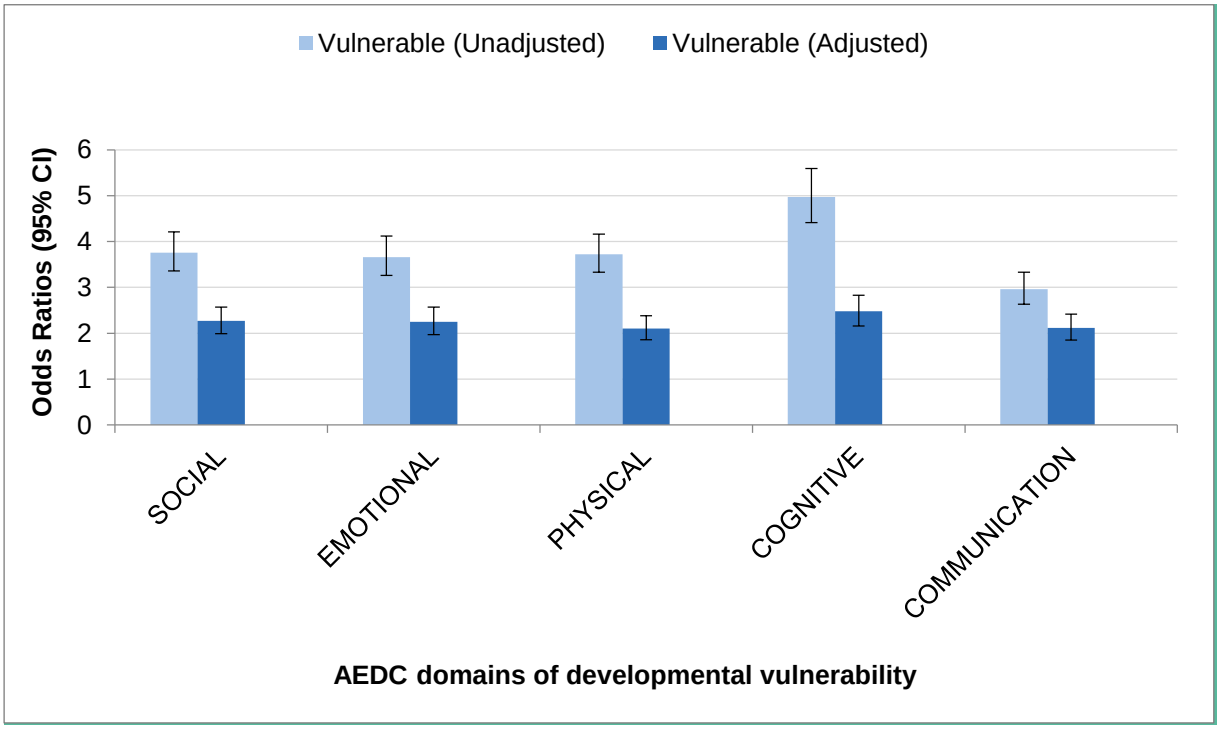
Of the 2,135 children exposed to substantiated harm (or risk of harm):

- 16% were developmentally vulnerable on one AEDC domain
- 12% were developmentally vulnerable on two AEDC domains
- 15% were developmentally vulnerable on three or more AEDC domains.

[1] Brighter Futures is a voluntary, targeted, early intervention program for families with children aged under nine years, or who are expecting a child, aimed to prevent vulnerable children from entering the child protection system by providing intervention and support that will achieve long-term benefits.

Figure 1 shows children exposed to substantiated maltreatment were 3 to 5 times more likely to be vulnerable on AEDC domains, when direct effects were examined (unadjusted associations[2]). When adjusting for the influence of other risk factors, the odds of vulnerability across AEDC domains among children exposed to maltreatment lessened: maltreated children were just over twice as likely to be vulnerable on each of the AEDC domains when accounting for other risk factors such as socioeconomic disadvantage, young maternal age, maternal mental illness, child's physical health conditions and being of male sex.

Figure 1 Effects of maltreatment on Australian Early Development Census Domains

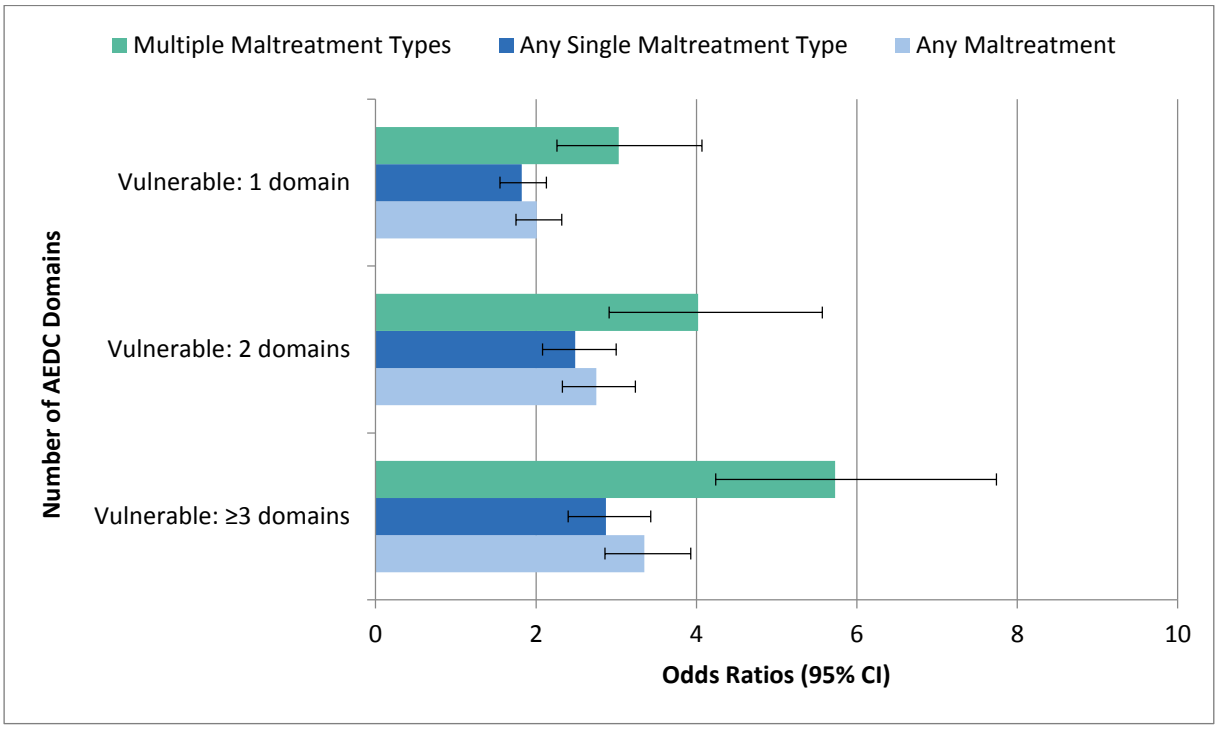


Source: Green et al., *Child Development,* DOI: 10.1111/cdev.12928

Children exposed to *multiple* types of maltreatment were more likely to be vulnerable on multiple developmental domains, relative to non-maltreated children. Figure 2 shows that children exposed to multiple types of maltreatment were more than 5 times more likely to be developmentally vulnerable on three or more AEDC domains; about 4 times more likely to be developmentally vulnerable on two AEDC domains; and approximately 3 times more likely to be developmentally vulnerable on any one AEDC domain, relative to the non-maltreated group.

[2] A simple ratio of probabilities that does not take into account confounding variables/other factors that may affect the relationship

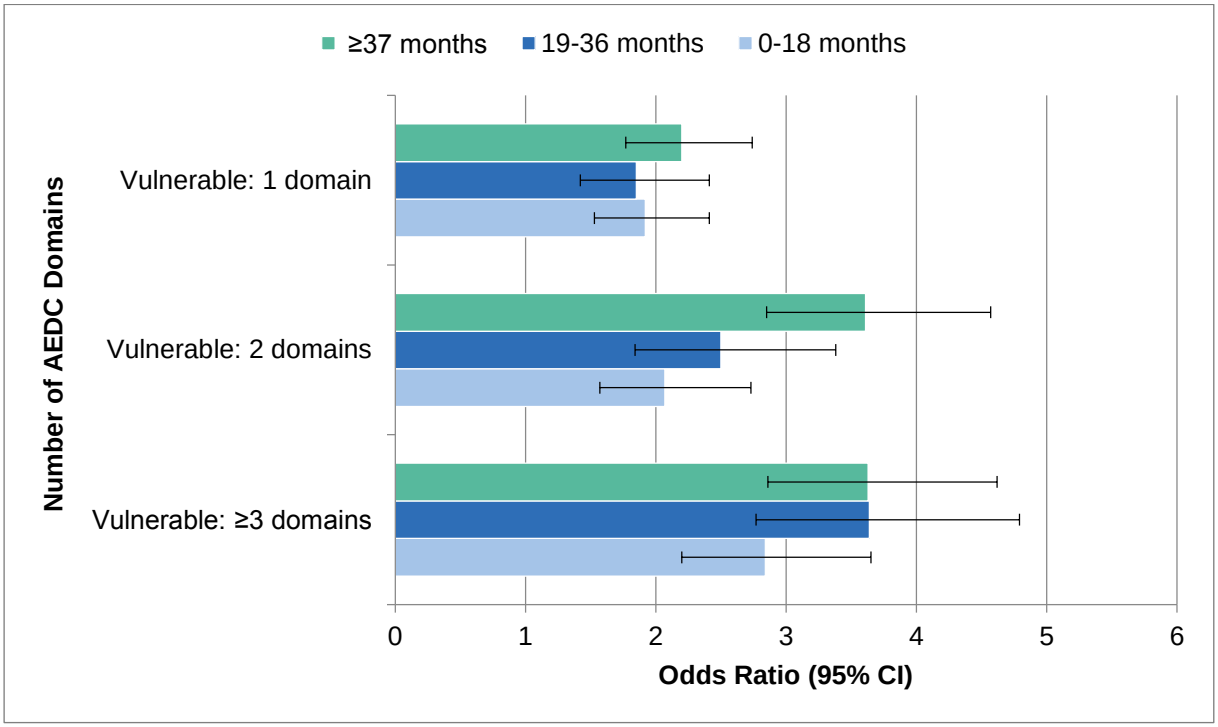
Figure 2 Effects of multiple maltreatment types on developmental vulnerability



Source: Green et al., *Child Development,* DOI: 10.1111/cdev.12928

Children who had their first substantiated maltreatment *after* three years of age were more likely to be vulnerable on multiple developmental domains, relative to non-maltreated children (Figure 3).

Figure 3. Timing of first substantiated maltreatment



Source: Green et al., *Child Development,* DOI: 10.1111/cdev.12928

Other contributors to vulnerability at age 5 years?

Other important contributors to early childhood developmental vulnerabilities included being male, maternal smoking during pregnancy, young maternal age, socioeconomic disadvantage, and parental mental illness.

Parental diagnosis of schizophrenia spectrum disorder, specifically, has a small unique association with socio-emotional vulnerability that does not reduce the association between maltreatment and those vulnerabilities.

What does this mean for policy and practice?

Exposure to multiple types of maltreatment may be an important predictor of developmental functioning or later clinical outcomes relevant to the early intervention services provided to vulnerable children and their families.

Early detection of the risks and occurrence of childhood maltreatment, and effective intervention could improve development milestones and learning trajectories throughout childhood.

More about the NSW Child Development Study

The NSW Child Development Study is a longitudinal study of child mental health and wellbeing in a population cohort of 87,026 children who were assessed with the Australian Early Development Census (AEDC) in 2009 as they entered school for the first time in NSW. The study brings together administrative data from multiple government departments (Health, Family and Community Services, Education and Justice) via record linkage, for children and their parents; future waves of record linkage are planned for key developmental stages into adulthood.

The first wave of record linkage was completed in 2013-2014 and combined the AEDC records for the children with their birth, health, education and child protection information (from birth to age ~ 5 years), and with health, crime and mortality information for their parents (up to 2009). The child cohort comprises 99.7% of NSW children commencing kindergarten in 2009; parental information was available for 72,795 mothers and 72,778 fathers of the child cohort.

Data availability

In Record Linkage 1, child protection data was available for 4.4% of the cohort, comprising only those children with substantiated ROSH reports, as well as those children placed in *Out of Home Care* or in the *Brighter Futures* Program. Health information was available for 86.6%, and education information was available for 44.8% of the child cohort. Parental information was available for 81.6% of mothers and 81.5% of fathers of the child cohort. In future waves of record linkage for the NSW-CDS, non-ROSH reports and unsubstantiated ROSH reports will be included.

Acknowledgements

This research was conducted by UNSW Australia with financial support from the Australian Research Council (Linkage Project LP110100150, with the New South Wales (NSW) Ministry of Health, NSW Department of Education and Communities, and the NSW Department of Family and Community Services representing the Linkage Project Partners); National Health and Medical Research Council (NHMRC; Project Grant APP1058652); the Australian Institute of Criminology (Research Grant CRG 19/14-15); and Australian Rotary Health (Mental Health Research Grant RG104090).

This research was conducted using population data owned by the Department of Education; NSW Department of Education; NSW Bureau of Crime Statistics and Research; NSW Ministry of Health; NSW Registry of Births, Deaths and Marriages; and, the Australian Bureau of Statistics. However, the information and views contained in this study do not necessarily, or at all, reflect the views or information held by these Departments.

Resources/more information

Please visit the NSW Child Development Study website for further information (http://nsw-cds.com.au).

Produced by

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