NSW GOVERNMENT

Evidence to Action Note

September 2020

What is the impact of early childhood maltreatment on mental health outcomes in middle childhood?

Findings from the NSW Child Development Study

Snapshot

- Children maltreated before entry to school (age 5-6 years), no matter the level of involvement with child protection services, are at heightened risk of experiencing poor mental health outcomes in middle childhood (age 6-14 years).
- More than 18% of children in the NSW Child Development Study (Wave 2 linkage) had been reported to child protection services by the time they started school.
- Children with at least one placement in Out-of-Home Care (OOHC) before school entry are the most vulnerable to be diagnosed with a mental disorder in middle childhood.
- Inter-agency policy collaboration is important to develop and invest in effective multidisciplinary programs that support children's mental health needs.
    - All children in statutory OOHC should participate in the OOHC Health Pathway to receive timely health, assessment, intervention, monitoring and review of their health needs.
    - All children who are reported to child protection services in early childhood should receive mental health assessment, support and ongoing monitoring of their needs.

Introduction

Childhood mental health is important for a child's safety, wellbeing and development, and impacts their outcomes both in childhood and adulthood. Recent research conducted by the NSW Child Development Study (NSW-CDS) has looked at the impact of early childhood maltreatment on mental health outcomes in middle childhood. It has shown that mental disorders emerging in middle childhood (age 6-14 years) are more frequently diagnosed in children who come to the attention of child protection services during early childhood (age 0-6 years).

This Evidence to Action Note outlines the key findings from the research paper entitled, 'Mental disorders in children known to child protection services during early childhood'[1]. It also discusses the implications of this research for policy and practice.

Why is it important to examine the impact of early childhood maltreatment on childhood mental health outcomes?

It is important to examine the impact of early childhood maltreatment on childhood mental health to inform the design of mental health and social services for children. Children who have a mental disorder are more vulnerable to experience adverse outcomes both in childhood and adulthood, for example adverse interactions with the legal system.[2]

It is known that children who experience maltreatment in early life are at a greater risk of having poorer mental health during adulthood.[3,4,5,6,7] The majority of studies to date have reported on the increased risk of mental disorders among adults who were maltreated as children.[8,9] However less is known about the impact that maltreatment in early life has on a child's mental health.

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

The NSW-CDS is a longitudinal population study of the mental health and wellbeing of a cohort of NSW children. It links administrative records from multiple NSW agencies, including Health, Education, Communities and Justice (formerly Family and Community Services, FACS) and Justice, with cross-sectional survey data for a total of 91,635 children.

The study used linked data from 2001 to 2016 for 74,462 NSW children drawn from the NSW-CDS to examine associations between early childhood maltreatment and middle childhood mental disorders. In the data analysis, the researchers adjusted for the influence of other potential risk factors for mental health, including the child's sex, socio-economic disadvantage, perinatal complications, and parental mental illness.

This study is the first population-based study to look at the relationship between children who experience maltreatment in early childhood (0-6 years) and the different types of mental disorder diagnoses in middle childhood (6-14 years).

How did the researchers measure early childhood maltreatment?

The researchers measured early childhood maltreatment by identifying children who were the subject of at least one child protection report using the NSW FACS Child Protection Case Management System.

The researchers allocated the children who had been reported to child protection services by school entry (approximately 5 years of age) 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 out-of-home care (OOHC) placement and a substantiated Risk of Significant Harm (ROSH) report, they were placed in the OOHC group.

The four levels of child protection response were:

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

- **OOHC placement:** 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.

How did the researchers measure childhood mental health outcomes?

Childhood mental health was measured by diagnosed mental disorders, as defined by the International Classification of Diseases, Version 10 (ICD-10)*. The researchers identified children from the age of school entry up to age 13-14 years who had a primary or secondary diagnosis of a mental disorder in the NSW Ministry of Health's Mental Health Ambulatory Data Collection, the Emergency Department Data Collection, or the Admitted Patient Data Collection.

The specific types of childhood-onset mental disorder diagnoses that were observed in children of this age included:

- phobias and anxiety
- emotional disorders
- stress reactions
- conduct disorders
- self-harm
- hyperkinetic disorders (e.g., Attention-Deficit Hyperactivity Disorder; ADHD)
- developmental disorders (e.g., Autism).

For more information about these mental disorders visit the Reachout website.

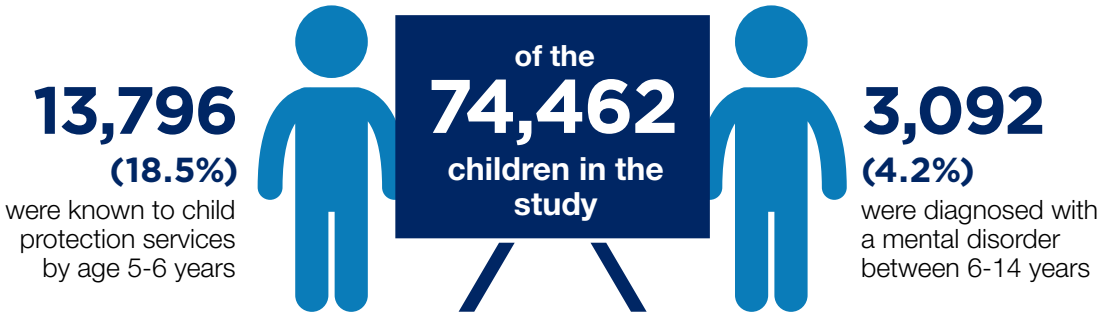
What did the study find?

The study used linked data for 74,462 NSW children drawn from the NSW-CDS to examine the association between early childhood contact with child protection services and mental disorder diagnosis in middle childhood (6-14 years).

Of the 74,462 children in the study:

- 13,796 (18.5%) were known to child protection services by age 5-6 years.
- 3,092 (4.2%) were diagnosed with a mental disorder between 6-14 years.

A breakdown of the children in the study who have early child protection contact and a diagnosis of a mental disorder in middle childhood



Of the children known to child protection services before they were 6 years old 8.3% had an OOHC placement, 12.2% had substantiated ROSH reports, 66.4% had unsubstantiated ROSH reports, and 13.1% had non ROSH reports.

* The ICD-10 is developed by the World Health Organization and is the global health information standard for mortality and morbidity statistics. The ICD is increasingly used in clinical care and research to define diseases and study disease patterns. It is important to note that the ICD-10 does not take into account how different cultures experience, label and explain mental health.

Association between any child protection contact and diagnoses of mental disorders

Children with any form of early childhood child protection contact are nearly three times as likely as their peers (who were unknown to child protection services) to have been diagnosed with a mental disorder in middle childhood.

Of the children in the study:

- 9.8% of the children known to child protection services before the age of 5 years had a recorded diagnosis of at least one mental disorder in middle childhood.
- 2.9% of children with no child protection contact had a record of mental disorder diagnosis in the same time period.

Of the children in the study:

9.8%

of the children **known to child protection services** before the age of 5 years had a record of **at least one mental disorder diagnosis** in middle childhood

2.9%

of children with **no child protection contact** had a record of **mental disorder diagnosis** in the same time period

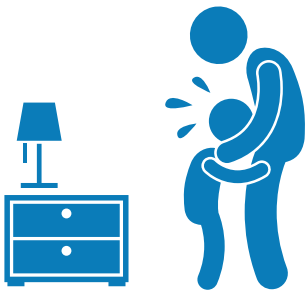
Children known to child protection services by the time of school entry were:

- More than four times as likely to engage in self-harm, or be diagnosed with a hyperkinetic or conduct disorder.
- More than three times as likely to be diagnosed with an emotional disorder or stress reactions.
- More than twice as likely to be diagnosed with a developmental disorder.

Children known to child protection services by the time of school entry were:

more than 4x

as likely to engage in self-harm, or be diagnosed with a hyperkinetic or conduct disorder



more than 3x

as likely to be diagnosed with an emotional disorder or stress reactions

more than 2x

as likely to be diagnosed with a developmental disorder

Impact of the level of child protection service response and mental disorder diagnoses

The prevalence of having at least one mental disorder diagnosis in middle childhood increased with the level of early childhood child protection contact. The proportion of children with a mental disorder diagnosis in middle childhood was as follows:

- 19.7% for those with an OOHC placement had a mental disorder diagnosis
- 13.8% with a substantiated ROSH report
- 8.9% for an unsubstantiated ROSH report
- 4.5% with non-ROSH report.

The odds of being diagnosed with a mental disorder in middle childhood was greatest for children who had been placed in OOHC, when compared with children with no child protection history**.

The odds of being diagnosed with a mental disorder in middle childhood by the level of early childhood child protection contact

Non ROSH
1.4x as likely

Unsub ROSH
2.6x as likely

Sub ROSH
3.8x as likely

OOHC
5.3x as likely

The relationship between the of the level of child protection service response and the type of mental disorder diagnoses

This study is the first population-based study to look at the relationship between children who experience maltreatment in early childhood (0-6 years) and the different types of mental health disorder diagnoses in middle childhood.The associations with specific mental disorders were again strongest for children with an OOHC placement, followed by those with substantiated ROSH reports, then unsubstantiated ROSH reports.

Children with an early childhood OOHC placement, when compared to children not known to child protection services, are more likely to be diagnosed with a hyperkinetic disorder, conduct disorders and stress reactions.

** Note: Odds is a measure of association between an exposure and an outcome. In this analysis, the 'odds' is a measure of association between the level of child protection response (exposure) and diagnosis of a mental disorder (outcome). The odds represents the odds that mental disorder will occur given a particular exposure (i.e., child protection response), compared to the odds they will occur in the absence of that exposure.

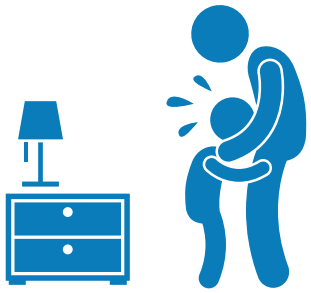
The odds of a child with an early childhood OOHC placement being diagnosed with a specific mental disorder in middle childhood

Diagnosed with hyperkinetic disorders

12.3x as likely

Diagnosed with conduct disorders

11.8x as likely



Diagnosed with stress reactions

10x as likely

What does this mean for policy and programs?

Children maltreated before entry to school, no matter the level of involvement with child protection services, are at a significantly increased risk of being diagnosed with a mental disorder in middle childhood (aged 6-14 years), compared to their non-maltreated peers. Those children that are in OOHC are particularly at risk, being 5.3 times more likely to have any mental health disorder and ten times more likely to have stress reactions, hyperkinetic disorders and conduct disorders than children not known to child protection services.

The risk of a mental disorder among children who have experienced early life maltreatment is likely to be even higher as this analysis used hospital admission and outpatient mental health services data and does not include diagnoses and treatment by primary practitioners, or those receiving private therapy.

This has implications for child protection policy and programs. It is important that policies and programs invest in early intervention and preventative mental health services in early life and/or early in the progression of a child's mental health issues. An early-in-life focus on mental health benefits children and establishes a solid foundation for later life and whole of family wellbeing. Protecting childhood mental health also involves consideration of parental strengths and vulnerabilities. To assist children and their families, the NSW Department of Communities and Justice (DCJ) funds several family preservation and early intervention services.

Inter-agency policy collaboration is important to develop and invest in effective multidisciplinary programs that support children's mental health needs. All children who are reported to child protection services in early childhood should receive mental health assessment, support and ongoing monitoring of their needs. For children with mental disorder diagnoses, inter-agency collaboration is needed to develop policies and programs that ensure that these children receive ongoing mental health support irrespective of the level of child protection involvement.

Given the particularly high levels of mental disorder diagnoses for children in OOHC, there needs to be multidisciplinary programs that support their mental health needs. One existing program is the OOHC Health Pathway. The OOHC Health Pathway is an agreed process between the NSW Ministry of Health and DCJ. The Pathway ensures that all children entering statutory OOHC receive timely and appropriate health assessment, intervention, monitoring and review of their health needs. An OOHC Health Coordinator is employed in each local health district is responsible for coordinating the Pathway process.

There is also a need for inter-agency collaboration, as well as collaboration with non-government organisations, to identify strategies for detecting children at increased risk of being maltreated to provide support to families earlier, so the maltreatment and its damaging mental health consequences can be minimised.

The original research

For more information about the original research you can contact the NSW-CDS.

The original research paper is:

Green, MJ, Hindmarsh, G, Kariuki, M, Laurens, KR, Neil, AL, Katz, I, Chilvers, M, Harris, F & Carr, VJ 2020, 'Mental disorders in children known to child protection services during early childhood', *The Medical Journal of Australia*, vol. 212, no. 1, pp. 22-28.

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 sub cohort 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 sub cohort of the same children (aged 11-12 years) who were assessed with AEDC in 2009.

Wave 3 is proposed for completion in 2020. 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

[1] Green, MJ, Hindmarsh, G, Kariuki, M, Laurens, KR, Neil, AL, Katz, I, Chilvers, M, Harris, F & Carr, VJ 2020, 'Mental disorders in children known to child protection services during early childhood', *The Medical Journal of Australia,* vol. 212, no. 1, pp. 22-28.

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