



Australian Government
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Family Studies



Why are children spending more time indoors?

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Australian Institute of Family Studies

Policy and practice paper | July 2024





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Cover image: © Gettyimages/ArtistGNDphotography

ISBN (online): 978-1-76016-339-6
ISBN (PDF): 978-1-76016-340-2

Edited by Katharine Day
Typeset by Rachel Evans

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Acknowledgements

This paper was written by Dr Kristel Alla. Dr Stewart Muir, Dr Mandy Truong and Dr Jasmine B. MacDonald contributed to the conceptualisation of the broader evidence package focusing on nature play in the early years and/or reviewed drafts of this article.

How this resource was developed

This article is part of a broader evidence package on nature play in early childhood for the AIFS Child Family Community Australia (CFCA) information exchange. The studies reviewed were identified through a rapid review and synthesis of international empirical literature. The CFCA audience identified social and emotional wellbeing in early childhood as a topic they would like more evidence about to inform their practice.

Overview

This resource describes what the research says about why young children (0–5 years) are spending more time indoors and considers what this could mean for their wellbeing. This paper also provides some considerations for practitioners and other professionals working to support parents with practical solutions to encourage children to play outside and support families to reduce time indoors.

Key messages

- Young children (0–5 years) are spending more time indoors than in the past, a trend that has been increasing over recent years.
- Children spending less time outdoors may negatively impact their wellbeing and development.
- Some key reasons why children are spending more time indoors include: fewer nature spaces where children can play, increased use of electronic devices, and study being prioritised over play (e.g. learning spelling or maths rather than playing).
- Practitioners can support parents and children to incorporate outdoor play into their activities and encourage families to balance children's screen time with time in nature.

Introduction

Research shows that young children (0–5 years) are spending an increased amount of their time indoors (Beer et al., 2018; Dankiw et al., 2020). This has led some parents, educators, health professionals and researchers to express concern that children will miss out on the positive effects of time in nature¹ (Dankiw et al., 2023; Green et al., 2022; Ward et al., 2017).

This article summarises international and Australian research evidence on why young children seem to spend more time indoors and considers what this could mean for their wellbeing and for the people who support families.

How much time are children spending indoors?

There's increasing recognition among parents, community and educational organisations of the value of including outdoor time for children. This is, in part, because there is a perception that children are spending increased time indoors. Research in this area is still limited, and based on a small number of studies, but there are some estimates that children in developed countries (e.g. USA, United Kingdom and Australia) spend up to 90% of their time indoors (Frumkin et al., 2017; Opinium, 2018; Oswald et al., 2020; Planet Ark, 2011). For example, the Royal Children's Hospital National Child Health Poll ([RCHNCHP], 2023) of 2,036 parents found that most Australian preschoolers (55%) don't play outdoors every day.

While there is a growing body of evidence for the benefits of outdoor play for children of all ages, more research is needed to fully understand the amount of time Australian children spend on indoor and outdoor activities.

Why is time outdoors important for young children?

Outdoor play can include what is sometimes called 'nature play' – that is any child-led activity where children interact with nature (e.g. with trees, rocks, plants, dirt and water) under minimal supervision (Beery, 2020; Dankiw et al., 2020; Prins et al., 2022) – as well as other outdoor activities such as playing sports or having a picnic in a park. Children's time outdoors can take a variety of forms but is often associated with physical activity (Dankiw et al., 2020; Tandon et al., 2018). This is particularly important because Australian national data show that the majority of Australian children don't meet [national guidelines](#) for their age for overall physical activity (Active Healthy Kids Australia, 2022; Hesketh et al., 2023).

There is also some evidence to suggest that playing outdoors encourages exploration and imagination through access to a wider range of materials, textures and heights (Atkmakur-Javdekar, 2016; Australian Children's Education & Care Quality Authority [ACECQA], 2019). This is particularly important for the brain development of young children, who learn about the world through their different senses and require a variety of stimuli (ACECQA, 2019; Christian et al., 2015).

Evidence also shows a clear link between children's sedentary activities indoors and health concerns such as obesity as well as increased issues with poor mental health (Active Healthy Kids Australia, 2022; Fyfe-Johnson et al., 2021). Simultaneously, there's also research that suggests that nature play improves children's physical and mental health, social competence, resilience and learning (Arola et al., 2023; Dankiw et al., 2020; Ward et al., 2017).² Importantly, young children often prefer to play outdoors (RCHNCHP, 2023) and report many positive emotions from this such as feelings of happiness, joy, excitement and relaxation (Coates & Pimlott-Wilson, 2019; McClain & Vandermaas-Peeler et al., 2016). Further, the majority of Australian parents (80%) believe children should spend more time outdoors (RCHNCHP, 2023).

Because the evidence suggests that outdoor play can have benefits for child development and wellbeing, it's important to understand why children are spending more time indoors. This can help identify opportunities to encourage more outdoor activities.

1 'Nature' here refers to environments that contain natural elements or living systems (such as plants and animals) and is an implied contrast with the 'built' or 'human-made' environments (although many 'natural spaces' are human made). Examples of 'nature' are wilderness, bushlands, forests, beaches, gardens and urban parks (Frumkin et al., 2017).

2 This is true for children of all ages, see for more information: Barragan-Jason et al. (2022); Dankiw et al. (2020); Fyfe-Johnson et al. (2021); Tillmann et al. (2018).

Key reasons for why children remain indoors

The research suggests that the main reasons children spend more time indoors are:

- a lack of suitable outdoor spaces
- parental concerns about safety, traffic and crime
- children spending more time on electronic devices
- study being prioritised over play (e.g. spending time learning spelling or maths rather than playing – whether at home or at preschool).

These reasons are described below.

A lack of suitable outdoor spaces

More than 50% of the world's population and 90% of Australians now live in urban areas (Australian Bureau of Statistics [ABS], 2019; United Nations, 2018). This can result in the limited availability of outdoor play spaces and, in particular, a lack of access to natural spaces (Frumkin et al., 2017; Kemp & Josephidou, 2021). For example, high-rise and high-density urban areas can limit opportunities for children to interact with nature (Christian et al., 2015).

Evidence indicates that children who have access to diverse natural environments and neighbourhood green spaces are more likely to play outdoors (MacDonald, Butler & Alla, 2023). However, some urban areas can offer a variety of green spaces for play such as parks, playgrounds and tree-lined streets (Atkmakur-Javdekar, 2016).

Parental concerns about safety, traffic and crime

Parental concerns about neighbourhood safety are another important reason why children spend a lot of time indoors (Coates & Pimlott-Wilson, 2019; RCHNCHP, 2023). Children in cities can be exposed to traffic, pollution, crime or strangers, leading some parents to prefer to keep their children indoors where they can play under their supervision (Atkmakur-Javdekar, 2016; Brussoni et al., 2015; Gemmell et al., 2023; Gray et al., 2023).

Comfort with outdoor play is partly influenced by parents' comfort with risk. A survey by the Royal Children's Hospital in Melbourne in 2023 found that close to a third of parents thought that play (in general) should not involve any risk (RCHNCHP, 2023). There is also evidence to suggest some parents are especially worried about the risks of play in natural environments (Brussoni et al., 2015; Jerebine et al., 2024; RCHNCHP, 2023).

How much parental concerns relate to actual risk of harm is not a well-researched area but some evidence suggests that the actual risks of outdoor play may be exaggerated or overestimated by parents (Brussoni et al., 2015; Gray et al., 2023; Jerebine et al., 2024; Vandermaas-Peeler et al., 2019). There is also evidence that suggests that moderate risk and independent play – especially outdoors – is associated with benefits for child mental health and wellbeing (Puhakka et al., 2019; Ward et al., 2017). Independent exploration and overcoming minor challenges and risks helps children improve their sense of agency, gives them a sense of control and promotes an understanding of what their bodies are capable of (McClain & Vandermaas-Peeler, 2016; Moore et al., 2021). This can improve children's confidence, self-esteem and decision-making skills (Puhakka et al., 2019; Ward et al., 2017). Children learn to assess risks by themselves, which can be important for their learning (Coates & Pimlott-Wilson, 2019; McClain & Vandermaas-Peeler et al., 2016).

More information on parents' concerns regarding safety of children outdoors can be found in the [Engaging Young Children \(0–5 Years\) in Nature Play](#) practice guide.

Children spending more time on electronic devices

Another driver of children's increased time spent indoors is increased time on electronic devices (mobile phones, computers, video games and television) and subsequently less time outdoors (Dankiw et al., 2020; Mallawaarachchi et al., 2022). Australian studies have found that as many as 3 in 4 preschool-aged children

spend more than the [national guidelines](#)' recommendation (that children aged 3–5 spend no more than 1 hour) on screens each day (Hinkley et al., 2018; Yu & Baxter, 2016).³

Electronic devices can offer entertainment, information and important social interaction. However, they can also decrease the motivation and opportunities for outdoor play and other physical activity (Veldman et al., 2023). Evidence indicates that lack of time outdoors, and having most play restricted to electronic devices, can delay the development of cognitive, language and social skills for young children (Dankiw et al., 2020; Hinkley et al., 2018). For example, one Finnish study of 1,700 families found that longer child and parental exposure to electronic media was negatively associated with the size of the child's expressive vocabulary at 18 and 24 months (Asikainen et al., 2021).

Screen time can also decrease the number and quality of children's interactions with peers and adults. Studies show that even background television reduces how much children and parents interact with each other (Brushe et al., 2024; Hinkley et al., 2018). Children who watch more television also tend to sleep less and poorly, their ability to stay calm or behave appropriately in social situations is reduced, and their overall social and emotional wellbeing can suffer (Hinkley et al., 2018; Joshi & Hinkley, 2019). Emerging research suggests that spending time in nature can reverse some of these negative effects on children (Oswald et al., 2020).

Study being prioritised over play

There is research to suggest that play is how children younger than 5 years learn best (Atkmakur-Javdekar, 2016; Fullan et al., 2021; RCHNCHP, 2023). However, among some parents in some places (including Australia), there is an increasing emphasis on children spending time studying (e.g. learning spelling or maths rather than playing – whether at home or at preschool), which is usually done indoors (Burgess & Ernst, 2020; Dankiw et al., 2023; RCHNCHP, 2023).

Although academic pressures are most often experienced by older children, young children may also be subject to academic pressures and competition and be required to take extra classes and do extracurricular activities, which can leave them with little energy or space for play (Beates, 2020; Dealey & Stone, 2017; Jerebine et al., 2024; Vandermaas-Peeler et al., 2019). Some researchers and commentators have suggested that some formal education provided to young children, both internationally and in Australia, is moving away from play-based instruction towards a greater focus on academic performance and school readiness (Beates, 2017; Dealey & Stone, 2017). This shift can mean reduced recess and outdoor time for children in early childhood education that prioritises academic curriculum over physical activity (Burgess & Ernst, 2020; Dealey & Stone, 2017).

Implications and considerations for practitioners

Increased time indoors can negatively impact young children's development and wellbeing. The main reasons for less time outdoors are fewer nature spaces where children can play, parents' concerns about safety, the excessive use of electronic devices and a focus on academic outcomes being prioritised over play. Understanding the reasons why children spend more time indoors can help professionals identify ways to encourage children's outdoor activities relevant to the specific characteristics and needs of families and where they live.

Professionals can also support parents to keep their children's screen time within the recommended levels, engage in more supportive screen behaviours (such as parents and children using screens together) and encourage children to take part in other activities, such as physical activity in nature.

Professionals who work in early childhood settings can also incorporate some of the following practice tips into their program or service.

³ The national guidelines recommend no screen time for children under 3 years and up to 1 hour a day for children 3–5 years old. National Australian data have shown that only 37% of children aged 0–2 years and 28% of children aged 3–5 years were meeting screen-time guidelines on an average day (Hesketh et al., 2023).



What can practitioners do to encourage families to spend time outdoors?

Here are some practice tips that practitioners can use to encourage families to do outdoor play and some activities that they might do themselves when working with children (e.g. in playgroups).

- Incorporate outdoor play into activities where they involve children and encourage guardians to take children outside to play.
- Encourage families to make outdoor activities and nature play part of regular family time and plan ahead for it to make time in busy schedules.
- Consider practical issues that may affect participation such as the timing and location of outdoor and natural spaces in relation to child care and transport needs.
- Map the green spaces near homes and transport routes, or near the service or education facility that you work for, including nature spaces in cities.
- Advise families to engage children in decisions about which areas and types of nature spaces to visit.
- Encourage families to balance children's time on screens with time in nature, provide incentives to play outdoors and use technology to explore nature (e.g. outdoor adventure or birdwatching apps).
- Consider potential risks involved in outdoor play but also encourage families to let children test their limits under minimal supervision to learn about risk.

Resources in the [Further reading](#) section and this [practice guide](#) will provide additional information and tips.

Further reading and resources

The resources listed below provide further information on children's relationship with nature and play.

Resources by AIFS

- [Creating environments to support young children's development](#)
This short article provides the best available evidence of the physical environmental factors that affect early childhood development.
- [What works to improve young children's social, emotional and behavioural wellbeing?](#)
This rapid evidence review identifies national and international prevention and early intervention programs that are effective at improving the social, emotional and behavioural health of at-risk children under the age of 5.
- [Too much time on screens? Screen time effects and guidelines for children and young people](#)
This short article provides an overview of the national guidelines for screen time, the effects of excessive screen time and how practitioners can support families to reduce screen time.
- [Australian children's screen time and participation in extracurricular activities | Growing Up in Australia](#)
This report provides insights into the patterns of screen time (watching television, using computers and playing electronic games) among Australian children (ages of 4–13 years) and the associations with physical wellbeing and participation in extracurricular activities.

Resources by Emerging Minds

- [A prescription of nature for children's mental health?](#)
This short article talks about how time spent in nature has the potential to have positive effects on a child's emotional, cognitive and behavioural development.
- [The child and their local ecology](#)
Infants' and children's mental health (more than that of any other age group) is tied to the world around them. A child's relationships; home, school and neighbourhood environments; and the broader societal and economic context they live in all have an impact on their development and wellbeing.

Other Australian resources

- Australian [national guidelines](#) on physical activities and screen time for children under 5 years.
- The Raising Children website has a [suite of resources](#) for parents on outdoor play suitable for children 0-8 years. These include example games to play and tips on what to do together as a family for the different age groups of children (babies, toddlers and preschoolers).
- Eco Explorers have a series of nature-inspired [downloadable resources](#) for parents, educators and teachers to use when outdoors in nature. They also have [links to various nature play programs](#) in Australia.
- [NaturePlay Australia](#) is made up of 4 state-based not for profit organisations dedicated to supporting the health, wellbeing and development of Australian children through nature play and learning. Their website links to individual state organisation's home pages and holds a range of resources relevant to nature play, including information on [outdoor mobile apps](#).
- [Early Childhood Outdoor Learning Network](#) has resources and tips for educators on outdoor [pedagogy](#), [practicalities](#) and links to some examples of [outdoor learning programs](#).
- [little bluebirds](#) offers a collection of creative ideas for parents and educators to use with babies and toddlers to engage with them outdoors.
- Babies and outdoor play [information sheet](#) by the Australian Children's Education & Care Quality Authority that explains the importance of outdoor activities for infants and provides some practical ideas for play experiences.

International resources

- Recommendations by the World Health Organization for physical activity and time outdoors for different age groups: [To grow up healthy, children need to sit less and play more](#).
- Children & Nature Network, an organisation based in the USA, offers a range of [resources](#) designed to help connect children and families to nature, including [free toolkits](#), [research summaries](#), [webinars](#), [videos](#), [reports](#) and [infographics](#).

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