

## Research Snapshot

# The Australian Early Childhood Education and Development Experience (AECEDE) Research Project



## Background

A child's early life experiences are fundamental to ensuring healthy development during childhood, adolescence and later into adult life. Early childhood is a critical period for children's brain development, with research suggesting that the quality of a child's early learning environment plays a key role in their development [1-3]. As such, the availability of high quality early childhood education and care (ECEC) has become an area of increased investment in recent decades within Australia.

There is significant variation in the way that preschool and other ECEC programs are offered across the different states and territories of Australia, with kindergartens, government preschools, non-government preschools and long day care centres all providing ECE services in the year before school [4]. Beyond preschool, there are also numerous other types of child care available during early childhood, including family day care, out of school hours care, occasional care, playgroup and informal care from grandparents,

friends and relatives [5]. Despite the known variation in care types offered in Australia, there is currently limited research that has described the different pathways that children take through the ECEC system and how this might impact their later developmental outcomes. In 2017, the Australian Government Department of Education, Skills and Employment funded a research study - the Australian Early Childhood Education and Development Experience (AECEDE) Research Project - to help fill this gap in knowledge.

## Aim

The research snapshot provides a summary of the key findings from the AECEDE Research Project. It describes the common pathways children take through the ECEC system, presents findings about which children and families are most likely to take the various pathways, and describes the associations between the different pathways and children's development at the start of school.

# Key findings

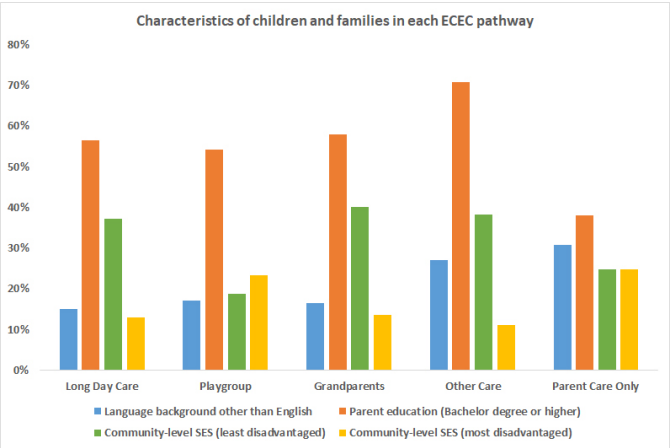
## Common pathways through the ECEC system

For children in the AECED Research Project, the most common type of care arrangement was Long Day Care (LDC), with 40-50% of children attending a LDC centre between the ages of 1 to 4 years. The second most common care arrangement was preschools with 26% of children attending preschool between 3 and 4, and 41% of children attending preschool between 4 and 5. Many children were cared for by grandparents, with 12-16% of children being regularly cared for by grandparents between 1 and 5 years old, and around 6% of children being cared for by grandparents in their first year of life. Parents reported that children utilised a range of other types of care arrangements including family day care, occasional care, playgroup, crèche, and nanny but fewer than 6% of children in this sample attended each of these care arrangements at any given age. We grouped together children who followed similar pathways through early education and care system, using latent class analysis. This analysis found five common pathways. Some of the pathways were characterised by distinct phases of care (e.g. at home with a parent and then at preschool) and others had overlapping or mixed care arrangements (e.g., a mix of care types from 0-3 years and then a different mix from 3-5 years). This is likely to reflect the various ways families manage their work and family commitments, juggle work commitments and make use of their support networks.

Common pathways	Description	% of sample
G1: Long Day Care	Children attended LDC from 1-5 years of age, and preschool from 4-5 years	35%
G2: Playgroup	Children attended Playgroup from 0-5 years of age, LDC from 3-5 years, and preschool from 3-5 years	5%
G3: Grandparent	Children were cared for by grandparents from 0-5 years, attended LDC from 1-5 years and preschool from 3-5 years	14%
G4: Other Care	Children participated in other care arrangements (e.g. occasional care, nannies, crèche) from 0-5 years, LDC from 1-5 years, and preschool from 4-5 years	7%
G5: Parent Care Only	Children were mainly cared for at home from 0 to 3 years of age, followed by preschool from 3-5 years of age	39%

## Characteristics of children and families who take these different pathways

Interestingly, this research was able to detect differences in the groups of children and families who took the five different pathways through the ECEC system. Some of the key differences are shown in the figure below. For example, culturally and linguistically diverse families were more likely to take the “Other Care” or “Parent Care Only” pathways rather than the “Long Day Care”, “Playgroup” or “Grandparent” pathways. Specifically, 27 and 31% of children in the “Other Care” and “Parent Care Only” ECEC pathways had a language background other than English, compared to 15-17% of children in the other groups. Differences in community-level socioeconomic status and parental education were also evident for families who took different ECEC pathways. For example, the most common form of care used by parents with a bachelor degree was “Other Care”, followed by “Long Day Care”, “Playgroup” and “Grandparent” ECEC pathways with the fewest using “Parent Care Only”. These findings are likely to reflect different challenges and opportunities faced by families in finding care for their children.

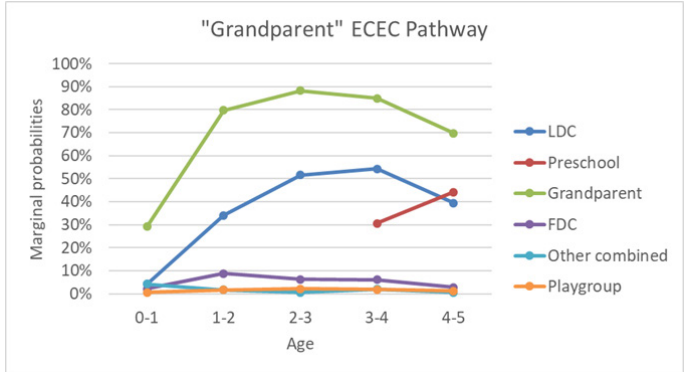


## Developmental outcomes for children who take these different pathways

While most children start school in Australia with the skills they need to thrive, around 22% start school vulnerable in at least one area of their development. There were large differences in vulnerability for children who took different ECEC pathways. About 7% of children in the “Grandparent” group were vulnerable in one or more areas of development, compared to 10% in the “Other Care” pathway, 13-14% in the “Long Day Care” and “Playgroup” ECEC pathways and 18% for children experiencing “Parent Care Only”. These differences are likely a reflection of both ECEC experiences, as well as differences in the characteristics of children and families who take these different pathways, and other factors such as the quality of the home learning environment. After taking into account the other ways in which the groups differed

(i.e. characteristics of children and families, differences in the quality of the home learning environment), the study found that most of the groups had a similar likelihood of developmental vulnerability. However, children who experienced “Grandparent” care were significantly less likely to be vulnerable in their development when they started school compared to children who experienced “Parent Care Only”.

To explore what it was about the “Grandparent” care group that might be supporting children’s development, the study explored the range of care experiences children had in these different ECEC pathways. The figure below shows a visual representation of the different ECEC arrangements for children at different ages, within the “Grandparent” ECEC pathway group. The figure shows that few of these children experienced playgroup, family day care, or other care, but many of them also had long day care and preschool at different ages. It might be that the lower levels of developmental vulnerability in these children is because of this mix of care types and associated experiences. Each care type will have exposed these children to different activities to encourage healthy development in early life. For example, time spent in more structured based long day care will have potentially afforded these children more opportunities for developing skills in social interaction and emotion regulation. While their time with grandparents is likely to have given them more one-on-one focused attention. As such, our findings suggest a combination of both formal care and informal types may confer significant positive impacts on later child development.



## Implications

### For policy and practice

This study highlighted that children from linguistically diverse backgrounds and children with parents with lower levels of education (i.e. without a tertiary education) were far more likely to receive “Parent Care Only” in the early years before preschool, and less likely to experience a diverse range of formal and informal care (such as that from grandparents) that were associated with better development outcomes at school entry. This finding lends strong support to the importance of a targeted and universal approach to the provision of ECEC in Australia, and highlights a need to reduce barriers to accessing ECEC services for families from socio-economically disadvantaged and linguistically diverse backgrounds from birth through to school entry. The study also shines a spotlight on the importance of supporting families to build intergenerational support networks, and recognising the valuable role grandparents and other family members have in the early lives of children in Australia.

### For research

This study was conducted in specific regions within two Australian jurisdictions – New South Wales and the Northern Territory. Given the variation in the provision of ECEC services across Australia, it is not known how well the findings of this study will generalise to the other states and territories. Future research on ECEC pathways across the Australian jurisdictions would help to address this question.

While the collection of ECEC histories from parents was challenging in the AECED Research Project (i.e. low survey completion rates), it provides a rich source of information on children’s experiences of grandparent care and playgroups that is not captured within large administrative database such as the Child Care Management System (CCMS) data. As such, these two sources of data (parent report and administrative data) provide complementary information for research into the impacts of ECEC experiences on children’s development.

## Study Detail

The AECED Research Project recruited children in the year before full time school from pre-schools and long day care centres in New South Wales and the Northern Territory in 2017. Parents provided information about the home environment and early education and care experiences from birth to preschool. In 2018, these children started primary school and teachers provided information on their developmental outcomes during the 2018 Australian Early Development Census (AEDC), which was linked to the ECEC experience information provided by parents. The analysis sample was made up of 1,266 children with 2018 AEDC data linked to primary caregiver survey information. Compared to children living in the same communities in the 2018 AEDC, the analysis sample had more highly educated parents and were less likely to live in the most socio-economically disadvantaged suburbs.

A full report on the study design and findings of the AECED Research Project is available on the AEDC website.

Collier, L., Gregory, T., Dal Grande, E., & Brinkman, S. (2019). The Australian Early Childhood Education Development Experience Research Project (AECED): Exploring the association between early childhood education and care pathways and child development outcomes at school entry. Telethon Kids Institute, Adelaide, Australia. [www.aedc.gov.au](http://www.aedc.gov.au)

## For further information

### About research snapshots

AEDC Research Snapshots provide a brief and accessible overview of research being undertaken in relation to the AEDC. The AEDC programme is funded by the Australian Government. For further up-to-date information consult the AEDC website and its many resources: [www.aedc.gov.au](http://www.aedc.gov.au).

### Suggested citation for this research snapshot

Collier, L., Gregory, T., & Brinkman, S. (2020). The Australian Early Childhood Education Development Experience Research Project (AEDC Research Snapshot). Australian Government, Canberra. Available at [www.aedc.gov.au](http://www.aedc.gov.au)

### About the Telethon Kids Institute

The Telethon Kids Institute is one of the largest, and most successful medical research institutes in Australia, comprising a dedicated and diverse team of more than 750 staff and students. Our vision is simple – happy healthy kids. We bring together community, researchers, practitioners, policy makers and funders, who share our mission to improve the health, development and lives of children and young people through excellence in research. Importantly, we want knowledge applied so it makes a difference. Our goal is to build on our success and create a research institute that makes a real difference in our community, which will benefit children and families everywhere.

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Since 2002, the Australian Government has worked in partnership with eminent child health research institutes, Centre for Community Child Health, Royal Children's Hospital, Melbourne, and the Telethon Kids Institute, Perth to deliver the Australian Early Development Index programme to communities nationwide. On 1 July 2014, the Australian Early Development Index (AEDI) programme became known as the Australian Early Development Census (AEDC), and was launched through a new website [www.aedc.gov.au](http://www.aedc.gov.au). The Australian Government continues to work with its partners, and with state and territory governments to implement the AEDC.