



The reach of playgroups and their benefit for children's development across Australia

**A comparison of 2012, 2015,
and 2018 AEDC data**



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1. EXECUTIVE SUMMARY

Playgroups have formed an important component of the services available to support families and children in the early years for decades. Despite widespread use across Australia as well as internationally, the evidence regarding the benefits of playgroup for children and families needs to be strengthened. The Telethon Kids Institute was engaged by Playgroup Australia to investigate patterns of playgroup attendance and the relationship between attendance and children's early development across Australia. This follows on from a qualitative evaluation conducted by the Institute in 2014 examining the barriers and facilitators that influence Community Playgroup attendance (1), as well as quantitative research exploring playgroup attendance and the benefits of attendance for children's development in 2016-17, using a national dataset measuring the development of all children who started school in Australia in 2012 and 2015 (the Australian Early Development Census; AEDC) (2, 3).

The AEDC is conducted triennially, thus recent release of 2018 AEDC data presents an opportunity to further explore trends in playgroup attendance across Australia over time, and the consistency of the relationship between playgroup and children's early development over time.

Specifically, the objectives of the current report were to explore:

1. Changes in playgroup attendance for children between 2012, 2015, and 2018 for Australia overall, as well as within specific jurisdictions and sub-groups of children.
2. The relationship between playgroup attendance and child development in the 2018 AEDC cohort and contrast this with findings from 2012 and 2015 censuses, again for Australia overall, as well as within specific jurisdictions and sub-groups of children.

Results showed that nationwide, more than 1 in 3 children had attended a playgroup before starting school in 2018. Encouragingly, playgroup attendance has increased amongst the country's most vulnerable children, including those living in remote and socioeconomically disadvantaged areas, and children with an Aboriginal background, language background other than English, and those who were born in a non-English speaking country. There remain opportunities to increase the reach of playgroups however, and learnings from the ways in which different agencies and jurisdictions are working to support provision of and access to playgroups in particular areas or amongst specific population groups may be valuable for use by others.

Key findings regarding patterns in playgroup attendance over time include:

- In 2018, 36.4% of children nationwide had attended playgroup before starting school, one percentage more than that observed amongst children in the 2015 AEDC cohort. At a population level, this suggests that more than 112,000 children attended playgroup between their birth in 2012-13 and starting school in 2018.
- Consistent with 2012 and 2015 cohorts, playgroup attendance in 2018 varied considerably across jurisdictions, ranging from 26.8% in New South Wales to 71.1% in Tasmania. Compared to 2015, in 2018 playgroup attendance decreased in South Australia and Victoria but increased in all other jurisdictions, most significantly in the Northern Territory.

- As in previous years, playgroup attendance was highest amongst children living in remote and very remote Australia, compared to those living in major cities and regional areas. Playgroup attendance amongst children living in remote and very remote Australia has increased considerably over time, particularly in New South Wales and the Northern Territory.
- Although playgroup attendance continues to be lower amongst children living in socioeconomically disadvantaged areas relative to those in more affluent communities, the gap between the percentages of children attending playgroup in the most and the least disadvantaged communities has narrowed, between 2015 and 2018 in particular.
- Playgroup attendance continued to be lowest amongst children with an Aboriginal background, children with a language background other than English, and children born in non-English speaking countries. However, 2018 results show playgroup attendance amongst these children has increased over time. While in 2012 approximately 1 in 5 of these children had attended playgroup, in 2018 this had increased to 1 in 4 children nationwide.

Importantly, results from the 2018 AEDC census also demonstrate a consistent positive relationship between playgroup attendance before school and children's early development. Specifically:

- As in previous years, the benefits of playgroup were seen across all developmental domains for children in the 2018 AEDC cohort. Differences in developmental vulnerability between children who did and did not attend playgroup were largest for children's Communication Skills and General Knowledge and their Language and Cognitive Skills.
- Nationally, children who did not attend playgroup had 1.71 times greater odds of being developmentally vulnerable on one or more domain of the AEDC compared to children who had attended playgroup, after adjustment for background characteristics. This finding has remained consistent over time, providing confidence in the strength and reliability of the positive relationship between participation in playgroup and children's early development.
- Playgroup was positively associated with development for children from a range of different backgrounds, with adjusted odds ratios ranging from 1.38 to 2.06 for different groups of children in 2018. The relationship between playgroup and children's development in remote areas of Australia in particular, has continued to strengthen over time, with children living in remote areas who did not attend playgroup with more than two times greater odds of developmental vulnerability, compared to those who attended playgroup.
- Variation in the relationship between playgroup and child development was found between jurisdictions, with adjusted odds ratios ranging from 1.41 in the Northern Territory to 2.16 in South Australia. Examining the factors driving stronger relationships could provide insight into how benefits of playgroup might be maximised across jurisdictions.

This research provides Playgroup Australia with insight into patterns of playgroup attendance over time, across the country overall as well as amongst different areas and groups of children. Further, it provides evidence of a consistent, positive association between playgroup attendance before school and children's early development. With this information, Playgroup Australia can continue to advocate for the increased provision of playgroups and the important role they play for families in Australia.

2. INTRODUCTION

2.1 Background

Playgroups have formed an important component of the services available to support families and children in the early years for decades. Specifically, playgroup provides an opportunity for children to interact with and engage in play with similar-aged children on a regular basis in a safe environment, at a low cost. Further, playgroup provides caregivers with the opportunity to strengthen social networks, parenting skills, and knowledge of their child's development (1, 4-6), and it also helps to foster community linkages and connectedness (7). Evidently, playgroup is likely to have a positive influence on children's early development through a number of different pathways, and as such, playgroup offers an opportunity for parents and caregivers to help in fostering their child's development at a time that is crucial in shaping children's later outcomes.

Despite widespread use across Australia as well as internationally, the evidence regarding the benefits of playgroup for children and families needs to be strengthened. The Telethon Kids Institute was engaged by Playgroup Australia to investigate (i) patterns in playgroup attendance and (ii) the relationship between playgroup attendance and children's early development across Australia. This follows on from a qualitative evaluation conducted by the Institute in 2014 examining the barriers and facilitators that influence Community Playgroup attendance (1), as well as quantitative research exploring playgroup attendance and the benefits of attendance for children's development in 2016-17, using a national dataset measuring the development of all children who started school in Australia in 2012 and 2015 (the Australian Early Development Census; AEDC) (2, 3). The AEDC is conducted triennially, thus recent release of 2018 AEDC data provides an opportunity to again explore trends in playgroup attendance and how this relates to children's early development, with a focus on examining how results may have changed over time across 2012, 2015, and 2018 cohorts of children.

2.2 Previous findings

Previous research conducted by the Telethon Kids Institute has explored patterns of playgroup attendance across Australia, and the relationship between playgroup attendance and children's development at school entry (2, 3, 8). This work utilised national datasets measuring child development for all children who started school in Australia in both 2012 and 2015; the Australian Early Development Census (AEDC). For each data cycle, information regarding the playgroup attendance of approximately 120,000 children in Australia was available and utilised in analyses.

Overall, results from this research demonstrated:

- In 2015, 35.5% of children across Australia attended playgroup prior to school, half a percent less than that observed amongst children who started school in 2012, with attendance rates ranging from 24.3% in New South Wales to 67.5% in Tasmania.

- Across both 2012 and 2015 cohorts, playgroup attendance was higher for children living in regional and remote areas of Australia than for those living in major cities, while boys, children with an Aboriginal and/or Torres Strait Islander background¹ and children with a language background other than English were less likely to attend playgroup.
- Playgroups continue to have a wide reach across the country, with one in four children living in the most disadvantaged communities and almost one in two children living in the least disadvantaged areas of Australia attending playgroup before school.

Previous findings have also highlighted that playgroup attendance is associated with better child development outcomes:

- Across both 2012 and 2015 cohorts, children who attended playgroup before school had better development than those who had not, and these differences were observed across all domains of child development (i.e. physical development, communication skills, social and emotional development, language and cognitive development).
- In the 2015 cohort, children who did not attend playgroup had 1.70 times greater odds of being developmentally vulnerable on one or more domains of the AEDC at school entry than children who did not attend playgroup, after adjusting for a number of background characteristics that are likely to have an influence on children's early development.
- Across both cohorts, considerable variation in the relationship between playgroup attendance and child development was found across jurisdictions, with the smallest relationship observed in the Northern Territory and the largest in Tasmania.
- Differences in the relationship between playgroup and child development were also found for children from across population groups: a stronger relationship was observed for boys, children with a non-Aboriginal background, children who spoke English only, and children living in the least disadvantaged areas amongst the 2015 AEDC cohort.

Overall, previous results have been encouraging in that they demonstrated that playgroup was universally beneficial for children from a range of different backgrounds across Australia.

2.3 Aims of the report

Previous findings highlighted patterns of playgroup attendance across Australia, providing Playgroup Australia and State and Territory Playgroup Associations with insights into who is accessing playgroup, and who might be missing out. Further, they also filled an important gap in our understanding of the relationship between children's playgroup participation before school and their early development. Building on this evidence, the recent release of the 2018 AEDC data in March 2019 presents an opportunity to further explore trends in playgroup attendance across Australia over time, and the consistency of the relationship between playgroup and children's early development.

¹ In this report, the term "Aboriginal and/or Torres Strait Islander", herein "Aboriginal" is used to refer to the first peoples of Australia, that is, people who identify as being of Aboriginal and/or Torres Strait Islander background.

Specifically, this report has two key aims:

1. To explore changes in playgroup attendance for children between 2012, 2015, and 2018 across Australia overall, as well as within specific jurisdictions and sub-groups of children, including:
 - Children living in different states/territories of Australia
 - Children living in major cities, regional and remote areas of Australia
 - Children living in areas of high and low socioeconomic disadvantage
 - Children with different demographic characteristics (e.g. gender, Aboriginal and/or Torres Strait Islander background, country of birth, language background)
2. To explore the relationship between playgroup attendance and child development in the 2018 AEDC cohort and contrast this with findings from 2012 and 2015 censuses, again for Australia overall, as well as within specific jurisdictions and sub-groups of children, including:
 - Children living in different states/territories of Australia
 - Children living in major cities, regional and remote areas of Australia
 - Children living in areas of high and low socioeconomic disadvantage
 - Children with different demographic characteristics (e.g. gender, Aboriginal and/or Torres Strait Islander background, country of birth, language background)

3. METHOD

3.1 Research questions

Different analyses were conducted to answer the two key research questions that are the focus of this report, as described below.

1. How many children are attending playgroups across Australia, and has this changed between 2012, 2015, and 2018 cohorts?

To investigate playgroup attendance across Australia we utilised data from the 2018 Australian Early Development Census (refer to section 3.2) to estimate the number and percentage of children attending playgroups nationally, as well as in each jurisdiction. Additionally, we explored playgroup attendance across different levels of geographical remoteness, socioeconomic disadvantage, as well as children's demographic characteristics including gender, Aboriginal background, and language background other than English. Rates and patterns of attendance observed in the 2018 data were then compared to those from 2012 and 2015 AEDC cohorts to highlight any changes in utilisation of playgroup over time.

2. What is the relationship between playgroup attendance and children's development, and has this changed between 2012, 2015, and 2018 cohorts?

To explore the relationship between playgroup attendance and children's development, we investigated the association between playgroup attendance prior to full-time school and children's development at school entry (as measured by the 2018 AEDC). Sociodemographic information about the child and the community in which they lived were used to adjust for differences between children who did and did not attend playgroup that might influence their development outcomes. Additionally, we explored if this relationship differed across jurisdictions, levels of geographical remoteness, socioeconomic disadvantage, as well as children's demographic characteristics. Again, these results were compared to those observed in 2012 and 2015 AEDC cohorts to determine if there were any changes in the relationship between playgroup attendance and children's development over time.

3.2 The Australian Early Development Census

The Australian Early Development Census (AEDC) is the key data source used this report. The AEDC is a national census of early childhood development conducted once every three years on all children in their first year of full-time school. In 2012 AEDC data were collected for 289,973 children, in 2015 data were collected for 302,003 children, and in 2018 data were collected for 308,953 children, providing a rich population wide data source over time. The AEDC is publicly available (www.aedc.gov.au) and provides data at the national, jurisdictional, and community level.

The child development instrument used within the AEDC program is an Australian adaptation of the Early Development Instrument (EDI; 9, 10). The EDI is a teacher-completed instrument including approximately 100 items that measure development across five developmental domains (Figure 1).

For each of the five domains, children receive a score between 0 and 10 with higher scores indicative of better development. Children are then classified into one of three categories: “developmentally vulnerable”, “developmentally at risk” and “developmentally on track”. Additionally, there are two key summary indicators used within the AEDC program, which indicate whether children are vulnerable on 1 or more developmental domains, and whether children are vulnerable on 2 or more domains (11). In this report, we focus primarily on whether children are vulnerable on 1 or more domains as our main outcome measure. Where possible, we also report on whether children are developmentally vulnerable on each of the five developmental domains separately.



Figure 1: Developmental domains measured in the AEDC

In addition to completing the Australian version of the EDI, teachers are asked to provide contextual information about the children in their class, for example, children’s education and care experiences before school. In the 2012 data collection, an item focused on playgroup attendance was added to the instrument. Specifically, for each child in their class teachers were asked “Did this child attend playgroup before entering full time school?” to which they could respond “yes”, “no”, or “don’t know”. This item was used as the measure of playgroup attendance throughout this report. It is important to note that teachers were not asked specifically about the type of playgroup a child attended (for instance a community playgroup or a supported playgroup), so they will have answered “yes” if they are aware of the child attending any form of playgroup run by any organisation prior to starting school.

Further, during the AEDC collection, children's demographic information including gender, Aboriginal background, language background and country of birth are obtained from school administrative records and included in the AEDC dataset. In addition, children's residential address was linked to information held by the Australia Bureau of Statistics to identify the level of socioeconomic disadvantage in the community in which the child lives. Specifically, the 2016 Socio-Economic Indexes for Areas (SEIFA) was linked at the lowest level of geography possible (12) providing a measure of socioeconomic disadvantage for each child in the dataset. SEIFA are a set of measures derived from census information that summarise different aspects of socioeconomic conditions in an area, such as income level, educational attainment, rates of unemployment, as well as occupations. Each geographical area in Australia is given a SEIFA score that ranks the disadvantage of an area, compared with other areas across the country. Quintile 1 represents the most socioeconomically disadvantaged areas, while Quintile 5 represents the least socioeconomically disadvantaged areas. Children's residential address was also used to determine the level of geographical remoteness of the community in which they lived based on the Australian Standard Geographical Classification (ASGC) Remoteness Areas (13). Communities are classified as: major cities, inner regional areas, outer regional areas, remote areas, or very remote areas of Australia.

Between 2012, 2015, and 2018 AEDC data collections, modifications to AEDC community boundaries have resulted in changes to SEIFA scores and/or geographical remoteness classifications for some areas. To simplify analyses and enable valid comparisons over time, throughout this report we have used the updated 2018 AEDC dataset in which these changes have been retrospectively applied to 2012 and 2015 data.

4. PLAYGROUP ATTENDANCE ACROSS AUSTRALIA

4.1 National and jurisdictional playgroup attendance

In 2012, 2015, and 2018 AEDC data collections, teachers were asked whether children attended playgroup prior to commencing full-time school. Teacher responses from all three cohorts are presented in Table 1 below, across Australia as a whole as well as separately for each jurisdiction. As has been observed in previous years, for many children teachers did not know about their playgroup experience before school. In 2018, teachers across Australia responded “don’t know” to this item for 63.2% of children, an increase from 58.7% of children in 2012 and 61.9% in 2015.

When looking across jurisdictions, in 2018 the percentage of children for whom their teacher did not know about their playgroup attendance before school ranged from 49.2% in Queensland to 83.5% in the Australian Capital Territory. Variation in these figures is likely a result of jurisdictional differences in the availability of playgroup programs and providers as well as school transition practices. For example, in Queensland a statewide approach has been employed, supporting schools and their partners (i.e. early childhood services, community agencies) to implement transition strategies that meet the needs of their communities, and this may influence how informed teachers are of children’s experience of playgroup. When looking at results across jurisdictions over time, the percentage of “don’t know” responses has continued to increase from 2012 through to 2018 in the Australian Capital Territory, New South Wales, South Australia, Tasmania, and Victoria. In contrast, figures have decreased between 2015 and 2018 in the Northern Territory, Queensland, and Western Australia.

While many teachers selected “don’t know”, very few left this item blank in the 2018 AEDC cohort. Given that “don’t know” was a viable option, we can be confident that teachers who did not select this option had credible information regarding children’s playgroup attendance. Therefore as in previous reports, if we consider only the children of whose playgroup experience we know of (i.e. the “Yes” and “No” columns in Table 1), we can use these figures to estimate the percentage of children who attended playgroup before school. This approach takes into account the fact that teachers working in different jurisdictions were more or less likely to know whether children in their class attended playgroup, and provides a better population estimate of playgroup attendance.

Using this approach², Table 2 demonstrates that national playgroup attendance in 2018 was slightly higher than previous cohorts, with 36.4% of children having attended playgroup prior to school entry. Attendance in the 2018 cohort was lower than the national average in New South Wales (26.8%), Queensland (32.3%), and the Australian Capital Territory (34.1%), while attendance in the Northern Territory (40.4%), Victoria (43.3%), and Western Australia (44.7%) was above the national average. Consistent with 2012 and 2015 results, in 2018 playgroup attendance was highest in South Australia and Tasmania, with 55.7% and 71.1% of children attending playgroup before school, respectively.

² Table 2 and subsequent analyses have excluded children where information on playgroup attendance was missing or the teacher responded “don’t know”, and therefore are based on children in AEDC cohorts with valid responses to the playgroup item (2012 n = 119,245; 2015 n = 114,742; 2018 n = 113,443).

Table 1: Playgroup attendance for 2012 (n = 289,973), 2015 (n = 302,003), and 2018 (n = 308,953) AEDC cohorts

Did the child attend playgroup before entering full time school?									
	2012			2015			2018		
	Yes n (%)	No n (%)	Don't know n (%)	Yes n (%)	No n (%)	Don't know n (%)	Yes n (%)	No n (%)	Don't know n (%)
Australia	42,952 (14.9)	76,293 (26.4)	169,342 (58.7)	40,743 (13.5)	73,999 (24.6)	186,250 (61.9)	41,310 (13.4)	72,133 (23.4)	194,503 (63.2)
ACT	516 (10.6)	987 (20.3)	3,365 (69.1)	369 (6.8)	703 (13.0)	4,327 (80.1)	322 (5.6)	623 (10.9)	4,768 (83.5)
NSW	10,483 (11.1)	27,429 (29.1)	56,324 (59.8)	9,318 (9.7)	29,078 (30.3)	57,558 (60.0)	9,374 (9.6)	25,558 (26.1)	62,855 (64.3)
NT	447 (13.4)	1,069 (32.1)	1,815 (54.5)	485 (14.1)	866 (25.2)	2,087 (60.7)	533 (15.9)	786 (23.5)	2,028 (60.6)
QLD	9,957 (16.2)	21,300 (34.7)	30,040 (49.0)	8,716 (13.4)	20,253 (31.2)	35,956 (55.4)	10,606 (16.4)	22,198 (34.4)	31,716 (49.2)
SA	3,114 (16.7)	2,214 (11.8)	13,365 (71.5)	2,946 (15.0)	2,150 (11.0)	12,502 (74.0)	2,620 (13.0)	2,085 (10.3)	15,512 (76.7)
TAS	2,133 (33.3)	1,087 (16.9)	3,195 (49.8)	2,247 (35.0)	1,083 (16.9)	3,082 (48.1)	2,204 (35.9)	896 (14.6)	3,032 (49.4)
VIC	10,530 (15.5)	13,560 (20.0)	43,654 (64.4)	9,988 (14.0)	11,056 (15.4)	50,543 (70.6)	8,404 (11.1)	11,020 (14.5)	56,626 (74.5)
WA	5,772 (18.0)	8,647 (27.0)	17,584 (54.9)	6,674 (19.8)	8,810 (26.2)	18,195 (54.0)	7,247 (21.2)	8,967 (26.2)	17,966 (52.6)

Note. Data on playgroup attendance were missing for 1,386 children in 2012, 1,011 children in 2015, and 1,007 children in 2018.

Table 2: Playgroup attendance for 2012 (n = 119,245), 2015 (n = 114,742), and 2018 (n = 113,443) AEDC cohorts

Did the child attend playgroup before entering full time school?									
	2012			2015			2018		
	Yes n (%)	No n (%)	Total n (%)	Yes n (%)	No n (%)	Total n (%)	Yes n (%)	No n (%)	Total n (%)
Australia	42,952 (36.0)	76,293 (64.0)	119,245 (100.0)	40,743 (35.5)	73,999 (64.5)	114,742 (100.0)	41,310 (36.4)	72,133 (63.6)	113,443 (100.0)
ACT	516 (34.3)	987 (65.7)	1,503 (100.0)	369 (34.4)	703 (65.6)	1,072 (100.0)	322 (34.1)	623 (65.9)	945 (100.0)
NSW	10,483 (27.7)	27,429 (72.3)	37,912 (100.0)	9,318 (24.3)	29,078 (75.7)	38,396 (100.0)	9,374 (26.8)	25,558 (73.2)	34,932 (100.0)
NT	447 (29.5)	1,069 (70.5)	1,516 (100.0)	485 (35.9)	866 (64.1)	1,351 (100.0)	533 (40.4)	786 (59.6)	1,319 (100.0)
QLD	9,957 (31.9)	21,300 (68.1)	31,257 (100.0)	8,716 (30.1)	20,253 (69.9)	28,969 (100.0)	10,606 (32.3)	22,198 (67.7)	32,804 (100.0)
SA	3,114 (58.4)	2,214 (41.6)	5,328 (100.0)	2,946 (57.8)	2,150 (42.2)	5,096 (100.0)	2,620 (55.7)	2,085 (44.3)	4,705 (100.0)
TAS	2,133 (66.2)	1,087 (33.8)	3,220 (100.0)	2,247 (67.5)	1,083 (32.5)	3,330 (100.0)	2,204 (71.1)	896 (28.9)	3,100 (100.0)
VIC	10,530 (43.7)	13,560 (56.3)	24,090 (100.0)	9,988 (47.5)	11,056 (52.5)	21,044 (100.0)	8,404 (43.3)	11,020 (56.7)	19,424 (100.0)
WA	5,772 (40.0)	8,647 (60.0)	14,419 (100.0)	6,674 (43.1)	8,810 (56.9)	15,484 (100.0)	7,247 (44.7)	8,967 (55.3)	16,214 (100.0)

Note. Children were excluded where information on playgroup attendance was missing or the teacher responded "don't know".

Table 2 also highlights changes in playgroup attendance within jurisdictions over time, which are further illustrated in Figure 2 below. After decreasing between 2012 and 2015, playgroup attendance in 2018 increased in New South Wales and Queensland. In contrast, after increasing between 2012 and 2015, attendance in 2018 decreased in Victoria. In South Australia, although rates of attendance are amongst the highest in Australia, they have continued to decrease across all three cohorts, from 58.4% in 2012 to 55.7% in 2018. Attendance in the Australian Capital Territory has remained relatively consistent over time at around 34%, while in the Northern Territory, Tasmania, and Western Australia, rates of attendance have increased in each cohort since 2012. Shifts in attendance have been largest in the Northern Territory, increasing by more than 10% from 2012 to 2018. This may be attributable to increases in playgroup programs and providers available in Northern Territory over the past decade, including for example, the introduction of the Families as First Teachers (FaFT) program, providing supported playgroups to families in remote Aboriginal communities (14).

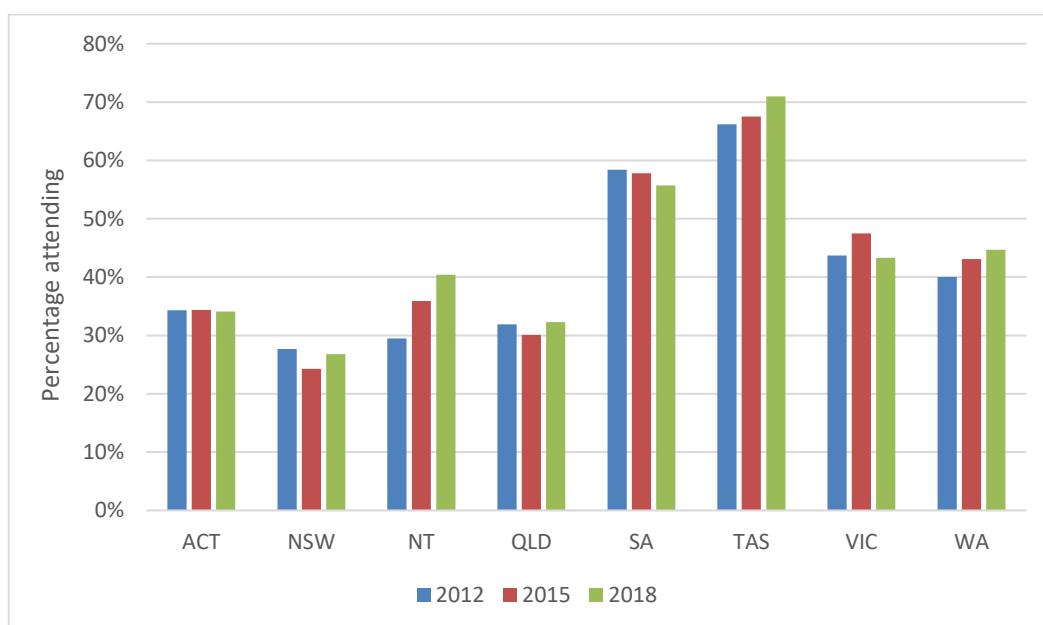


Figure 2: Playgroup attendance in each jurisdiction across 2012, 2015, and 2018 AEDC cohorts

Table 3 demonstrates an application of these percentages to the full AEDC cohort samples, so as to estimate the number of children in each jurisdiction who would have attended playgroup before starting school³. These estimates suggest that in the 2018 cohort, more than 112,000 children across Australia attended playgroup at some stage between their birth in 2012-13 and starting school in 2018. These estimates indicate playgroup reached from between 1,388 children in the Northern Territory to 33,014 children in Victoria. Importantly, these results help to highlight that, although the national increase in percentage of children who attended playgroup between 2015 and 2018 seems small (i.e. from 35.5% to 36.4%), based on these estimates this equates to more than 5,000 additional children across Australia having attended playgroup in the 2018 AEDC cohort.

³ These estimates are based on children with valid playgroup attendance data, and it is important to note that attendance for children where information on playgroup attendance was missing or the teacher responded “don’t know” may have differed to that of children with valid playgroup attendance data.

Table 3: Estimates of the number of children who attended playgroup prior to school

	2012			2015			2018		
	# children in AEDC cohort	% attending playgroup	Estimated # attending playgroup	# children in AEDC cohort	% attending playgroup	Estimated # attending playgroup	# children in AEDC cohort	% attending playgroup	Estimated # attending playgroup
Australia	289,973	36.0	104,390	302,003	35.5	107,211	308,953	36.4	112,458
ACT	4,898	34.3	1,680	5,415	34.4	1,863	5,727	34.1	1,952
NSW	94,572	27.7	26,196	96,156	24.3	23,366	98,020	26.8	26,269
NT	3,470	29.5	1,024	3,582	35.9	1,286	3,438	40.4	1,388
QLD	61,593	31.9	19,648	65,200	30.1	19,625	64,700	32.3	20,898
SA	18,921	58.4	11,050	19,669	57.8	11,369	20,303	55.7	11,308
TAS	6,430	66.2	4,257	6,425	67.5	4,337	6,151	71.1	4,373
VIC	67,931	43.7	29,686	71,737	47.5	34,075	76,245	43.3	33,014
WA	32,158	40.0	12,863	33,819	43.1	14,576	34,369	44.7	15,362

Table 4: Playgroup attendance for 2012, 2015, and 2018 AEDC cohorts by geographical remoteness

	Did the child attend playgroup before entering full time school?								
	2012			2015			2018		
	Yes n (%)	No n (%)	Total n (%)	Yes n (%)	No n (%)	Total n (%)	Yes n (%)	No n (%)	Total n (%)
Major Cities	26,690 (34.6)	50,456 (65.4)	77,146 (100.0)	25,238 (34.0)	49,039 (66.0)	74,277 (100.0)	25,765 (34.4)	49,046 (65.6)	74,811 (100.0)
Inner Regional	9,379 (38.4)	15,029 (61.6)	24,408 (100.0)	8,852 (37.7)	14,622 (62.3)	23,474 (100.0)	9,063 (39.6)	13,805 (60.4)	22,868 (100.0)
Outer Regional	5,220 (39.0)	8,175 (61.0)	13,395 (100.0)	4,893 (38.0)	7,991 (62.0)	12,884 (100.0)	4,659 (39.0)	7,272 (61.0)	11,931 (100.0)
Remote	981 (41.1)	1,408 (58.9)	2,389 (100.0)	986 (44.8)	1,213 (55.2)	2,199 (100.0)	1,023 (48.8)	1,073 (51.2)	2,096 (100.0)
Very Remote	682 (35.8)	1,225 (64.2)	1,907 (100.0)	774 (40.6)	1,134 (59.4)	1,908 (100.0)	800 (46.1)	937 (53.9)	1,737 (100.0)

4.2 Playgroup attendance in metropolitan, regional, and remote areas of Australia

Community playgroups operate in all parts of Australia, from inner city areas such as Melbourne and Perth, to regional towns such as Dubbo and Launceston, to remote communities in Alice Springs and Mount Isa. Next, we explored if playgroup attendance varies for children living in different parts of the country, and examined how these patterns of attendance have changed over time.

These results are presented in Table 4 and Figure 3, with the same figures replicated separately for each jurisdiction in Appendix A. As in previous years, results from the 2018 data collection show that the general trend of playgroup attendance being highest outside of Australia's major cities has remained. When looking at results across jurisdictions, patterns of attendance vary and may work to highlight ways in which different early years policies, contexts, and strategies are having an influence on playgroup attendance across the country. For example, in New South Wales and the Northern Territory, playgroup attendance was highest for families living in very remote areas, and in Queensland and South Australia attendance was highest in remote communities. In contrast, in Tasmania and Western Australia, playgroup attendance was lowest amongst children living in very remote communities, relative to other areas. Understanding the different ways in which jurisdictions address the challenges of facilitating playgroup in areas with limited services and supports could provide valuable insights that could be considered in other jurisdictions.

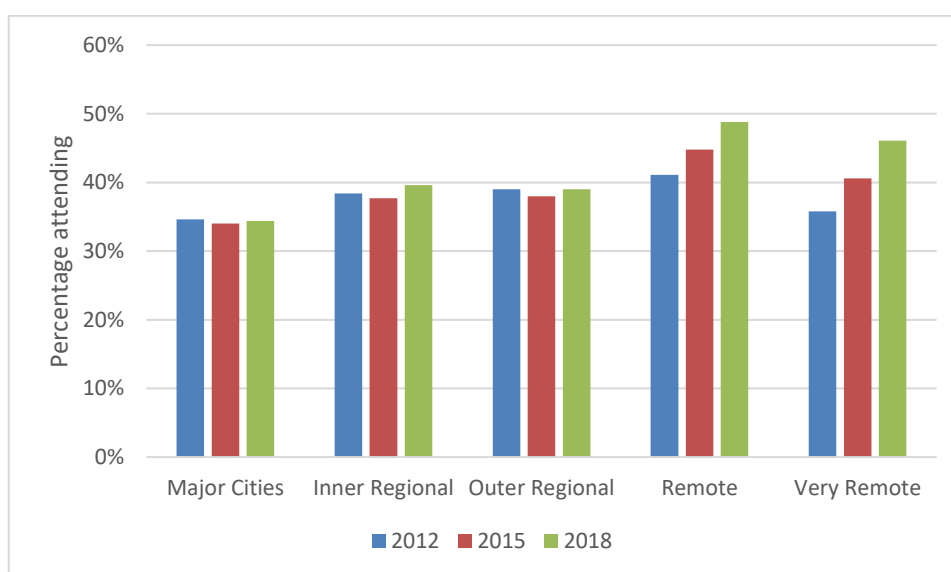


Figure 3: Playgroup attendance by geographical remoteness across 2012, 2015, and 2018 AEDC cohorts

When exploring national attendance by geographical remoteness over time, results show that while attendance has remained relatively consistent from 2012 to 2018 in major cities as well as regional areas, the percentage of children attending playgroup in remote and very remote areas has increased considerably with each new cohort. This is particularly the case for very remote areas of Australia, in which playgroup attendance has increased from 35.8% in 2012 to 46.1% in 2018.

This increase in engagement with playgroups in very remote areas of the country is an encouraging finding, however, it is important to note that this is based on a relatively small number of children (i.e. playgroup information was available for 1,737 children living in very remote Australia in the 2018 AEDC data collection, and 800 or 46.1% of these children had attended playgroup before starting school).

When exploring trends in attendance over time separately for each jurisdiction (Appendix A), some noteworthy findings are observed. In both New South Wales and the Northern Territory, playgroup attendance amongst children living in very remote areas has seen the greatest increase, relative to those living in major cities, inner and outer regional areas, and remote areas. These patterns could be attributable to a range of factors, such as changes that are related to the nature and size of communities in more remote parts of the country or how these jurisdictions are working to support playgroups in very remote areas. Learnings from experiences in New South Wales and the Northern Territory may be valuable for use in other jurisdictions.

In Tasmania we see the opposite pattern of attendance. Across 2012, 2015, and 2018 AEDC cohorts playgroup attendance has increased in inner regional areas, but decreased in outer regional, remote, and very remote areas of the state. Similarly, this could be the result of a number of factors including changes in the spread of playgroup provision and providers across the state. Again, other jurisdictions may be able to learn from the experience in Tasmania regarding the supports in place that may be influencing greater engagement with playgroup in inner regional areas of the state.

4.3 Playgroup attendance in areas of high and low socioeconomic disadvantage

Community playgroups are one of the most affordable activities for families, however attendance requires travel to playgroup which may pose financial and logistical barriers for families with limited disposable income and/or access to transportation. Beyond these difficulties, previous research has also demonstrated that families face a number of non-financial barriers to attending playgroup, which may also be related to socioeconomic position. For example, some families may have difficulty accessing playgroup information, and others may feel that playgroups are inaccessible to them because they do not fit in with other families in the group (1).

We explored patterns in playgroup attendance based on the socioeconomic disadvantage in the area in which a child lives. Results demonstrate a clear socioeconomic gradient in the families attending playgroup. Table 5 shows that in 2018, while 29.7% of children in the most disadvantaged communities had attended playgroup before school, 42.3% of children in the most advantaged communities had attended. These results are consistent with those from 2012 and 2015 AEDC cohorts, however, as Figure 4 helps to illustrate, the gap between the percentages of children attending playgroup in the most and the least disadvantaged communities has reduced, between 2015 and 2018 in particular. This is a very positive finding and indicates that more of Australia's most disadvantaged children are receiving the investments needed to promote their early development. This result is also likely to be related to those in section 4.2, that is, increased playgroup attendance amongst children living in remote and very remote areas is likely to be, in part, driving increases observed amongst those living in socioeconomically disadvantaged communities, and vice versa.

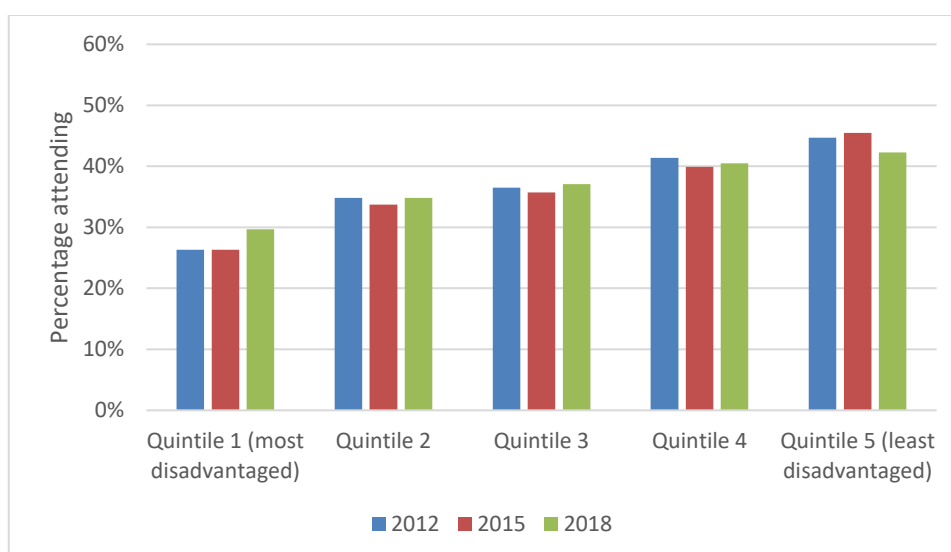


Figure 4: Playgroup attendance by socioeconomic disadvantage across 2012, 2015, and 2018 AEDC cohorts

However, it is important to note that this reduction in playgroup attendance inequality is a result of increased attendance amongst the most disadvantaged, as well as decreased attendance amongst the least disadvantaged. As community playgroups are a universal service, ideally we would want to see this gap in attendance being reduced without decreases in attendance for children from more advantaged backgrounds. Insight into what has influenced a decrease in attendance amongst more socioeconomically advantaged families is needed. For instance, families may be choosing to participate in early childhood education services other than playgroup, or they may be struggling to fit playgroup into their work schedules as was found through previous qualitative research (7).

4.4 Demographic characteristics of children by playgroup attendance

The sections above have explored the relationships between playgroup attendance and where a child lives. Results have indicated that the likelihood of children having attended playgroup before starting school is influenced by the state or territory in which they live, whether they live in a major city, regional town or remote area, and whether they live in a more or less socioeconomically disadvantaged area of Australia. Next, we explore relationships between playgroup attendance and children's individual characteristics. Specifically, if there are differences in attendance depending on if children:

- are a boy or girl,
- are of Aboriginal and/or Torres Strait Islander background;
- were born in Australia, an English speaking country, or a non-English speaking country, and;
- have a language background other than English

We also explore if any differences in attendance based on children's individual characteristics have changed over time. If specific groups of children are not accessing playgroup, this may present an opportunity for Playgroup Australia to target these families in future marketing campaigns.

Table 5: Playgroup attendance for 2012, 2015, and 2018 AEDC cohorts by socioeconomic disadvantage

	Did the child attend playgroup before entering full time school?								
	2012			2015			2018		
	Yes n (%)	No n (%)	Total n (%)	Yes n (%)	No n (%)	Total n (%)	Yes n (%)	No n (%)	Total n (%)
Quintile 1	7,604 (26.3)	21,347 (73.7)	28,951 (100.0)	7,384 (26.3)	20,645 (73.7)	28,029 (100.0)	7,938 (29.7)	18,793 (70.3)	26,731 (100.0)
Quintile 2	8,451 (34.8)	15,857 (65.2)	24,308 (100.0)	7,964 (33.7)	15,677 (66.3)	23,641 (100.0)	7,914 (34.8)	14,846 (65.2)	22,760 (100.0)
Quintile 3	8,546 (36.5)	14,847 (63.5)	23,393 (100.0)	8,003 (35.7)	14,416 (64.3)	22,419 (100.0)	8,639 (37.1)	14,656 (62.9)	23,295 (100.0)
Quintile 4	8,661 (41.4)	12,237 (58.6)	20,898 (100.0)	8,043 (39.9)	12,092 (60.1)	20,135 (100.0)	8,378 (40.5)	12,319 (59.5)	20,697 (100.0)
Quintile 5	9,687 (44.7)	11,996 (55.3)	21,683 (100.0)	9,339 (45.5)	11,165 (54.5)	20,504 (100.0)	8,439 (42.3)	11,513 (57.7)	19,952 (100.0)

Note. Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged. Data on socioeconomic disadvantage were missing for 31 children in 2012, 39 children in 2015, 28 children in 2018.

Table 6: Demographic characteristics of children by playgroup attendance

		Did the child attend playgroup before entering full time school?					
		2012		2015		2018	
		Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia		42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
Sex	Male	21,590 (35.0)	40,125 (65.0)	20,380 (34.5)	38,639 (65.5)	20,869 (35.5)	37,989 (64.5)
	Female	21,362 (37.1)	36,168 (62.9)	20,363 (36.5)	35,360 (63.5)	20,441 (37.4)	34,144 (62.6)
Aboriginal background	Non-Aboriginal	41,285 (37.0)	70,273 (63.0)	38,859 (36.5)	67,522 (63.5)	38,957 (37.3)	65,569 (62.7)
	Aboriginal	1,667 (21.7)	6,020 (78.3)	1,884 (22.5)	6,477 (77.5)	2,337 (26.4)	6,526 (73.6)
Country of birth	Australia	40,744 (36.8)	70,094 (63.2)	38,700 (36.3)	67,874 (63.7)	39,031 (37.0)	66,323 (63.0)
	Other country	903 (19.0)	3,838 (81.0)	966 (19.2)	4,058 (80.8)	1,488 (24.8)	4,514 (75.2)
	Other English speaking country	1,305 (35.6)	2,361 (64.4)	1,077 (34.3)	2,067 (65.7)	791 (37.9)	1,296 (62.1)
Language background other than English	No	38,244 (39.5)	58,597 (60.5)	35,202 (38.9)	55,372 (61.1)	34,000 (39.5)	52,075 (60.5)
	Yes	4,708 (21.0)	17,696 (79.0)	5,541 (22.9)	18,627 (77.1)	7,310 (26.7)	20,058 (73.3)

Table 6 above highlights that children who had and had not attended playgroup before starting school differ significantly in terms of their individual characteristics. Figure 5 below helps to highlight how these differences played out across all three AEDC data collections. To summarise:

- **Gender:** In 2018, more girls had attended playgroup prior to starting school compared to boys. This gender difference of approximately 2% in favour of girls has remained relatively consistent across all three AEDC cohorts. Again, although this difference seems small, it represents a large number of children at the population level, indicating that approximately 6,000 more girls are attending playgroups nationwide before school, compared to boys.
- **Aboriginal background:** As in previous years, fewer children with an Aboriginal background who started school in 2018 had attended playgroup, compared to children with a non-Aboriginal background. Encouragingly however, playgroup attendance amongst children with an Aboriginal background has continued to increase over time. While in 2012 approximately 1 in 5 children with an Aboriginal background had attended playgroup before school, in 2018 this has increased to more than 1 in 4 children nationwide.
- **Country of birth:** In 2018, rates of playgroup attendance were highest amongst children who were born in an English speaking country other than Australia, whereas in previous cohorts, attendance was highest amongst children born in Australia. As in previous years, children who were born in a non-English speaking country were much less likely to have attended playgroup before school, however, attendance amongst this group of children increased significantly between 2015 and 2018. This is encouraging, and may be a reflection of increased availability of playgroups designed for families with limited English skills when they arrive in Australia.
- **Language background other than English:** Across all AEDC cohorts, children who speak English only were much more likely to attend playgroup than children with a language background other than English. However, results show a significant increase in attendance amongst children with a language background other than English over time, from 1 in 5 children attending in 2012 to 1 in 4 in the 2018 cohort. Again, this might be a reflection of an increase in playgroups specifically for families who have a language background other than English.

In Appendix B, Table 6 is replicated for each jurisdiction to provide a description of the characteristics of children who had and had not attended playgroup before starting school across AEDC cohorts.

Overall, these results are encouraging in that they demonstrate that gaps in access to playgroups are closing over time. Specifically, playgroup attendance before school has increased amongst children from more vulnerable population groups, which is likely in part, a reflection of increased provision of both community and supported playgroups designed to better engage with these families (e.g. community playgroups designed for families of specific cultural or language groups, or supported playgroups designed for and established in remote Aboriginal communities). With continued efforts and investments such as these that work to ensure playgroup is accessible to all, we may continue to see these patterns of attendance increase through future AEDC cohorts.

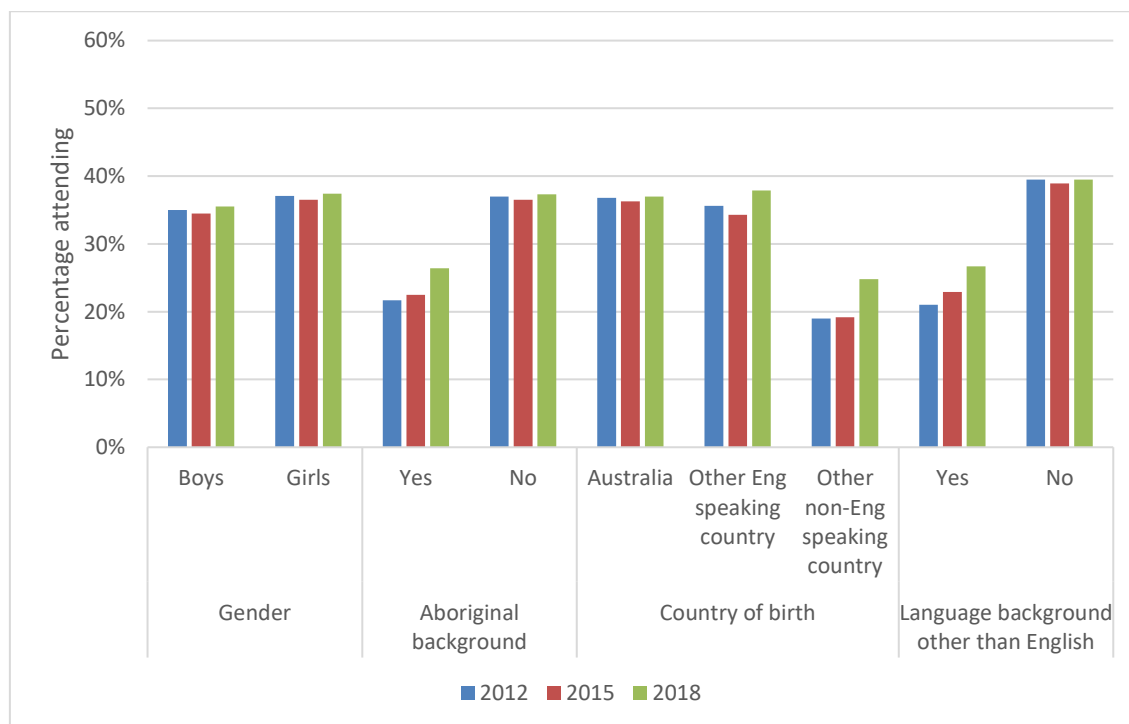


Figure 5: Playgroup attendance by children's individual demographic characteristics across 2012, 2015, and 2018 AEDC cohorts

4.5 Summary

This section of the report sought to explore patterns of playgroup attendance in Australia over time. Analyses utilised teacher-reported information of children's experience of playgroup before school, collected through three cycles of AEDC data. Specifically, playgroup attendance data were available for 119,245 children across Australia in 2012, 114,742 children in 2015, and 113,443 children in 2018.

Key findings include:

- In 2018, 36.4% of children nationwide had attended playgroup before starting school, one percentage more than that observed amongst children in the 2015 AEDC cohort. At a population level, this suggests that more than 112,000 children attended playgroup between their birth in 2012-13 and starting school in 2018.
- Consistent with 2012 and 2015 cohorts, playgroup attendance in 2018 varied considerably across jurisdictions, ranging from 26.8% in New South Wales to 71.1% in Tasmania. Compared to 2015, in 2018 playgroup attendance decreased in South Australia and Victoria but increased in all other jurisdictions, most significantly in the Northern Territory.

- As in previous years, playgroup attendance was highest amongst children living in remote and very remote Australia, compared to those living in major cities and regional areas. Playgroup attendance amongst children living in remote and very remote Australia has increased considerably over time, particularly in New South Wales and the Northern Territory.
- Although playgroup attendance continues to be lower amongst children living in socioeconomically disadvantaged areas relative to those in more affluent communities, the gap between the percentages of children attending playgroup in the most and the least disadvantaged communities has narrowed, between 2015 and 2018 in particular.
- Playgroup attendance continued to be lowest amongst children with an Aboriginal background, children with a language background other than English, and children born in non-English speaking countries. However, 2018 results show playgroup attendance amongst these children has increased over time. While in 2012 approximately 1 in 5 of these children had attended playgroup before school, in 2018 this had increased to 1 in 4 children nationwide.

Overall, results demonstrate that playgroups continue to have a wide reach across Australia, with more than 1 in 3 children having attended playgroup nationwide before starting school in 2018. Despite this, opportunities to increase the reach of playgroups in Australia remain, and learnings from the ways in which different agencies and jurisdictions are working to support provision of and access to playgroups in particular areas or amongst specific population groups may be valuable for use by others. Encouragingly, findings from the 2018 AEDC highlight that exposure to playgroup has increased amongst the country's most vulnerable children, including those living in remote and socioeconomically disadvantaged areas, and children with an Aboriginal background, language background other than English, and those who were born in a non-English speaking country. Analyses in the next section of this report will help us to understand if increased investments in the early years for these children are working to promote children's early developmental outcomes.

5. RELATIONSHIP BETWEEN PLAYGROUP ATTENDANCE AND CHILD DEVELOPMENT

5.1 Developmental vulnerability amongst children who did and did not attend playgroup

In this section we compare developmental outcomes, as measured by the AEDC, for children who did and did not attend playgroup before starting school. Table 7 presents the number and percentage of children who were developmentally vulnerable on each of the five AEDC domains separately for children who did and did not attend playgroup across 2012, 2015, and 2018 cohorts of children. As in previous years, there were large differences in developmental vulnerability amongst children who did and did not attend playgroup before school. Specifically, the percentage of children who were developmentally vulnerable at school entry was much higher amongst children who had not attended playgroup, relative to those who had, across all developmental domains. As in previous cohorts, the biggest differences between children who did and did not attend playgroup were in their Communication Skills and General Knowledge (5.5% vs 11.8%) and Language and Cognitive Skills (4.2% vs 10.2%), while the smallest difference was in children's Emotional Maturity (6.8% vs 10.9%).

Figure 6 highlights trends in developmental vulnerability amongst children who did and did not attend playgroup over time, as well as for children whose teachers responded "don't know" to the playgroup information item. Evidently, rates of vulnerability in Physical Health and Wellbeing and Language and Cognitive Skills domains have increased over time amongst all children. In remaining domains however, increased developmental vulnerability was observed amongst children who had attended playgroup only. This is likely a reflection of results presented in Section 4, demonstrating that in the 2018 cohort playgroup attendance increased amongst the country's most disadvantaged children⁴.

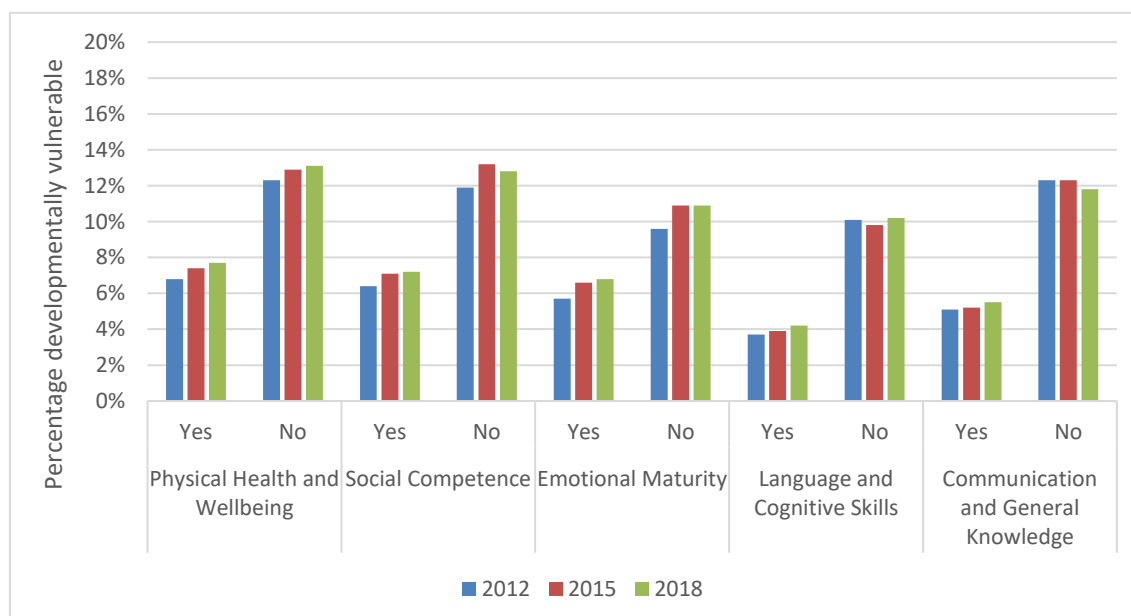


Figure 6: Developmental vulnerability on AEDC domains by playgroup attendance (yes/no) across 2012, 2015, and 2018 AEDC cohorts

⁴ It is important to reiterate that results presented are based on children with valid playgroup attendance data only, and thus do not necessarily reflect trends in developmental vulnerability amongst the full AEDC cohorts.

Table 7: Developmental vulnerability on AEDC domains by playgroup attendance

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes	No	Yes	No	Yes	No
	(n = 42,952)	(n = 76,293)	(n = 40,743)	(n = 73,999)	(n = 41,310)	(n = 72,133)
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Developmental domain						
Physical Health and Wellbeing	2,772 (6.8)	8,849 (12.3)	2,881 (7.4)	9,075 (12.9)	3,026 (7.7)	8,974 (13.1)
Social Competence	2,625 (6.4)	8,538 (11.9)	2,766 (7.1)	9,221 (13.2)	2,841 (7.2)	8,793 (12.8)
Emotional Maturity	2,309 (5.7)	6,897 (9.6)	2,562 (6.6)	7,618 (10.9)	2,668 (6.8)	7,444 (10.9)
Language and Cognitive Skills	1,507 (3.7)	7,284 (10.1)	1,534 (3.9)	6,899 (9.8)	1,669 (4.2)	6,974 (10.2)
Communication and General Knowledge	2,075 (5.1)	8,885 (12.3)	2,042 (5.2)	8,655 (12.3)	2,155 (5.5)	8,072 (11.8)
Summary indicators						
Vulnerable on 1 or more domains	6,402 (15.8)	19,761 (27.5)	6,464 (16.6)	19,575 (28.0)	6,624 (16.8)	18,861 (27.6)
Vulnerable on 2 or more domains	2,823 (6.9)	10,589 (14.7)	2,918 (7.5)	10,921 (15.6)	3,191 (8.1)	10,451 (15.3)

Note. Number of valid cases (i.e. children with valid domain scores) will be slightly lower than n specified as this number varies across domains/indicators.

5.2 The relationship between playgroup attendance and child development

Table 8 presents results from analyses exploring the relationship between playgroup attendance before school and developmental vulnerability on one or more domains of the AEDC across 2012, 2015, and 2018 cohorts of children. Because children who did and did not attend playgroup vary considerably in terms of their demographic characteristics (as described in Table 6 above), the remainder of results reported were adjusted for these differences in background characteristics (i.e. gender, Aboriginal background, country of birth, language background other than English, and socioeconomic disadvantage) as all of these factors are known to be related to children's developmental outcomes. Odds ratios represent the odds that children who did not attend playgroup were developmentally vulnerable, compared to the odds of children who did attend. Odds ratios for children's background characteristics highlight relationships between these characteristics and developmental vulnerability.

Results show that for children who started school in 2018, the odds of being developmentally vulnerable on one or more domains of the AEDC were 1.71 times higher for children who did not attend playgroup before school compared with children who did attend playgroup. Encouragingly, this figure has remained relatively consistent over time, giving us confidence in the strength and reliability of the positive relationship between children's participation in playgroup and their early development.

5.3 The relationship between playgroup attendance and child development across different population groups

Next, we explored if the relationship between playgroup attendance and children's development varied based on children's background characteristics. For instance, if the relationship between playgroup attendance and development at school entry was stronger for girls than it was boys, or for children who have a language background other than English than for children who speak English only. This provides us with some insight into who in particular may benefit from attending playgroup, and if some children may benefit more or less than others. Table 9 presents results from these analyses, which again were adjusted to account for children's background characteristics. Encouragingly results showed that odds ratios were significantly different from 1 across all groups, suggesting that playgroups are universally beneficial for children from a range of different backgrounds.

Specifically, findings for the 2018 cohort show that:

- Girls who did not attend playgroup had 1.83 times higher odds of being developmentally vulnerable compared to those who attended playgroup, while the odds ratio was somewhat lower for boys (1.64). This suggests that girls might benefit from playgroup more than boys, however this result has been inconsistent over time, shifting from a higher odds ratio for girls in 2012, for boys in 2015, and again for girls in 2018, and so should be interpreted with caution.
- Children with an Aboriginal background who did not attend playgroup had 1.82 times greater odds of being developmentally vulnerable at school entry compared to those who attended playgroup. This odds ratio was slightly higher than that for children of a non-Aboriginal background (1.70), however this result has also changed over time, suggesting there is not a consistent difference in the relationship between playgroup and early development for children with and without an Aboriginal background.

Table 8: Relationship between playgroup attendance and developmental vulnerability on one or more AEDC domains

	2012 OR (95% CI)	2015 OR (95% CI)	2018 OR (95% CI)
Playgroup attendance			
Yes	ref	ref	ref
No	1.74 (1.68-1.80)**	1.70 (1.65-1.76)**	1.71 (1.66-1.77)**
Sex			
Male	ref	ref	Ref
Female	0.46 (0.45-0.48)**	0.44 (0.43-0.46)**	0.47 (0.45-0.48)**
Aboriginal background			
Non-Aboriginal	ref	ref	Ref
Aboriginal	2.38 (2.26-2.25)**	2.45 (2.32-2.58)**	2.33 (2.21-2.45)**
Country of birth			
Australia	ref	ref	ref
Other English speaking country	1.02 (0.94-1.11)	1.06 (0.97-1.16)	1.16 (1.04-1.29)*
Other country	1.36 (1.27-1.46)**	1.37 (1.27-1.47)**	1.41 (1.32-1.51)**
Language background other than English			
No	ref	ref	ref
Yes	1.41 (1.35-1.46)**	1.32 (1.27-1.37)**	1.26 (1.21-1.30)**
Geographical remoteness			
Major cities	ref	ref	ref
Inner regional	1.01 (0.98-1.06)	1.02 (0.98-1.06)	1.03 (0.99-1.07)
Outer regional	1.01 (0.96-1.06)	1.01 (0.97-1.07)	0.93 (0.88-0.97)*
Remote	0.93 (0.84-1.04)	1.18 (1.06-1.30)*	0.99 (0.89-1.11)
Very remote	1.40 (1.25-1.56)**	1.67 (1.50-1.86)**	1.75 (1.57-1.95)**
Socioeconomic disadvantage			
Quintile 1 (most disadvantaged)	ref	ref	ref
Quintile 2	0.78 (0.75-0.81)**	0.75 (0.72-0.79)**	0.75 (0.72-0.78)**
Quintile 3	0.70 (0.67-0.73)**	0.71 (0.68-0.74)**	0.66 (0.63-0.69)**
Quintile 4	0.57 (0.54-0.60)**	0.59 (0.59-0.61)**	0.57 (0.54-0.59)**
Quintile 5 (least disadvantaged)	0.46 (0.44-0.49)**	0.47 (0.45-0.50)**	0.46 (0.43-0.48)**

Note. OR = odds ratio, CI = confidence interval, * = $p < .05$, ** = $p < .001$. Results presented here may differ slightly from those presented for 2012 and 2015 cohorts previously as this analysis included adjustment for additional demographic characteristics (i.e. country of birth and geographical remoteness) than in previous reports.

Table 9: Relationship between playgroup attendance and developmental vulnerability on one or more AEDC domains for different population groups

	2012 OR (95% CI)	2015 OR (95% CI)	2018 OR (95% CI)
Full population	1.74 (1.68-1.80)**	1.70 (1.65-1.76)**	1.71 (1.66-1.77)**
Sex			
Male	1.67 (1.61-1.74)**	1.71 (1.64-1.78)**	1.64 (1.57-1.71)**
Female	1.86 (1.76-1.96)**	1.69 (1.61-1.79)**	1.83 (1.74-1.92)**
Aboriginal background			
Non-Aboriginal	1.74 (1.68-1.80)**	1.71 (1.65-1.77)**	1.70 (1.65-1.76)**
Aboriginal	1.78 (1.57-2.01)**	1.64 (1.46-1.84)**	1.82 (1.63-2.02)**
Country of birth			
Australia	1.76 (1.70-1.82)**	1.69 (1.64-1.75)**	1.72 (1.66-1.78)**
Other English speaking country	1.35 (1.12-1.63)*	1.85 (1.49-2.28)**	1.76 (1.38-2.23)**
Other country	1.51 (1.26-1.81)**	1.77 (1.48-2.12)**	1.52 (1.31-1.75)**
Language background other than English			
No	1.78 (1.72-1.85)**	1.74 (1.68-1.80)**	1.76 (1.70-1.83)**
Yes	1.55 (1.43-1.68)**	1.58 (1.47-1.70)**	1.57 (1.47-1.68)**
Geographical remoteness			
Major cities	1.60 (1.54-1.67)**	1.61 (1.54-1.68)**	1.61 (1.55-1.68)**
Inner regional	2.01 (1.87-2.15)**	1.86 (1.73-1.99)**	1.88 (1.76-2.02)**
Outer regional	2.07 (1.89-2.27)**	2.01 (1.83-2.21)**	1.90 (1.72-2.09)**
Remote	1.61 (1.28-2.01)**	1.77 (1.42-2.20)**	2.06 (1.65-2.59)**
Very remote	1.43 (1.14-1.80)**	1.26 (1.01-1.58)*	1.62 (1.29-2.03)**
Socioeconomic disadvantage			
Quintile 1 (most disadvantaged)	1.81 (1.70-1.93)**	1.78 (1.67-1.90)**	1.84 (1.73-1.96)**
Quintile 2	1.86 (1.74-2.00)**	1.86 (1.73-2.00)**	1.81 (1.69-1.95)**
Quintile 3	1.76 (1.64-1.90)**	1.63 (1.52-1.75)**	1.72 (1.60-1.85)**
Quintile 4	1.79 (1.65-1.94)**	1.66 (1.53-1.80)**	1.69 (1.56-1.83)**
Quintile 5 (least disadvantaged)	1.40 (1.30-1.52)**	1.51 (1.39-1.64)**	1.38 (1.27-1.50)**

Note. OR = odds ratio, CI = confidence interval, * = $p < .05$, ** = $p < .001$. Results presented here may differ slightly from those presented for 2012 and 2015 cohorts previously as this analysis included adjustment for additional demographic characteristics (i.e. country of birth and geographical remoteness) than in previous reports.

- Children born in an English speaking country outside of Australia who did not attend playgroup had 1.76 times higher odds of developmental vulnerability compared to those who had attended playgroup, while the odds ratios for children born in Australia and children born in a non-English speaking country were lower (1.72 and 1.52, respectively). Although these patterns have also shifted over time, encouragingly, results indicate that children from diverse language backgrounds are likely to benefit from attending playgroup similarly to those with English speaking backgrounds.
- Children who speak English only who did not attend playgroup had 1.76 times greater odds of being developmentally vulnerable on the AEDC compared to children who attended playgroup. These odds were lower for children who had a language background other than English (1.56), and this pattern has remained consistent over all cohorts of children. This suggests children who speak English only might benefit most from the playgroup environment, however, Playgroup Associations have established culture or language-specific playgroups across Australia, which is likely working to reduce barriers to effectively participating in playgroup for families who have a language background other than English.
- The relationship between playgroup attendance and child development was strongest for children living in remote areas of Australia, compared to those living in major cities, regional areas, and very remote areas. Children living in remote Australia who did not attend playgroup had more than two times increased odds of being developmentally vulnerable compared to children who had attended playgroup. The strength of this relationship has continued to increase over time, suggesting playgroup is particularly beneficial for children in these areas.
- The relationship between playgroup attendance and child development was strongest for children living in the most socioeconomically disadvantaged areas of the country, with those who had not attended playgroup having 1.84 times increased odds of being developmentally vulnerable compared to children who had attended playgroup before school. The strength of this relationship decreases incrementally as disadvantage decreases, suggesting it is the most disadvantaged children who gain the most benefit from attending playgroup, and this relationship has remained consistent over 2012, 2015, and 2018 cohorts of children.

5.4 The relationship between playgroup attendance and child development across different jurisdictions

Lastly, we explored if the relationship between playgroup attendance and developmental vulnerability differed depending on the state or territory in which a child lives. Again, analyses were adjusted to account for differences in children's background characteristics. Table 10 demonstrates large variation in results. In South Australia, children who did not attend playgroup had more than two times greater odds of being developmentally vulnerable at school entry compared to those who had attended. In the Northern Territory on the other hand, this relationship was considerably weaker, with an odds ratio of 1.41. It is important to note that these results should be interpreted with caution, however, given the small numbers of children included in analyses for some jurisdictions. Nonetheless, results showed that odds ratios were significantly different from one in all jurisdictions, indicating that there is a positive association between playgroup attendance before school and early development for children across Australia.

Table 10: Relationship between playgroup attendance and developmental vulnerability on one or more AEDC domains in each jurisdiction

	2012 OR (95% CI)	2015 OR (95% CI)	2018 OR (95% CI)
Australia	1.74 (1.68-1.80)**	1.70 (1.65-1.76)**	1.71 (1.66-1.77)**
ACT	1.24 (0.94-1.65)	1.69 (1.19-2.3)*	1.55 (1.09-2.18)*
NSW	1.52 (1.42-1.62)**	1.58 (1.48-1.69)**	1.39 (1.30-1.48)**
NT	1.81 (1.36-2.40)**	1.30 (0.98-1.71)	1.41 (1.06-1.88)*
QLD	1.73 (1.62-1.84)**	1.64 (1.54-1.75)**	1.74 (1.64-1.85)**
SA	1.82 (1.16-2.86)*	1.70 (1.47-1.97)**	2.16 (1.86-2.51)**
TAS	2.70 (2.24-3.27)**	2.55 (2.12-3.07)**	2.06 (1.69-2.51)**
VIC	1.82 (1.69-1.96)**	1.88 (1.74-2.03)**	2.04 (1.88-2.20)**
WA	1.95 (1.78-2.14)**	1.82 (1.67-1.99)**	1.80 (1.65-1.97)**

Note. OR = odds ratio, CI = confidence interval, * = $p < .05$, ** = $p < .001$. Results presented here may differ slightly from those presented for 2012 and 2015 cohorts previously as this analysis included adjustment for additional demographic characteristics (i.e. country of birth and geographical remoteness) than in previous reports.

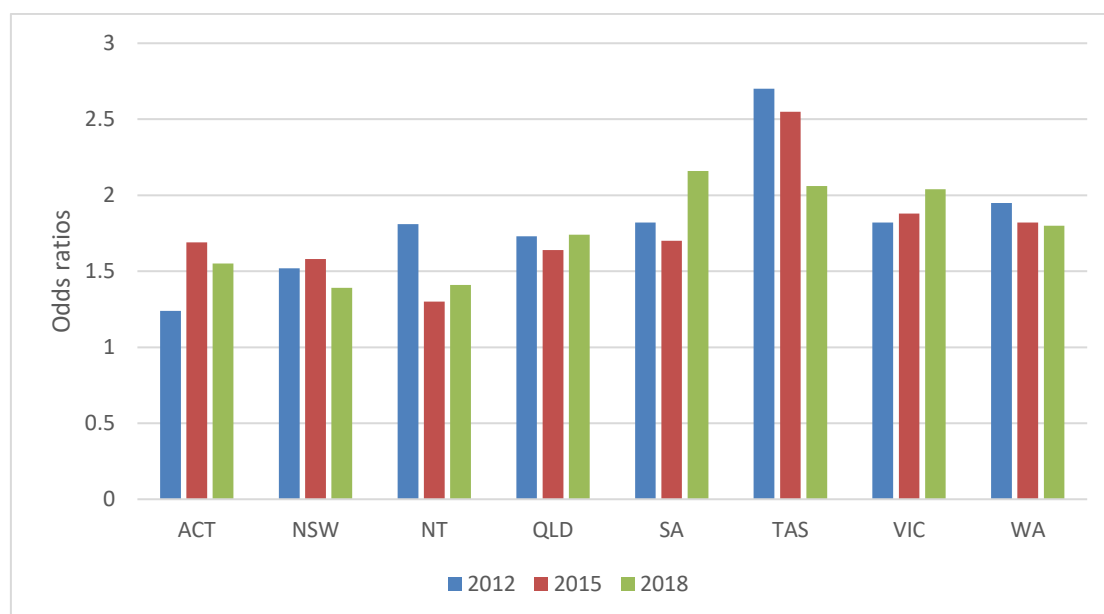


Figure 7: Relationship between playgroup attendance and developmental vulnerability in each jurisdiction across 2012, 2015, and 2018 cohorts

Figure 7 helps to highlight patterns in the relationship between playgroup attendance and children's developmental vulnerability within each jurisdiction over time. In some jurisdictions such as New South Wales and Queensland, the difference in developmental vulnerability between children who did and did not attend playgroup before school has remained relatively consistent over time. In Tasmania and Western Australia, the relationship has decreased over time. Although amongst the 2018 cohort, there was a considerable increase in the difference in developmental vulnerability between children who did and did not attend playgroup in South Australia, Victoria was the only jurisdiction in which results show that this relationship has continued to strengthen over time. It is important to keep in mind that these analyses presented associations when interpreting changes over time. The strength of associations between playgroup attendance and child development is likely to be influenced by a range of factors that are not able to be measured in the current analyses. For example, the ways in which playgroups are being delivered, the length of time children attend playgroup, recruitment strategies that encourage a broader range of families to attend, as well as changes in other early years services that provide support to children and families. More in depth exploration of changes to playgroups, services within jurisdictions and the collection of attendance data would help contribute insight into how benefits of the support playgroup offers children and families could be maximised across jurisdictions.

5.5 Summary

This section of the report sought to explore the relationship between playgroup attendance and children's development at school entry as measured by the AEDC, and if these relationships have remained consistent or shifted over time.

Key findings include:

- As in previous years, the benefits of playgroup were seen across all developmental domains for children in the 2018 AEDC cohort. Differences in developmental vulnerability between children who did and did not attend playgroup were largest for children's Communication Skills and General Knowledge and their Language and Cognitive Skills.
- Nationally, children who did not attend playgroup had 1.71 times greater odds of being developmentally vulnerable on one or more domain of the AEDC compared to children who had attended playgroup, after adjustment for background characteristics. This finding has remained consistent over time, providing confidence in the strength and reliability of the positive relationship between participation in playgroup and children's early development.
- Encouragingly, results indicated playgroups are positively associated with children's development for children from a range of different backgrounds, with adjusted odds ratios ranging from 1.38 to 2.06 for different groups of children in the 2018 AEDC cohort. The relationship between playgroup and children's development in remote areas of Australia in particular, has continued to strengthen over time, with children living in remote areas who did not attend playgroup with more than two times greater odds of developmental vulnerability, compared to those who attended playgroup.

- As with playgroup attendance across jurisdictions, variation in the relationship between playgroup and child development was found between states and territories, with adjusted odds ratios ranging from 1.41 in the Northern Territory, to 2.16 in South Australia. Examination of the factors that might be driving stronger positive relationships in some jurisdictions could provide insight into how benefits of playgroup could be maximised across jurisdictions.

Research exploring children's development trajectories as they progress through school has shown that children who are developmentally vulnerable are more likely to experience difficulty in their transition into the school environment and have poor academic outcomes throughout childhood and adolescence (15). Across three AEDC cohorts, results have consistently indicated a significant positive relationship between playgroup attendance and children's early development. Although the use of a nationwide sample, a well-established measure of child development (i.e. the AEDC), and adjustment for background characteristics help to strengthen these results, it is important to note that this provides evidence of a relationship between playgroup attendance and child development, rather than a causal effect. If this relationship is indeed causal however, then the benefits of playgroup on children's AEDC results would be expected to flow on to outcomes throughout the life course. Future research investigating the type, timing and amount, as well as quality of playgroup environments would contribute further understanding of how best to utilise playgroups to support families and promote children's development.

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APPENDIX A: PLAYGROUP ATTENDANCE BY GEOGRAPHICAL REMOTENESS IN EACH JURISDICTION

Below are figures demonstrating percentages of playgroup attendance by geographical remoteness in each jurisdiction across 2012, 2015, and 2018 AEDC cohorts. A figure was not produced for the Australian Capital Territory as all children lived in major cities. The number of children attending playgroup across each of these groups are in Tables 11-18 in Appendix B.

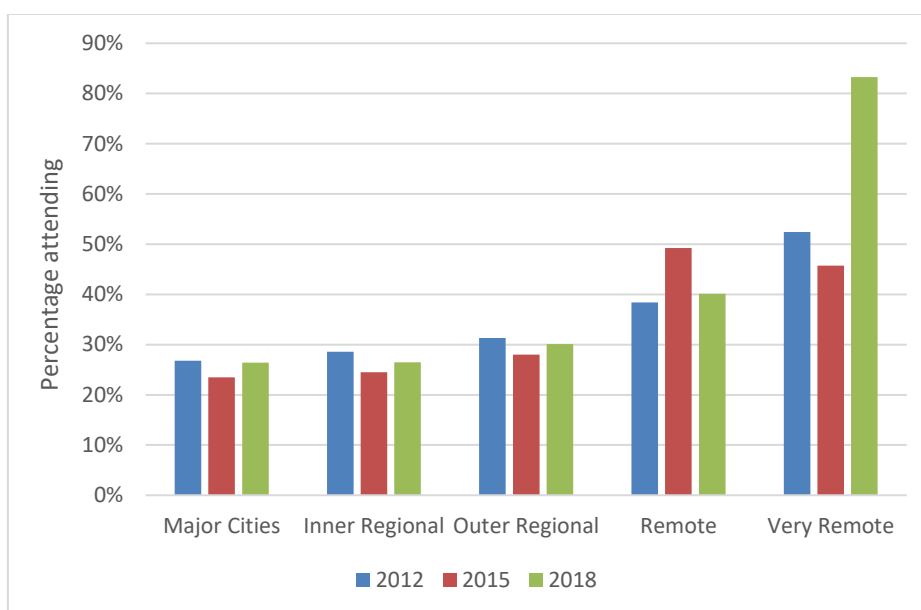


Figure 8: Playgroup attendance by geographical remoteness in NSW

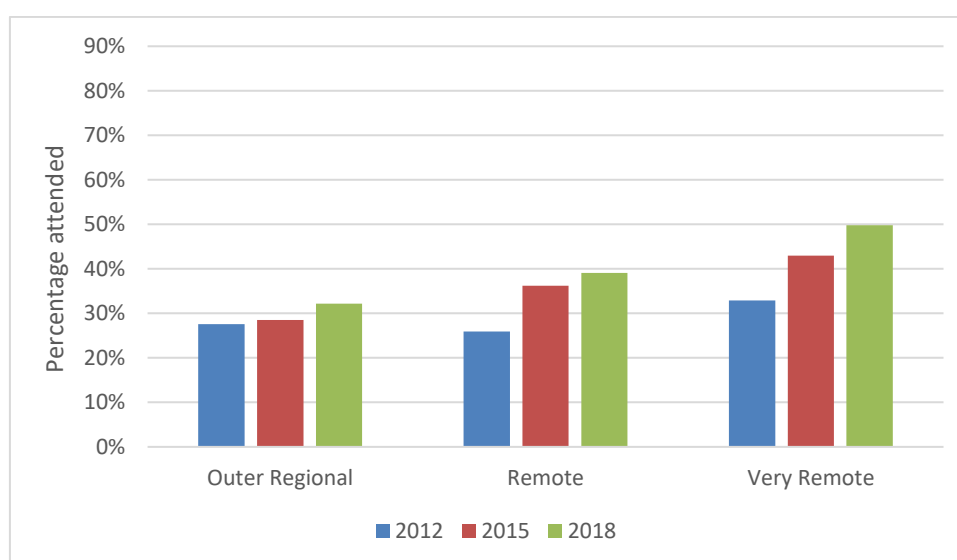


Figure 9: Playgroup attendance by geographical remoteness in NT

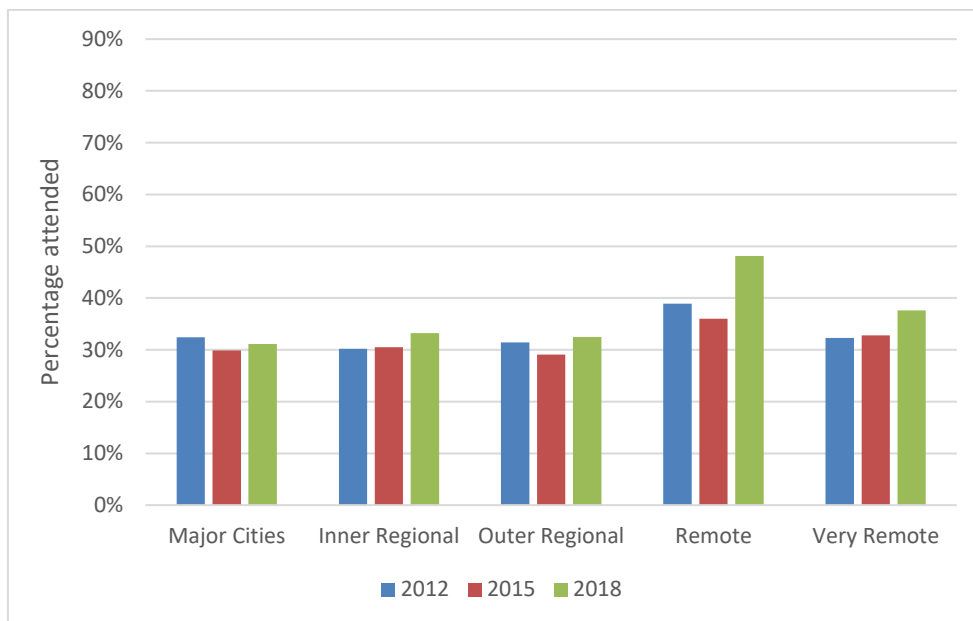


Figure 10: Playgroup attendance by geographical remoteness in QLD

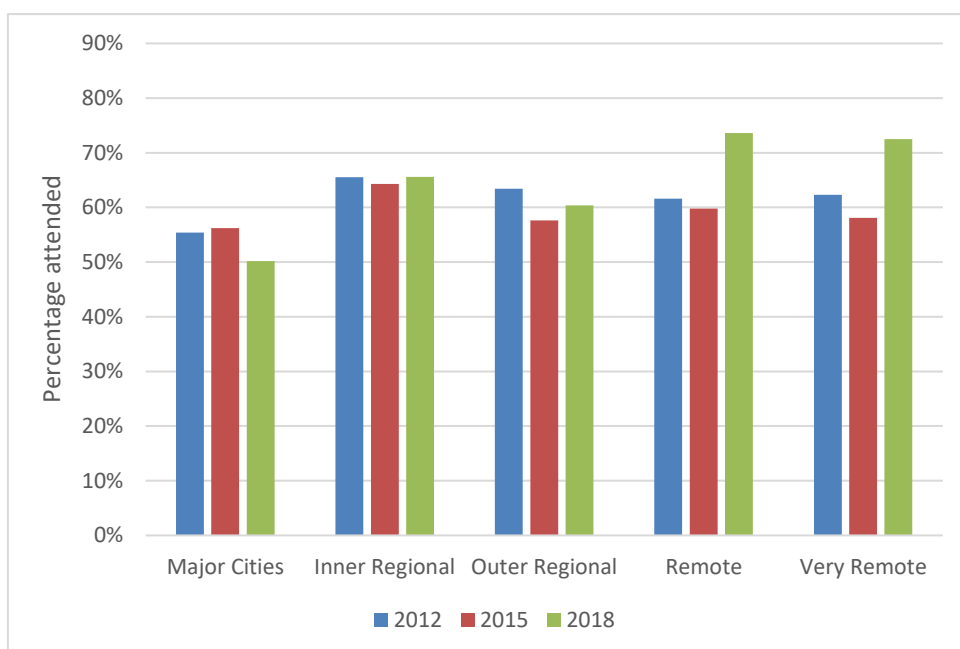


Figure 11: Playgroup attendance by geographical remoteness in SA

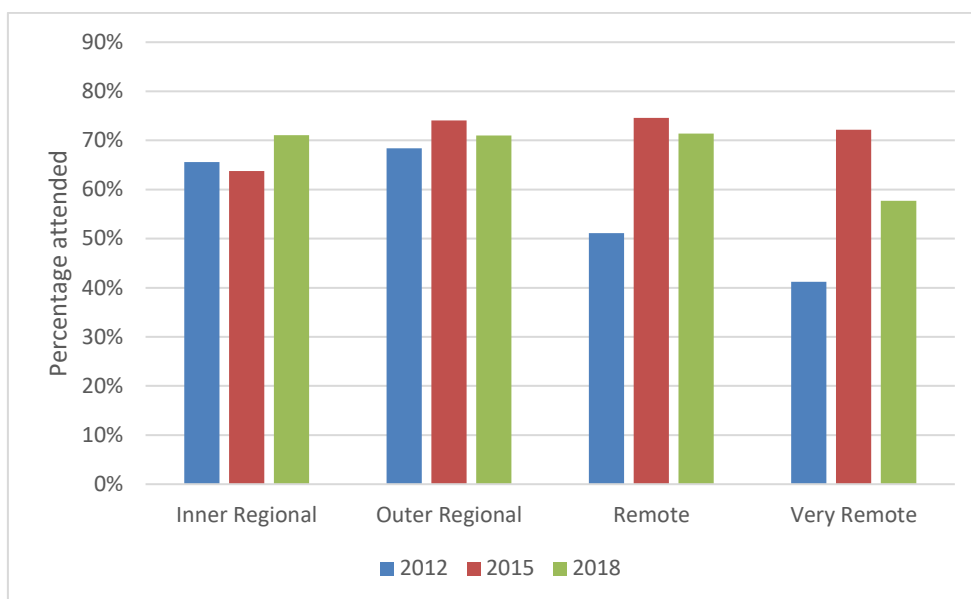


Figure 12: Playgroup attendance by geographical remoteness in TAS

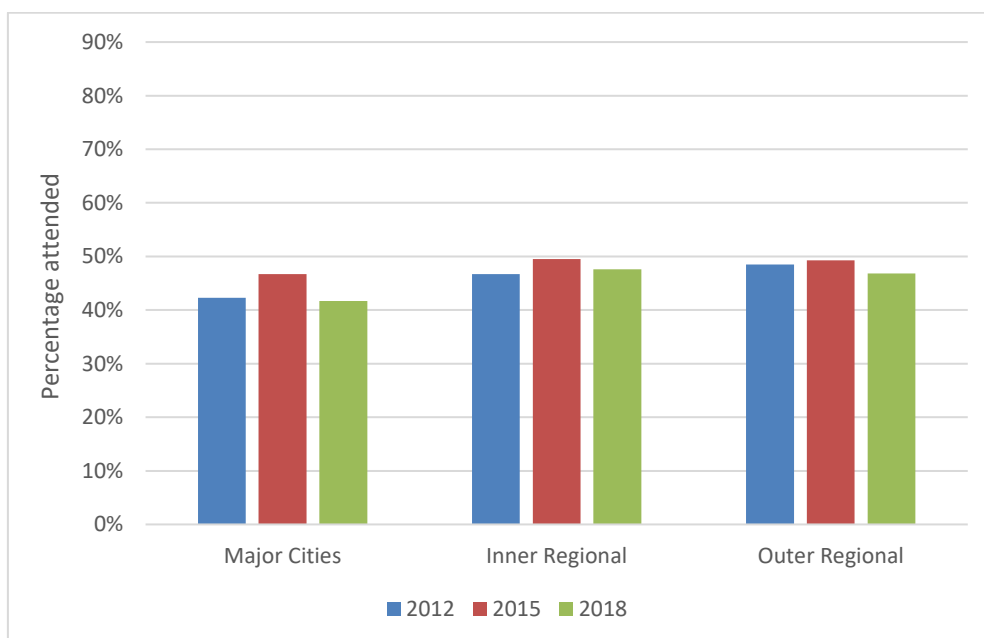


Figure 13: Playgroup attendance by geographical remoteness in VIC

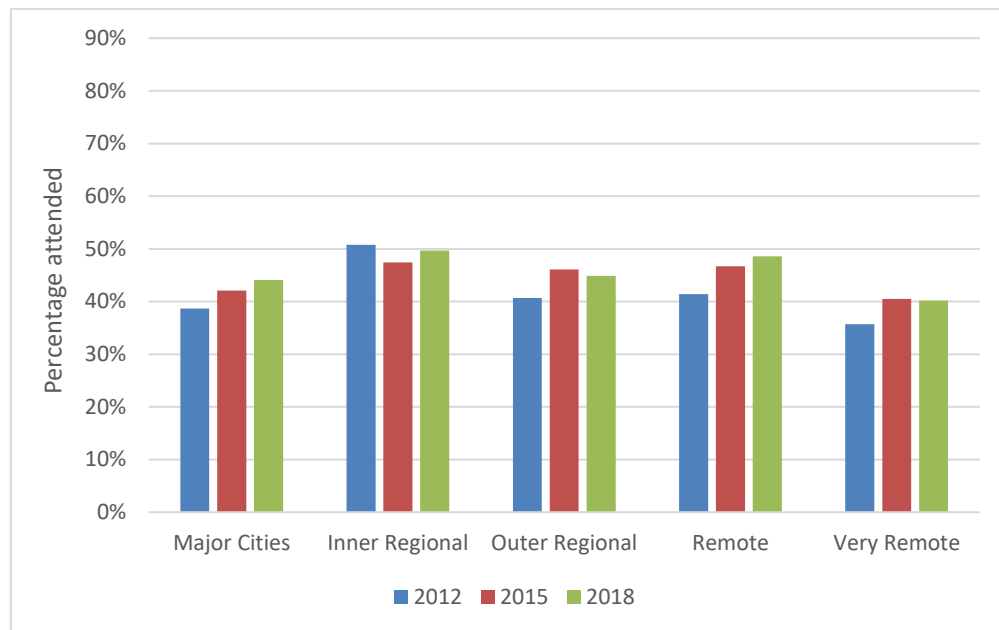


Figure 14: Playgroup attendance by geographical remoteness in WA

APPENDIX B: DEMOGRAPHIC CHARACTERISTICS OF CHILDREN ATTENDING PLAYGROUP IN EACH JURISDICTION

Below are tables demonstrating percentages of playgroup attendance by children's demographic characteristics in each jurisdiction across 2012, 2015, and 2018 AEDC cohorts.

Table 11: Demographic characteristics of children by playgroup attendance in ACT

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
ACT	516 (34.3)	987 (65.7)	369 (35.9)	703 (65.6)	322 (34.1)	623 (65.9)
Sex						
Male	268 (34.1)	517 (65.9)	184 (34.1)	356 (65.9)	170 (33.8)	333 (66.2)
Female	238 (34.5)	470 (65.5)	185 (34.8)	347 (65.2)	152 (34.4)	290 (65.6)
Aboriginal background						
Non-Aboriginal	506 (34.5)	959 (65.5)	359 (34.5)	683 (65.5)	304 (35.1)	561 (64.9)
Aboriginal	10 (26.3)	28 (73.7)	10 (33.3)	20 (66.7)	-	24 (88.9)
Country of birth						
Australia	482 (35.8)	863 (64.20)	346 (36.1)	612 (63.9)	288 (35.3)	528 (64.7)
Other Country	12 (12.0)	88 (88.0)	9 (12.3)	64 (87.7)	20 (35.3)	86 (75.4)
Other English Speaking Country	22 (37.9)	36 (62.1)	14 (34.1)	27 (65.9)	5 (35.7)	9 (64.3)
Language background other than English						
No	459 (39.0)	748 (62.0)	327 (38.9)	513 (61.1)	260 (37.4)	435 (62.6)
Yes	57 (19.3)	239 (80.7)	42 (18.1)	190 (81.9)	62 (24.8)	188 (75.2)
Geographical remoteness						
Major cities	515 (34.4)	984 (65.6)	368 (34.4)	701 (65.6)	322 (34.1)	622 (65.9)
Inner Regional	-	-	-	-	-	-
Outer Regional	-	-	-	-	-	-
Remote	-	-	-	-	-	-
Very Remote	-	-	-	-	-	-
Socioeconomic status of communities where children live						
Quintile 1	-	-	-	-	-	-
Quintile 2	-	10 (100.0)	-	6 (75.0)	-	6 (60.0)
Quintile 3	44 (44.4)	55 (55.6)	27 (35.1)	50 (64.9)	20 (37.0)	34 (63.0)
Quintile 4	236 (37.0)	401 (63.0)	113 (30.5)	258 (69.5)	110 (39.3)	170 (60.7)
Quintile 5	235 (31.1)	521 (68.9)	227 (36.9)	388 (63.1)	188 (31.4)	411 (68.6)

Note. Cells where n < 5 have been suppressed. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 12: Demographic characteristics of children by playgroup attendance in NSW

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
NSW	10,483 (27.7)	27,429 (72.3)	9,318 (24.3)	29,078 (75.7)	9,374 (26.8)	25,558 (73.2)
Sex						
Male	5,278 (27.0)	14,257 (73.0)	4,720 (23.9)	15,049 (76.1)	4,762 (26.2)	13,393 (73.8)
Female	5,205 (28.3)	13,172 (71.7)	4,598 (24.7)	14,029 (75.3)	4,612 (27.5)	12,165 (72.5)
Aboriginal background						
Non-Aboriginal	10,029 (28.2)	25,543 (71.8)	8,906 (24.9)	26,876 (75.1)	8,785 (27.3)	23,429 (72.7)
Aboriginal	454 (19.4)	1,886 (80.6)	412 (15.8)	2,202 (84.2)	588 (21.6)	2,129 (78.4)
Country of birth						
Australia	10,021 (28.1)	25,651 (71.9)	8,834 (24.7)	26,980 (75.3)	8,833 (27.3)	23,518 (72.7)
Other Country	236 (16.1)	1,228 (83.9)	263 (14.7)	1,522 (85.3)	393 (18.8)	1,696 (81.2)
Other English Speaking Country	226 (29.1)	55 (70.9)	221 (27.7)	576 (72.3)	148 (30.1)	344 (69.9)
Language background other than English						
No	8,894 (31.5)	19,297 (68.5)	7,551 (27.2)	20,199 (72.8)	7,278 (29.9)	17,023 (70.1)
Yes	1,589 (16.3)	8,132 (83.7)	1,767 (16.6)	8,879 (83.4)	2,096 (19.7)	8,535 (80.3)
Geographical remoteness						
Major cities	7,173 (26.8)	19,582 (73.2)	6,533 (23.5)	21,232 (76.5)	6,694 (26.4)	18,710 (73.6)
Inner Regional	2,253 (28.6)	5,616 (71.4)	1,788 (24.5)	5,512 (75.5)	1,776 (26.5)	4,923 (73.5)
Outer Regional	932 (31.3)	2,046 (68.7)	847 (28.0)	2,174 (72.0)	771 (30.1)	1,791 (69.9)
Remote	103 (38.4)	165 (61.6)	118 (49.2)	122 (50.8)	83 (40.1)	124 (59.9)
Very Remote	22 (52.4)	20 (47.6)	32 (45.7)	38 (54.3)	50 (83.3)	10 (16.7)
Socioeconomic status of communities where children live						
Quintile 1	2,254 (19.9)	9,066 (80.1)	2,061 (18.6)	8,993 (81.4)	2,392 (24.0)	7,585 (76.0)
Quintile 2	1,993 (25.9)	5,712 (74.1)	1,777 (22.6)	6,070 (77.4)	1,722 (24.6)	5,273 (75.4)
Quintile 3	1,641 (26.8)	4,475 (73.2)	1,283 (21.1)	4,794 (78.9)	1,443 (24.4)	4,479 (75.6)
Quintile 4	1,574 (31.8)	3,373 (68.2)	1,401 (26.1)	3,961 (73.9)	1,320 (28.4)	3,325 (71.6)
Quintile 5	3,019 (38.6)	4,802 (61.4)	2,795 (34.7)	5,259 (65.3)	2,497 (33.8)	4,896 (66.2)

Note. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 13: Demographic characteristics of children by playgroup attendance in NT

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
NT	447 (29.5)	1,069 (70.5)	485 (35.9)	866 (64.1)	533 (40.4)	786 (59.6)
Sex						
Male	206 (25.7)	596 (74.3)	257 (36.0)	456 (64.0)	251 (38.0)	409 (62.0)
Female	241 (33.8)	473 (66.2)	228 (35.7)	410 (64.3)	282 (42.8)	377 (57.2)
Aboriginal background						
Non-Aboriginal	232 (33.2)	467 (66.8)	211 (35.3)	387 (64.7)	244 (40.2)	363 (59.8)
Aboriginal	215 (26.3)	602 (73.7)	274 (36.4)	479 (63.6)	289 (40.6)	423 (59.4)
Country of birth						
Australia	431 (30.4)	989 (69.6)	474 (36.9)	812 (63.1)	523 (41.5)	737 (58.5)
Other Country	9 (12.2)	65 (87.8)	-	42 (91.3)	5 (10.6)	42 (89.4)
Other English Speaking Country	7 (31.8)	15 (68.2)	7 (36.8)	12 (63.2)	5 (41.7)	7 (58.3)
Language background other than English						
No	235 (33.2)	472 (66.8)	211 (34.3)	405 (65.7)	240 (41.0)	345 (59.0)
Yes	212 (26.2)	597 (73.8)	274 (37.3)	461 (62.7)	293 (39.9)	441 (60.1)
Geographical remoteness						
Major cities	-	-	-	-	-	-
Inner Regional	-	-	-	-	-	-
Outer Regional	161 (27.6)	422 (72.4)	147 (28.5)	368 (71.5)	168 (32.2)	354 (67.8)
Remote	77 (25.9)	220 (74.1)	114 (36.2)	201 (63.8)	116 (39.1)	181 (60.9)
Very Remote	209 (32.9)	427 (67.1)	224 (43.0)	297 (57.0)	249 (49.8)	251 (50.2)
Socioeconomic status of communities where children live						
Quintile 1	207 (30.4)	473 (69.6)	265 (41.7)	370 (58.3)	276 (44.6)	343 (55.4)
Quintile 2	69 (30.1)	160 (69.9)	61 (25.8)	175 (74.2)	62 (33.3)	124 (66.7)
Quintile 3	41 (21.5)	150 (78.5)	59 (30.9)	132 (69.1)	85 (39.7)	129 (60.3)
Quintile 4	76 (27.6)	199 (72.4)	53 (32.5)	110 (67.5)	76 (41.5)	107 (58.5)
Quintile 5	54 (38.3)	87 (61.7)	45 (36.3)	79 (63.7)	34 (29.3)	82 (70.7)

Note. Cells where n < 5 have been suppressed. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 14: Demographic characteristics of children by playgroup attendance in QLD

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
QLD	9,957 (31.9)	21,300 (68.1)	8,716 (30.1)	20,253 (69.9)	10,606 (32.3)	22,198 (67.7)
Sex						
Male	5,052 (30.9)	11,290 (69.1)	4,344 (29.2)	10,543 (70.8)	5,397 (31.4)	11,767 (68.6)
Female	4,905 (32.9)	10,010 (67.1)	4,372 (31.0)	9,710 (69.0)	5,209 (33.3)	10,431 (66.7)
Aboriginal background						
Non-Aboriginal	9,465 (32.8)	19,373 (67.2)	8,193 (31.2)	18,096 (68.8%)	9,910 (33.4)	19,777 (66.6)
Aboriginal	492 (20.3)	1,927 (79.7)	523 (19.5)	2,157 (80.5)	696 (22.3)	2,421 (77.7)
Country of birth						
Australia	9,264(32.0)	19,662 (68.0)	8,357 (30.4)	18,890 (69.9)	9,986 (32.4)	20,881 (67.6)
Other Country	209 (21.7)	754 (78.3)	175 (20.3)	688 (79.7)	344 (28.6)	857 (71.4)
Other English Speaking Country	484 (35.4)	884 (64.6)	284 (29.6)	675 (70.4)	276 (37.5)	460 (62.5)
Language background other than English						
No	9,203 (33.1)	18,612 (66.9)	7,877 (31.2)	17,378 (68.6)	9061 (33.2)	18248 (66.8)
Yes	754 (21.9)	2,688 (78.1)	839 (22.6)	2,875 (77.4)	1545 (28.1)	3950 (71.9)
Geographical remoteness						
Major cities	5,748 (32.4)	12,009 (67.6)	4,740 (29.9)	11,111 (70.1)	6,032 (31.3)	13,222 (68.7)
Inner Regional	2,146 (30.2)	4,966 (69.8)	2,121 (30.5)	4,834 (69.5)	2,507 (33.2)	5,050 (66.8)
Outer Regional	1,612 (31.4)	3,522 (68.6)	1,446 (29.1)	3,530 (70.9)	1,597 (32.5)	3,319 (67.5)
Remote	269 (38.9)	422 (61.1)	222 (36.0)	395 (64.0)	298 (48.1)	321 (51.9)
Very Remote	182 (32.3)	381 (67.7)	187 (32.8)	383 (67.2)	172 (37.6)	286 (62.4)
Socioeconomic status of communities where children live						
Quintile 1	1845 (23.5)	5993 (76.5)	1755 (23.7)	5,660 (76.3)	2,120 (26.8)	5,792 (73.2)
Quintile 2	1869 (30.9)	4186 (69.1)	1749 (29.5)	4,177 (70.5)	1,947 (30.5)	4,434 (69.5)
Quintile 3	2343 (33.2)	4711 (66.8)	2006 (31.0)	4,470 (69.0)	2,592 (33.7)	5,103 (66.3)
Quintile 4	2145 (36.3)	3765 (63.7)	1799 (33.8)	3,531 (66.2)	2,287 (35.7)	4,118 (64.3)
Quintile 5	1755 (39.9)	2643 (60.1)	1403 (36.8)	2,412 (63.2)	1,660 (37.7)	2,749 (62.3)

Note. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 15: Demographic characteristics of children by playgroup attendance in SA

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
SA	3,114 (58.4)	2,214 (41.6)	2,946 (57.8)	2,150 (42.2)	2,620 (55.7)	2,085 (44.3)
Sex						
Male	1,534 (56.9)	1,160 (43.1)	1,472 (56.1)	1,154 (43.9)	1,342 (54.2)	1,134 (45.8)
Female	1,580 (60.0)	1,054 (40.0)	1,474 (59.7)	996 (40.30)	1,278 (57.3)	951 (42.7)
Aboriginal background						
Non-Aboriginal	3,016 (59.6)	2,045 (40.4)	2,864 (59.3)	1,963 (40.7)	2,496 (56.5)	1,921 (43.5)
Aboriginal	98 (36.7)	169 (63.3)	82 (30.5)	187 (69.5)	124 (43.1)	164 (56.9)
Country of birth						
Australia	2,998 (60.8)	1,933 (39.2)	2,851 (59.6)	1,931 (40.4)	2,546 (57.5)	1,879 (42.5)
Other Country	51 (17.8)	236 (82.2)	41 (17.2)	197 (82.8)	47 (19.8)	190 (80.2)
Other English Speaking Country	65 (59.1)	45 (40.9)	54 (71.1)	22 (28.9)	27 (62.8)	16 (37.2)
Language background other than English						
No	2,844 (63.4)	1,640 (36.6)	2,636 (61.9)	1,620 (38.1)	2,258 (59.4)	1,544 (40.6)
Yes	270 (32.0)	574 (68.0)	310 (36.9)	530 (63.1)	362 (40.1)	541 (59.9)
Geographical remoteness						
Major cities	1,903 (55.4)	1,529 (44.6)	1,809 (56.2)	1,408 (43.8)	1,462 (50.2)	1,450 (49.8)
Inner Regional	459 (65.5)	242 (34.5)	468 (64.3)	260 (35.7)	494 (65.6)	259 (34.4)
Outer Regional	519 (63.4)	299 (36.6)	442 (57.6)	326 (42.4)	457 (60.4)	300 (39.6)
Remote	162 (61.6)	101 (38.4)	152 (59.8)	102 (40.2)	128 (73.6)	46 (26.4)
Very Remote	71 (62.3)	43 (37.7)	75 (58.1)	54 (41.9)	79 (72.5)	30 (27.5)
Socioeconomic status of communities where children live						
Quintile 1	694 (47.2)	775 (52.8)	651 (43.1)	858 (56.9)	608 (42.0)	839 (58.0)
Quintile 2	804 (58.5)	571 (41.5)	776 (62.4)	468 (37.6)	734 (58.1)	530 (41.9)
Quintile 3	580 (65.2)	310 (34.8)	540 (62.2)	328 (37.8)	479 (63.6)	274 (36.4)
Quintile 4	623 (61.8)	385 (38.2)	618 (63.9)	349 (36.1)	506 (62.4)	305 (37.6)
Quintile 5	412 (70.4)	173 (29.6)	360 (71.0)	147 (29.0)	293 (68.1)	137 (31.9)

Note. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 16: Demographic characteristics of children by playgroup attendance in TAS

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
TAS	2,133 (66.2)	1,087 (33.8)	2,247 (67.5)	1,083 (32.5)	2,204 (71.1)	896 (28.9)
Sex						
Male	1,077 (64.1)	602 (35.9)	1,115 (65.2)	595 (34.8)	1,082 (68.8)	490 (31.2)
Female	1,056 (68.5)	485 (31.5)	1,132 (69.9)	488 (30.1)	1,122 (73.4)	406 (26.6)
Aboriginal background						
Non-Aboriginal	2,006 (67.3)	975 (32.7)	2,046 (68.1)	958 (31.9)	2,019 (71.7)	798 (28.3)
Aboriginal	127 (53.1)	112 (46.9)	201 (61.7)	125 (38.3)	185 (65.4)	98 (34.6)
Country of birth						
Australia	2,085 (66.8)	1,035 (33.2)	2,210 (68.1)	1,033 (31.9)	2,129 (71.7)	840 (28.3)
Other Country	23 (34.8)	43 (65.2)	23 (34.8)	43 (65.2)	33 (41.3)	47 (58.8)
Other English Speaking Country	25 (73.5)	9 (26.5)	14 (66.7)	7 (33.3)	42 (82.4)	9 (17.6)
Language background other than English						
No	2,079 (66.9)	1,027 (33.1)	2,181 (68.6)	997 (31.4)	2,112 (72.2)	814 (27.8)
Yes	54 (47.4)	60 (52.6)	66 (43.4)	86 (56.6)	92 (52.9)	82 (47.1)
Geographical remoteness						
Major cities	-	-	-	-	-	-
Inner Regional	1,360 (65.6)	712 (34.4)	1,367 (63.8)	776 (36.2)	1,560 (71.0)	638 (29.0)
Outer Regional	743 (68.4)	343 (31.6)	814 (74.1)	284 (25.9)	591 (71.9)	231 (28.1)
Remote	23 (51.1)	22 (48.9)	53 (74.6)	18 (25.4)	38 (70.4)	16 (29.6)
Very Remote	7 (41.2)	10 (58.8)	13 (72.2)	5 (27.8)	15 (57.7)	11 (42.3)
Socioeconomic status of communities where children live						
Quintile 1	840 (60.8)	542 (39.2)	865 (63.1)	505 (36.9)	755 (64.6)	413 (35.4)
Quintile 2	574 (72.8)	214 (27.2)	654 (72.2)	252 (27.8)	591 (75.6)	191 (24.4)
Quintile 3	337 (70.2)	143 (29.8)	335 (72.7)	126 (27.3)	362 (75.4)	118 (24.6)
Quintile 4	325 (67.0)	160 (33.0)	320 (65.8)	166 (34.2)	399 (73.2)	153 (27.7)
Quintile 5	57 (71.3)	23 (28.7)	73 (68.2)	34 (31.8)	97 (82.2)	21 (17.8)

Note. Cells where n < 5 have been suppressed. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 17: Demographic characteristics of children by playgroup attendance in VIC

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
VIC	10,530 (43.7)	13,560 (56.3)	9,988 (47.5)	11,056 (52.5)	8,404 (43.3)	11,020 (56.7)
Sex						
Male	5,282 (42.5)	7,158 (57.5)	4,985 (46.1)	5,835 (53.9)	4,199 (42.0)	5,793 (58.0)
Female	5,248 (45.0)	6,401 (55.0)	5,003 (48.9)	5,221 (51.1)	4,205 (44.6)	5,227 (55.4)
Aboriginal background						
Non-Aboriginal	10,422 (44.0)	13,282 (56.0)	9,868 (47.9)	10,739 (52.1)	8,276 (43.6)	10,697 (56.4)
Aboriginal	108 (28.0)	278 (72.0)	120 (27.5)	317 (72.5)	128 (28.4)	323 (71.6)
Country of birth						
Australia	10,083 (45.0)	12,339 (55.0)	9,564 (49.2)	9,868 (50.8)	7,945 (44.8)	9,802 (55.2)
Other Country	231 (21.0)	869 (79.0)	249 (21.4)	915 (78.6)	3,49 (26.2)	951 (73.8)
Other English Speaking Country	216 (38.0)	352 (62.0)	175 (39.1)	273 (60.9)	110 (31.9)	235 (68.1)
Language background other than English						
No	9,259 (48.2)	9,968 (51.8)	8,621 (53.0)	7,653 (47.0)	6,916 (48.3)	7,412 (51.7)
Yes	1,271 (26.1)	3,592 (73.9)	1,367 (28.7)	3,403 (71.3)	1,488 (29.2)	3,608 (70.8)
Geographical remoteness						
Major cities	7,301 (42.3)	9,944 (57.7)	6,952 (46.7)	7,947 (53.3)	5,880 (41.7)	8,223 (58.3)
Inner Regional	2,500 (46.7)	2,850 (53.3)	2,398 (49.5)	2,451 (50.5)	2,035 (47.6)	2,236 (52.4)
Outer Regional	717 (48.5)	762 (51.5)	632 (49.3)	649 (50.7)	487 (46.8)	554 (53.2)
Remote	12 (75.0)	-	6 (40.0)	9 (60.0)	-	7 (77.8)
Very Remote	-	-	-	-	-	-
Socioeconomic status of communities where children live						
Quintile 1	1,188 (28.7)	2,945 (71.3)	1,155 (29.9)	2,703 (70.1)	1,045 (30.5)	2,385 (69.5)
Quintile 2	2,199 (40.7)	3,209 (59.3)	1,943 (41.7)	2,721 (58.3)	1,703 (39.5)	2,609 (60.5)
Quintile 3	2,274 (44.0)	2,889 (56.0)	2,280 (47.8)	2,494 (52.2)	1,974 (44.5)	2,463 (55.5)
Quintile 4	2,404 (51.2)	2,295 (48.8)	2,155 (53.1)	1,901 (46.9)	1,900 (47.5)	2,097 (52.5)
Quintile 5	2,465 (52.6)	2,222 (47.4)	2,455 (66.5)	1,237 (33.5)	1,782 (54.9)	1,466 (45.1)

Note. Cells where n < 5 have been suppressed. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.

Table 18: Demographic characteristics of children by playgroup attendance in WA

	Did the child attend playgroup before entering full time school?					
	2012		2015		2018	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Australia	42,952 (36.0)	76,293 (64.0)	40,743 (35.5)	73,999 (64.5)	41,310 (36.4)	72,133 (63.6)
WA	5,772 (40.0)	8,647 (60.0)	6,674 (43.1)	8,810 (56.9)	7,247 (44.7)	8,967 (55.3)
Sex						
Male	2,893 (38.9)	4,545 (61.1)	3,303 (41.5)	4,651 (58.5)	3,666 (44.0)	4,670 (56.0)
Female	2,879 (41.2)	4,102 (58.8)	3,371 (44.8)	4,159 (55.2)	3,581 (45.5)	4,297 (54.5)
Aboriginal background						
Non-Aboriginal	5,609 (42.4)	7,629 (57.6)	6,412 (45.1)	7,820 (54.9)	6,923 (46.3)	8,023 (53.7)
Aboriginal	163 (13.8)	1,018 (86.2)	262 (20.9)	990 (79.1)	324 (25.6)	944 (74.4)
Country of birth						
Australia	5,380 (41.4)	7,622 (58.6)	6,164 (44.3)	7,748 (55.7)	6,781 (45.5)	8,138 (54.5)
Other Country	132 (19.2)	555 (80.8)	202 (25.6)	587 (74.4)	288 (32.0)	6,123 (68.0)
Other English Speaking Country	260 (35.6)	470 (64.6)	208 (39.3)	475 (60.7)	178 (45.2)	216 (54.8)
Language background other than English						
No	5,271 (43.5)	6,833 (56.5)	5,798 (46.7)	6,607 (53.3)	5,875 (48.4)	6,254 (51.6)
Yes	501 (21.6)	1,814 (78.4)	867 (28.5)	2,203 (71.5)	1,372 (33.6)	2,713 (66.4)
Geographical remoteness						
Major cities	4,050 (38.7)	6,408 (61.3)	4,836 (42.1)	6,640 (57.9)	5,375 (44.1)	6,819 (55.9)
Inner Regional	660 (50.8)	640 (49.2)	709 (47.4)	787 (52.6)	691 (49.7)	698 (50.3)
Outer Regional	536 (40.7)	781 (59.3)	565 (46.1)	660 (53.9)	588 (44.9)	723 (55.1)
Remote	335 (41.4)	474 (58.6)	321 (46.7)	366 (53.3)	358 (48.6)	378 (51.4)
Very Remote	191 (35.7)	344 (64.3)	243 (40.5)	357 (59.5)	235 (40.2)	349 (59.8)
Socioeconomic status of communities where children live						
Quintile 1	575 (27.0)	1553 (73.0)	632 (28.9)	1,555 (71.1)	742 (34.1)	1,435 (65.9)
Quintile 2	943 (34.4)	1,795 (65.6)	1,002 (35.7)	1,808 (64.3)	1,151 (40.7)	1,679 (59.3)
Quintile 3	1,286 (38.7)	2,114 (62.2)	1,473 (42.1)	2,022 (57.9)	1,684 (45.0)	2,056 (55.0)
Quintile 4	1,278 (43.5)	1,659 (56.5)	1,584 (46.6)	1,816 (53.4)	1,780 (46.5)	2,044 (53.5)
Quintile 5	1,690 (52.6)	1,525 (47.4)	1,981 (55.2)	1,609 (44.8)	1,888 (51.9)	1,751 (48.1)

Note. Socioeconomic status Quintile 1 = most disadvantaged, Quintile 5 = least disadvantaged.