Department of Education

EARLY CHILDHOOD DEVELOPMENT IN WESTERN AUSTRALIA

AUSTRALIAN EARLY DEVELOPMENT CENSUS

STATE REPORT: WESTERN AUSTRALIA 2015

Australian Early Development Census
An Australian Government Initiative

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Acknowledgments

Since 2002, the Australian Government has worked in partnership with eminent child health research institutes the 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. The Australian Government continues to work with its partners, and with state and territory governments to implement the AEDC.

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Western Australian schools, teachers and Aboriginal and Islander Education Officers that completed the AEDC are acknowledged for their important contribution.

FROM THE MINISTER

The Western Australian Government is committed to ensuring all children have the opportunity for the best start in life to achieve optimal health, wellbeing, development and learning.

Every three years, all Pre-primary children in Western Australia take part in the Australian Early Development Census (AEDC). Teachers complete the census for each child in their first year of full-time schooling to measure their development.

I am very proud that the 2015 results show Western Australian children are doing well and, for the first time, are performing above the Australian average.

There were 3000 fewer young Western Australian children at risk of falling behind their peers in basic literacy and numeracy skills – we have gone from one in four children at risk in 2009 to one in five in 2015.

The State Government has invested enormously in the vital early years of children's development and education and I am delighted that we are seeing clear improvements.

Since 2010 we have made Pre-primary compulsory, increased Kindergarten hours, set up 21 Child and Parent Centres, and established 37 KindiLink programs for three-year-old Aboriginal children and their families.

While the majority of Western Australian children are doing well, the AEDC data also shows that more must be done to address developmental vulnerabilities of children in low socio-economic communities. Children living in very remote communities, for example, are almost twice as likely to be behind their city peers.

It is important for us all to continue to use the AEDC to identify what is working well and what needs to be improved for all young children across this State.

Hon Peter Collier MLC
MINISTER FOR EDUCATION

> I am very proud that the 2015 results show Western Australian children are doing well.

KEY FINDINGS 2015

- The majority of Western Australian children are doing well on each of the five developmental domains, consistent with the 2009 and 2012 results.
- Western Australia has improved from one in four (25%) children presenting with developmental needs in 2009, down to one in five (21%) in 2015.
- Western Australian results show a continued decrease in developmental vulnerability in every three year AEDC cycle since 2009. This compares to the national results which show a reduction in developmental vulnerability between 2009 and 2012 before plateauing in 2015.
- Western Australian children did better in 2015 than the national average (21% compared with 22% nationally).
- The most improvement occurred in the language and cognitive skills domain with the percentage of children at risk almost halving since 2009 (from 20.7% to 10.6%), as has the percentage of children developmentally vulnerable (from 12.0% to 6.6%). Therefore, 3000 fewer children entered school developmentally at risk or vulnerable on this domain in 2015.
- Boys represent two thirds of all children that are developmentally vulnerable compared to one third of girls. The gender gap in developmental vulnerability has remained constant since the first data collection in 2009.
- Nearly one in two Aboriginal children is developmentally vulnerable compared to one in five non-Aboriginal children. The gap in developmental vulnerability between Aboriginal and non-Aboriginal children has reduced slightly since 2009.
- The 2015 results are similar to 2009 and 2012 results in that they continue to show developmental vulnerability exists, to varying degrees, across all communities irrespective of their geographic, demographic or economic status.
- The further away from the metropolitan area children live, the higher the proportion of children who are developmentally vulnerable. Children living in very remote Western Australian communities are almost two times as likely to be developmentally vulnerable (38%) than their city peers (20%). However, the number of children developmentally vulnerable is much higher in the metropolitan area (N=5000) compared to very remote areas (N=300).
- Vulnerability rates are higher in poorer communities. Children living in the most socio-economic disadvantaged communities are twice as likely to be developmentally vulnerable (35%) than children living in communities with low levels of socio-economic disadvantage (15%). Since 2009, this gap has widened slightly.
- The number of children developmentally vulnerable was similar across all socio-economic quintiles. The 6895 children who are developmentally vulnerable were evenly spread across the Socio-Economic Indexes for Areas (SEIFA) quintiles showing that vulnerability exists in affluent as well as less affluent communities.
- More than half of all Aboriginal children who were developmentally vulnerable lived in communities classified in the lowest SEIFA category (Quintile 1 – the most disadvantaged). In contrast, the highest number of non-Aboriginal children who were developmentally vulnerable lived in communities classified in Quintiles 4 and 5 – the least disadvantaged.

Western Australian children did better in 2015 than the national average.

OVERVIEW

What is the Australian Early Development Census (AEDC)?

The AEDC is a nationwide population measure of young children's development. The census data is collected using an adapted version of the Early Development Instrument, which was developed in Canada. The on-line instrument is completed by teachers for children enrolled in their first year of full-time school (Pre-primary in Western Australia). Data is collected every three years, is analysed and reported at national, State/ Territory and community levels (based on the suburb or town in which children live).

What does the AEDC measure?

The AEDC measures the proportion of Pre-primary children who are developmentally on track, at risk or vulnerable across five domains:

- physical health and wellbeing
- social competence
- emotional maturity
- language and cognitive skills
- communication skills and general knowledge.

These domains are important areas of child development and are considered good predictors of adult health, education and social outcomes.

Why is the AEDC important?

By understanding young children's development, Western Australian communities, parents, families, government and non-government agencies can begin to explore the factors influencing child development outcomes.

Used with other socio-demographic and community information, the AEDC is a powerful tool that supports policy development, planning and action for health and education, and community support.

Why do we need to focus on the early years?

The early years really do matter!

The first five years of a child's life is a critical period of development. It is during this time that children build the foundations that help to shape the adults they will become.

From the moment of birth a child's brain undergoes a huge change.

These early stages of development are influenced by genes and the environment. While genes provide the initial road map for brain development in children, it is their everyday experiences, the opportunities available and the relationships they make that have the most influence.

Positive early experiences are essential in ensuring children get the best start in life so they start school ready and eager to learn, and build the skills necessary for healthy development, wellbeing and lifelong learning.

How is AEDC information reported?

The AEDC domain scores are calculated for each child where enough valid* responses were recorded. For each of the five domains children receive a score between 0 and 10, where ten is the highest score.

In 2009, when the first AEDC was undertaken, a series of benchmarks were established. Children falling below the 10th percentile were considered 'developmentally vulnerable', children falling between the 10th and 25th percentile were considered 'developmentally at risk' and all other children were considered to be 'on track'.

The benchmarks set in 2009 provide a reference point against which later AEDC results can be compared. For example, in 2012 only 6.8% of children were developmentally vulnerable on the language and cognitive domain, using the 2009 benchmarks.

*The AEDC domain scores are reported for valid results only. Scores are flagged as invalid for children who may have been in the class for less than one month; are less than four years old; or where teachers complete less than 75% of the items in any given domain.

How can the AEDC results be compared?

With data sets covering three collections (2009, 2012, 2015), results can be compared to identify emerging trends of early children's development.

To assist in making decisions about whether the change in the results over time (for the percentages of children developmentally on track, at risk, or vulnerable) is statistically significant, a method described as the 'critical difference' has been developed. The critical difference is the minimum percentage point change required for the results to represent a 'significant change' in children's development.

For more information on the calculation of the critical difference, refer to the AEDC technical report – *Exploring change in the Australian version of the Early Development Instrument: The estimation of a critical difference for the 'vulnerable', 'at risk', and 'on track' categories.*

How does the AEDC differ from other measures?

The AEDC is different from other measures as it focuses on the 'whole child' (health, wellbeing, learning and development).

As a population measure it analyses and reports this information at the group – not individual level.

It is not a test or a measure of school performance. The results provide information about how communities have supported the development of their children (up to five years old) and helps them to understand how their children are doing compared with children in other communities both in Western Australia and nationally.

How is AEDC information accessed?

Results are accessible in the form of national and state reports, community profiles, community results table and online community maps at aedc.gov.au.

DATA COLLECTION AT A GLANCE

In 2015, the third nationwide data collection took place. The first collection was undertaken in 2009 followed by a second in 2012. Further data collections are expected to be undertaken every three years, with the next in 2018.

The rate of participation in the AEDC has remained consistent across the three collection cycles. Western Australian schools completed the census for at least 99% of children starting Pre-primary (table 1).

Table 1: Number of children in the AEDC for Australia and Western Australia

Year	Australia	Western Australia
2009	261 147 (97.5%)	27 565 (99.6%)
2012	289 973 (96.5%)	32 158 (99.0%)
2015	302 003 (96.5%)	33 819 (98.7%)

Table 2: Western Australia fast facts, 2015

	2009		2012		2015	
	N	%	N	%	N	%
Total number of children	27 565	99.6	32 158	99.0	33 819	98.7
Average age of children	5 years 5 months	–	5 years 5 months	–	5 years 5 months	–
Teachers completing the AEDC	1 464	N/A	1 642	N/A	1 792	N/A
Schools completing the AEDC	855	97.0	862	97.0	898	100.0
Aboriginal population of children	1 799	6.5	2 207	6.9	2 230	6.6
Children with a language background other than English (including Aboriginal children)	4 087	14.8	5 013	15.6	6 568	19.4
Children making good progress in transitioning to the school environment	21 563	78.2	24 684	76.7	26 269	77.7
Children regularly read to/encouraged in their reading	17 607	63.9	22 075	68.7	24 103	71.3
Children requiring further assessment	3 109	11.3	3 245	10.1	3 747	11.1
Children with special needs	904	3.3	1 111	3.5	1 167	3.5
Children absent for six or more days from the start of school year to the time the AEDC was undertaken (1 May – 4 July 2015)	11 374	41.3	12 293	38.2	11 254	33.3

DIVERSITY OF WESTERN AUSTRALIAN CHILDREN

The Western Australian population is one of the most culturally and linguistically diverse in Australia. This is reflected in the AEDC which shows nearly one in ten children were born overseas and one in five were reported as having a language background other than English.

Where do overseas-born children come from?

- Teachers were asked to report on children's countries of birth (table 3) and their main home languages other than English (table 4).
- Consistent with previous collections, the 2015 data revealed that nearly 89% of children were born in Australia; 3715 (11%) were born outside Australia.
- England and New Zealand were the most common countries of birth besides Australia.
- The proportion of children born outside Australia increased since the 2009 Census 10% (N=2800) to 2012 (11%: N= 3578) and remained the same in 2015 (11%: N=3715).

Table 3: Country of birth

Country of birth	2009 (N= 27 565)		2012 (N=32 158)		2015 (N=33 819)	
	N	%	N	%	N	%
Australia	24 765	89.8%	28 580	88.9%	30 104	89.0%
New Zealand	308	1.1%	620	1.9%	704	2.1%
England	671	2.4%	656	2.0%	616	1.8%
India	130	0.5%	244	0.8%	290	0.9%
Philippines	107	0.4%	193	0.6%	229	0.7%
South Africa	185	0.7%	317	1.0%	204	0.6%
Ireland	72	0.3%	113	0.4%	147	0.4%
China	41	0.1%	74	0.2%	97	0.3%
United States of America	70	0.3%	113	0.4%	89	0.3%
Malaysia	73	0.3%	79	0.2%	76	0.2%
Sri Lanka	37	0.1%	34	0.1%	57	0.2%
Pakistan	12	0.0%	28	0.1%	55	0.2%
Indonesia	55	0.2%	72	0.2%	52	0.2%
Singapore	51	0.2%	77	0.2%	49	0.1%
Thailand	40	0.1%	53	0.2%	44	0.1%
Korea, South	15	0.1%	30	0.1%	38	0.1%
Vietnam	23	0.1%	28	0.1%	19	0.1%
Other countries	910	3.3%	847	2.6%	949	2.8%

*See additional notes on page 40.

What languages were spoken at home?

In 2015, teachers reported that 4671 children spoke English as a second language. An additional 1897 children were reported to speak a language other than English in the home. The total cohort of children with a language background other than English was 6568 (19.4% of all children).

There was an increase in the percentage of children with a language background other than English.

There were 14.8% (N=4087) in 2009 compared to 15.6% (N=5013) in 2012 and 19.4% (N=6568) in 2015.

Table 4: Main languages other than English spoken in the home

Main languages other than English spoken in the home	2009 (N= 4087)		2012 (N=5013)		2015 (N=6568)	
	N	%	N	%	N	%
Aboriginal* languages	569	13.9	550	10.9	508	7.7
Mandarin	135	3.3	252	5.0	461	7.0
Arabic	268	6.6	342	6.8	397	6.0
Vietnamese	256	6.3	286	5.7	283	4.3
Hindi	75	1.8	160	3.1	259	3.9
Tagalog	59	1.4	125	2.5	196	3.0
Afrikaans	151	3.7	164	3.2	173	2.6
Indonesian	122	3.0	150	2.9	173	2.6
Japanese	94	2.3	111	2.2	169	2.6
Spanish	92	2.3	134	2.6	164	2.5
Italian	93	2.3	112	2.2	162	2.5
Malayalam	37	0.9	67	1.3	132	2.0
Cantonese	66	1.6	131	2.6	130	1.9
French	79	1.9	104	2.1	128	1.9
Punjabi	18	0.4	39	0.8	128	1.9
Tamil	34	0.8	49	1.0	119	1.8
Other non-Aboriginal languages	1757	43.0	1953	38.9	2599	39.6
Unspecified**	182	4.4	284	5.7	387	5.9

Numbers are based on teacher reports only.

*Aboriginal languages include Aboriginal English.

** There were 182 children in 2009, 284 in 2012 and 387 in 2015 reported as speaking English as an additional language but were not reported to speak another language in the home. Their main language other than English was therefore not specified.

See additional notes on page 40.

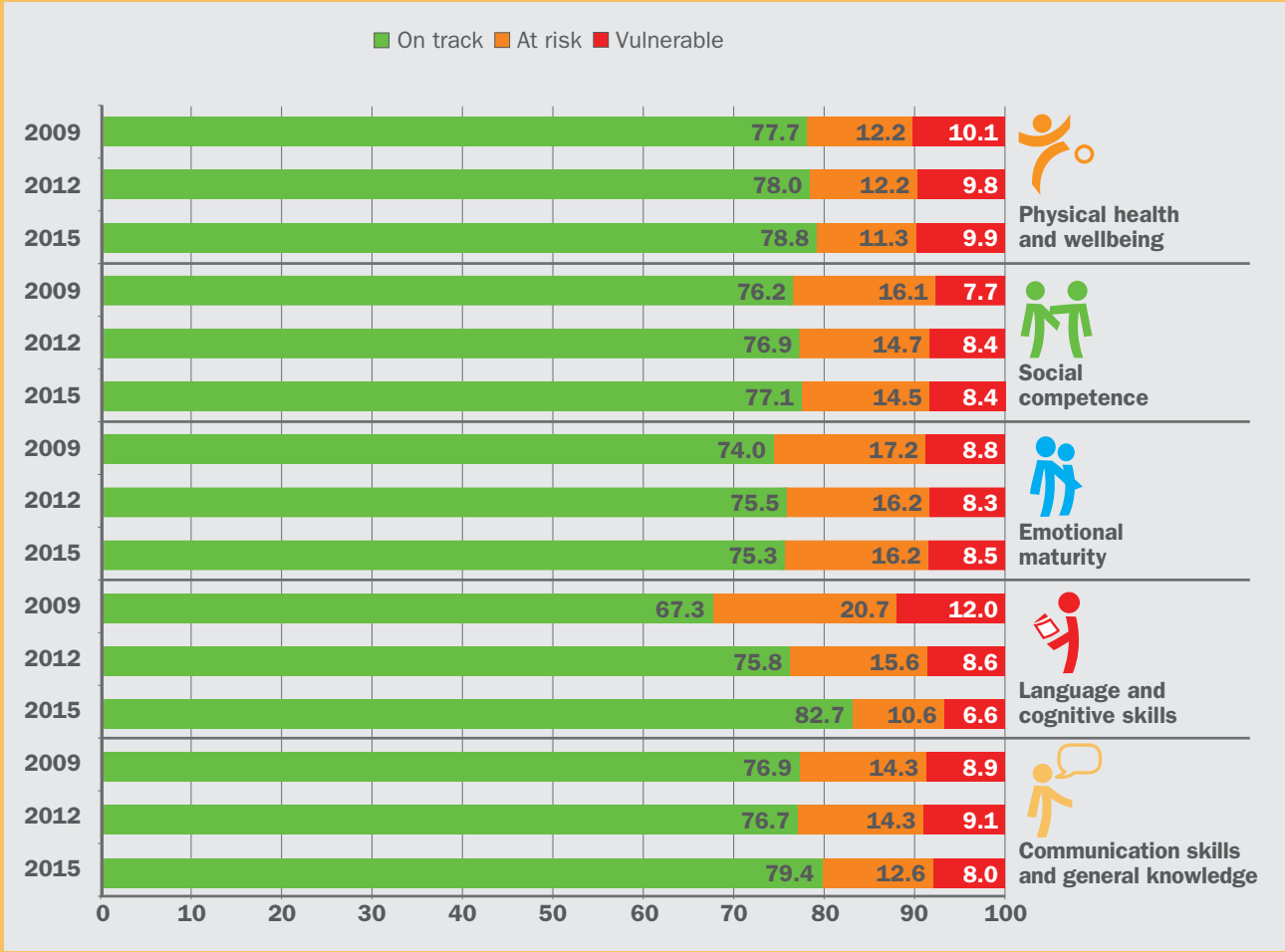
ARE WESTERN AUSTRALIAN CHILDREN ON TRACK?

- Yes, the 2009, 2012 and 2015 results showed most Western Australian children were on track and doing well on each of the developmental domains (graph 1). The next section provides information about children classified as developmentally vulnerable.
- There has been a significant improvement in the percentage of children developmentally on track across each of the domains since 2009 (graph 1).
- The most improvement occurred in the language and cognitive skills domain with the percentage of children on track increasing from 67.3% in 2009 to 82.7% in 2015.

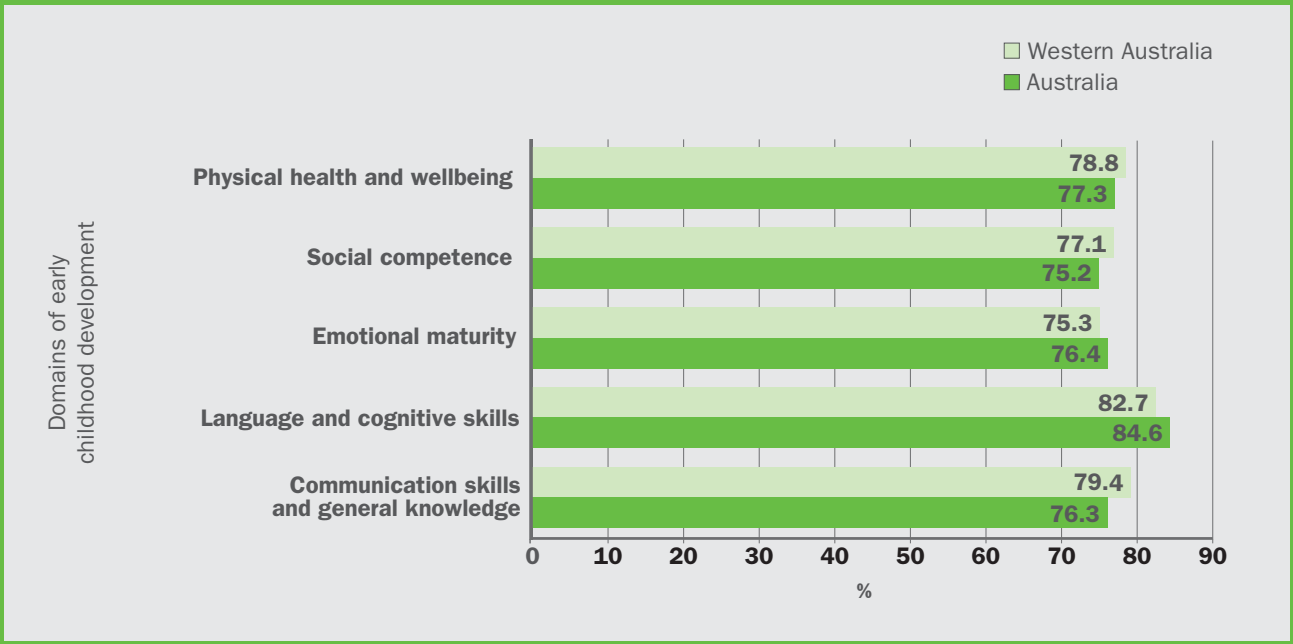
The percentage of children at risk has almost halved (from 20.7 to 10.6%), as has the percentage of children developmentally vulnerable (from 12.0% to 6.6% – graph 1).

- Children were most likely to be developmentally on track in the language and cognitive skills domain (82.7%) and least likely to be on track in the emotional maturity domain (75.3% – graph 1).
- When compared nationally, Western Australia had a higher percentage of children developmentally on track in three domains: physical health and wellbeing, social competence and communication skills and general knowledge (graph 2).

Graph 1: Percentage of Western Australian children developmentally on track, at risk and vulnerable by AEDC domains



Graph 2: Percentage of children developmentally on track by AEDC domain for Western Australia and Australia in 2015



Further data on the percentage of children developmentally on track, at risk or vulnerable are in Appendix A, table 4.

A CLOSER LOOK AT DEVELOPMENTALLY VULNERABLE CHILDREN

While the majority of children living in Western Australia are doing well, there were children who entered school developmentally at risk or vulnerable.

Overall, the 2015 results (graph 3) showed that:

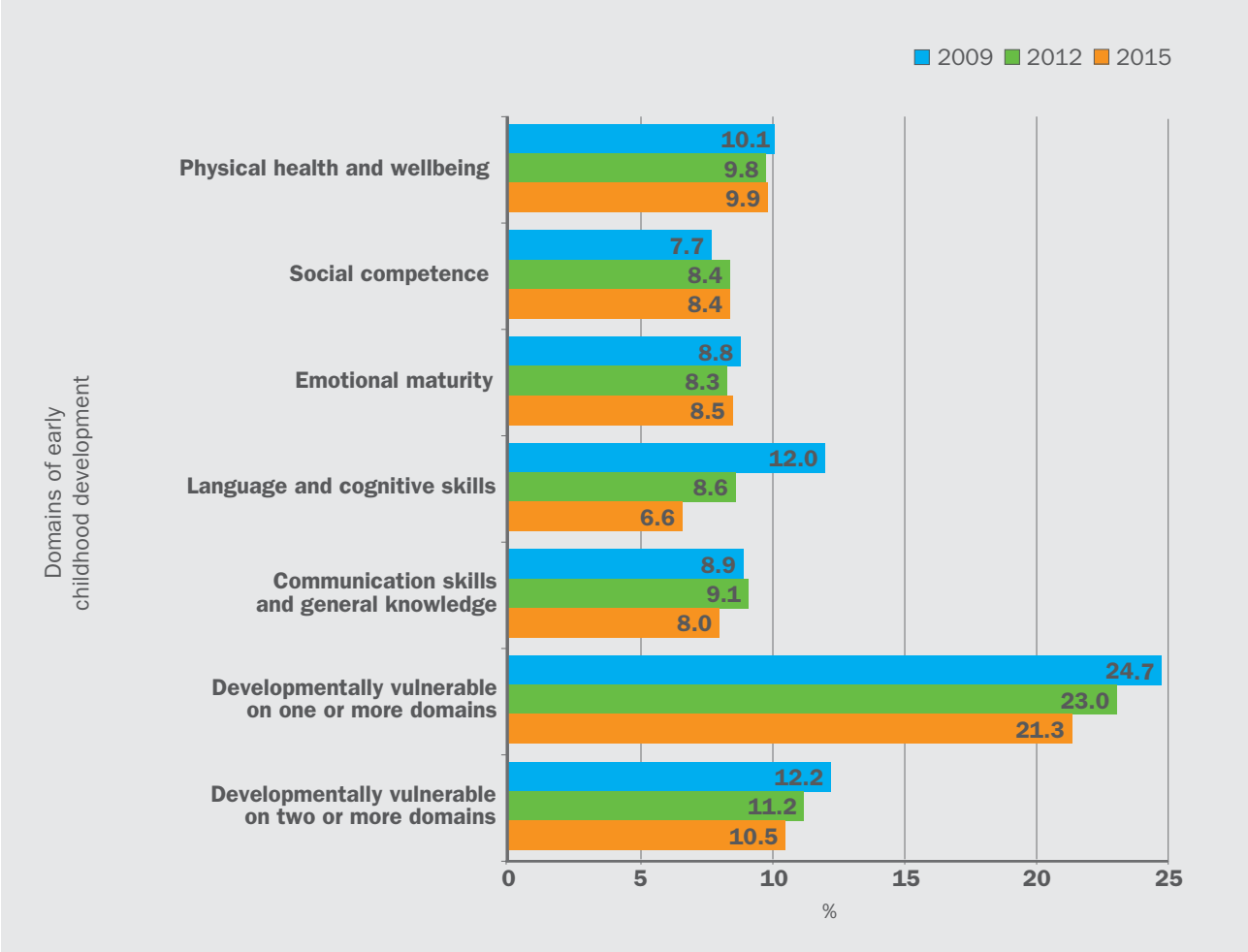
- 21.3% of Western Australian children were developmentally vulnerable on one or more domains
- 10.5% were developmentally vulnerable on two or more domains.

How did Western Australian children perform in 2015, compared with 2009 and 2012?

- There were proportionately fewer children who were developmentally vulnerable on one or more domains in 2015 – 21.3% compared with 24.7% in 2009 and 23% in 2012 (graph 3).
- There was a similar pattern for the percentage of children vulnerable on two or more domains in 2015 – 10.5% compared with 12.2% in 2009 and 11.2% in 2012 (graph 3).
- The number of children with one or more developmental vulnerabilities has remained relatively constant despite a rapid population increase – 2009 (N=6445), 2012 (N=7048), 2015 (N=6895).
- There was a reduction in developmental vulnerability on three domains:
  - The language and cognitive skills domain showed the largest proportional change. In 2015, 6.6% of children were developmentally vulnerable, compared with 12.0% in 2009 and 8.6% in 2012 (graph 3).
  - Children's communication skills and general knowledge improved in 2015 – 8.0% compared to 8.9% in 2009 and 9.1% in 2012 (graph 3).
  - Children's emotional maturity also improved in 2015 – 8.5% compared to 8.8% in 2009 and 8.3% in 2012 (graph 3).

- In the remaining two domains:
  - children's physical health and wellbeing domain has remained relatively stable with no statistically significant change in the percentage of children developmentally vulnerable (10.1% in 2009, 9.8% in 2012 and 9.9% in 2015 – graph 3).
  - there was a statistically significant increase in the percentage of children developmentally vulnerable on the social competence domain between 2009 (7.7%) and 2012 (8.4%). The result plateaued in 2015 (graph 3).
- Overall, children were least likely to be developmentally vulnerable on the language and cognitive skills domain (6.6%) and most likely to be developmentally vulnerable on the physical health and wellbeing domain (9.9%).

Graph 3: Percentage of Western Australian children who were developmentally vulnerable by AEDC domain



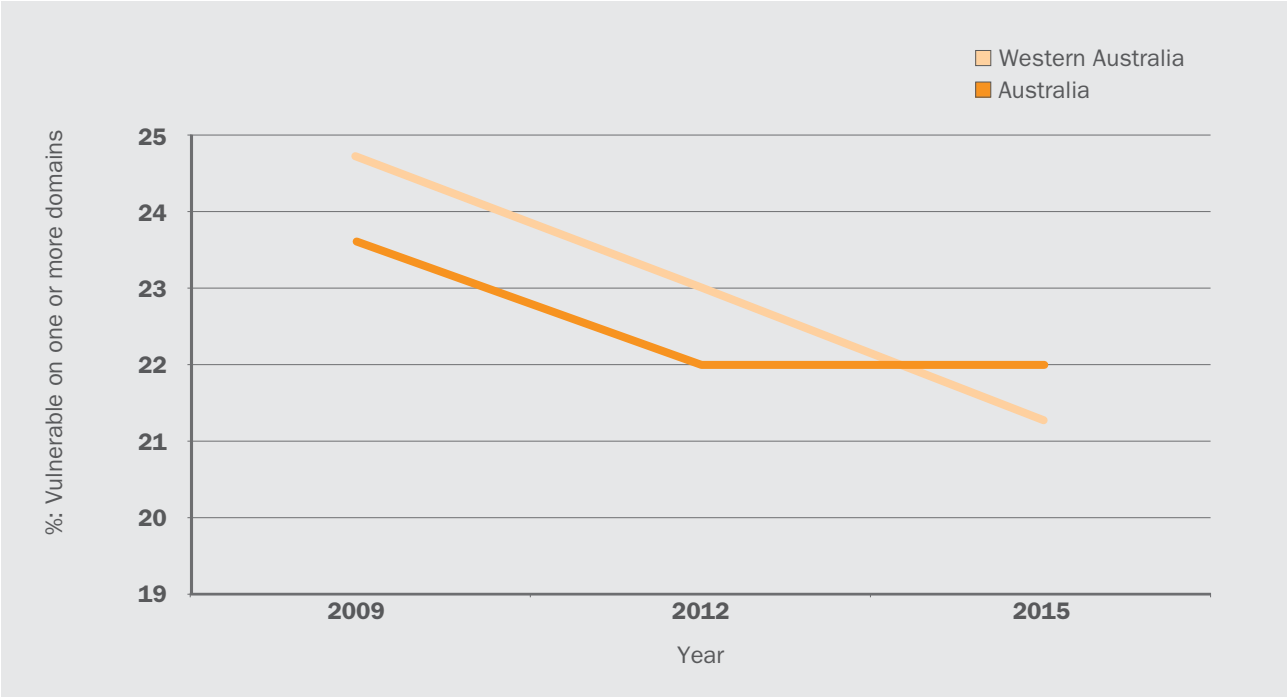
Further data on the percentages of children developmentally on track, at risk or vulnerable are in Appendix A, table 4.

How do Western Australian children compare nationally?

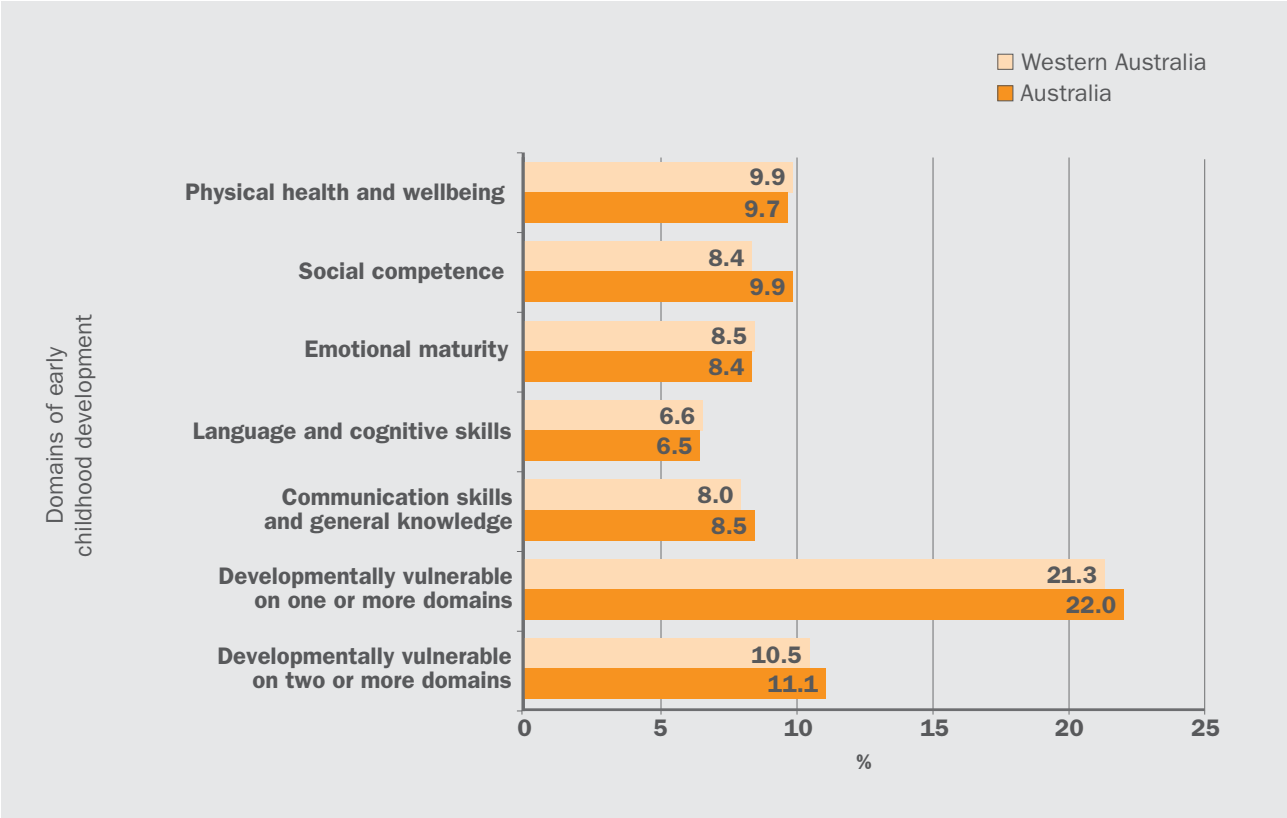
- They did better. In 2015, there were proportionately fewer children who were developmentally vulnerable on one or more domains and two or more domains than the national average (graph 4 and 5).
- Western Australia had a lower percentage of children developmentally vulnerable in the social competence, and the communication and general knowledge domains in 2015 than the national average (graph 5).
- In the other three domains, Western Australian children performed at a similar level to the national average in 2015 (graph 5).
- From 2009 to 2015, there was a significant improvement in the language and cognitive skills domain. This occurred in both the Western Australian and national results. However, the gap in vulnerability between the Western Australian and the national results has narrowed from 3.4 percentage points in 2009, to 0.1 percentage points in 2015; bringing Western Australia into line with the national average (graph 6).

Futher information is provided in Appendix A – page 41.

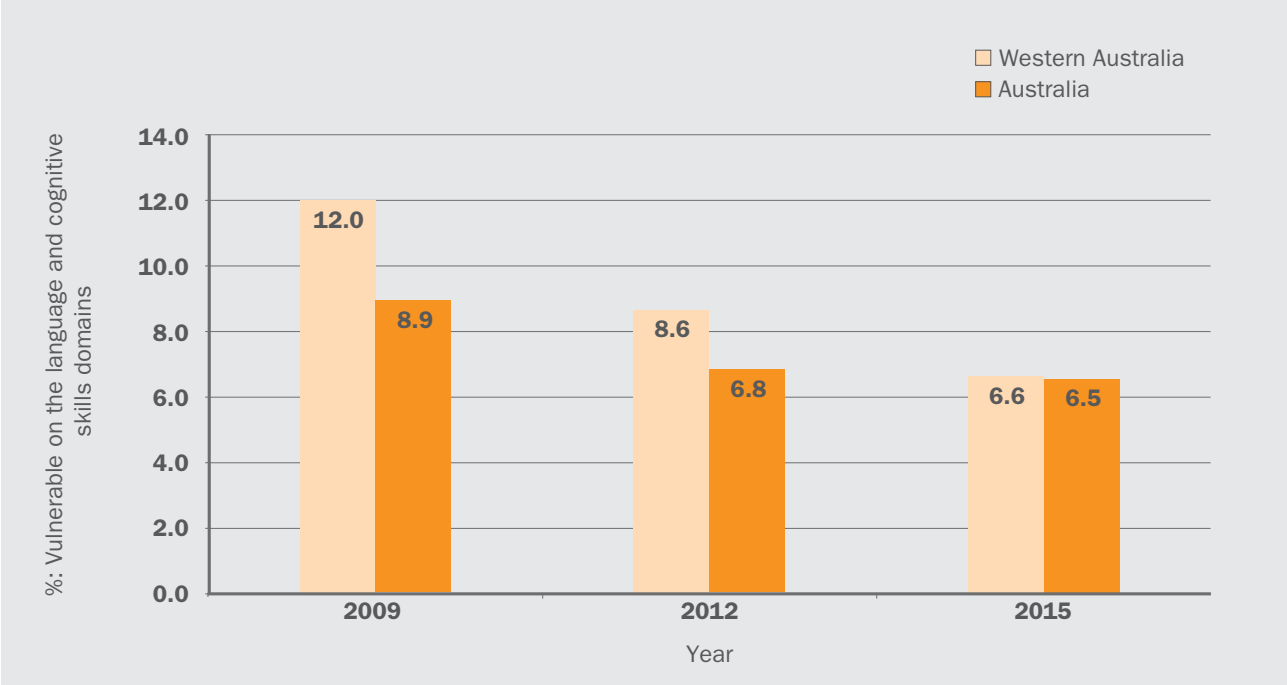
Graph 4: Percentage of Western Australian and Australian children who were developmentally vulnerable on one or more AEDC domains



Graph 5: Percentage of developmentally vulnerable children by domain for Western Australia and Australia in 2015



Graph 6: Percentage of developmentally vulnerable children on the language and cognitive skills domain for Western Australia and Australia

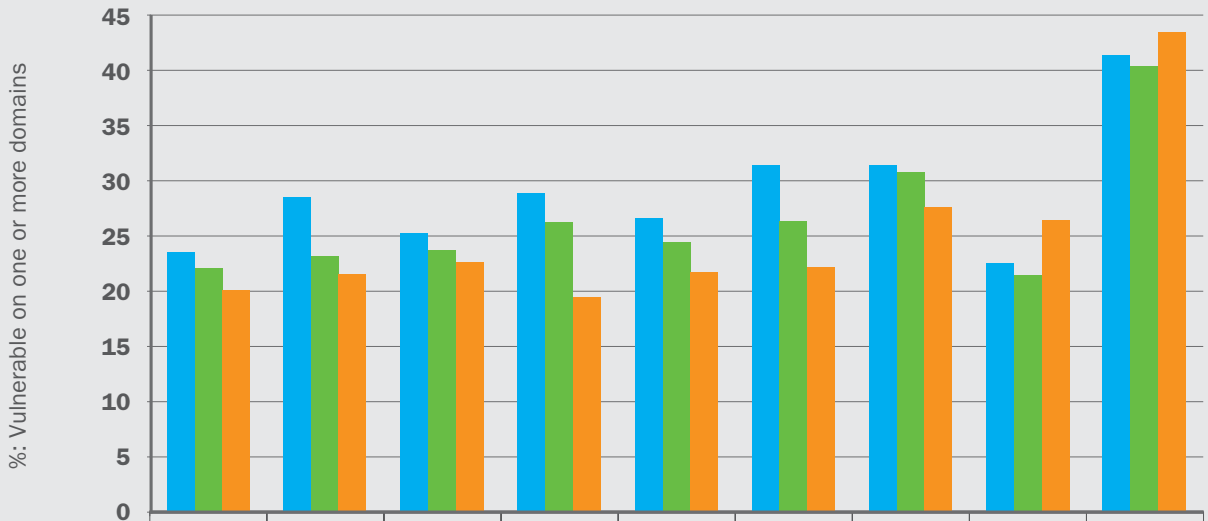


Further data on the percentages of children developmentally vulnerable by State and Territory are in Appendix A, tables 5 and 6.

How do children compare across Western Australian regions?

- Developmental vulnerability existed across all regions although the percentage and number of developmentally vulnerable children varied (graph 7 and 9).
- With the exception of the Kimberley region, the distribution of vulnerability by region was fairly consistent (graph 7 and 9).
- Since 2009, seven out of nine regions performed better with proportionately fewer children entering school developmentally vulnerable in 2015. The decrease represents a statistically significant change. One region – Pilbara, experienced a statistically significant increase in the percentage of developmentally vulnerable children. There was also a slight increase in vulnerability in the Kimberley region, although the change was not statistically significant (graph 7).
- The Upper Great Southern and South Eastern regions showed the largest proportional change in reducing developmental vulnerability (graph 7).
- In terms of children's language and cognitive skills, eight out of nine regions experienced a statistically significant decrease in the percentage of children vulnerable since 2009. In the Perth and South Eastern regions the percentage of children developmentally vulnerable on this domain almost halved (from 10.8% in 2009 to 5.4% in 2015, and from 17.1% to 8.6% respectively). While there was a small improvement in the Kimberley region, the change was not statistically significant (graph 8).

Graph 7: Percentage of Western Australian children who were developmentally vulnerable on one or more AEDC domains by ABS*region

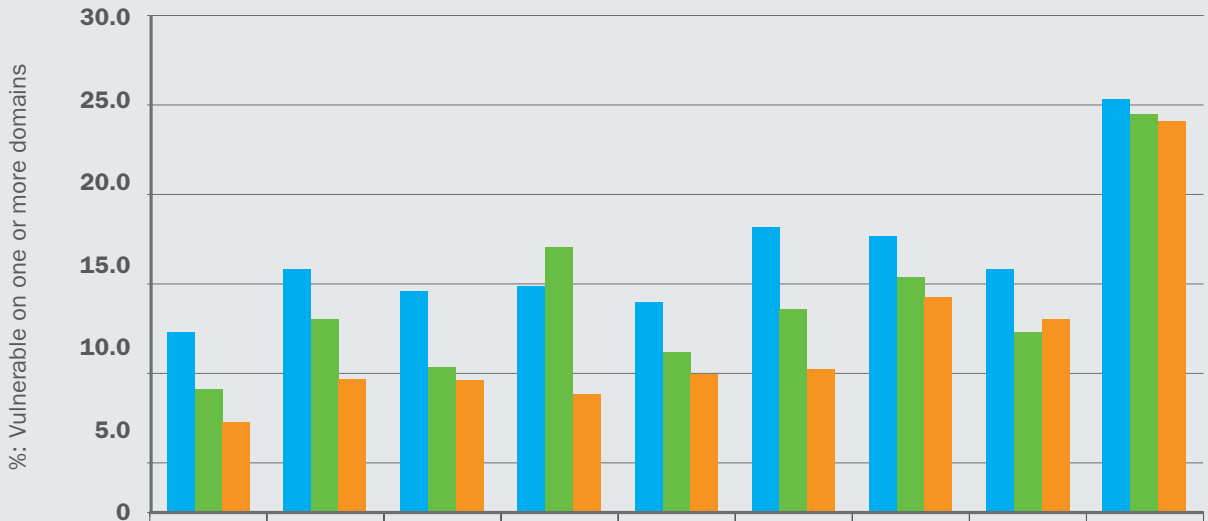


	Perth	Midlands	South West	Upper Great Southern	Lower Great Southern	South Eastern	Central	Pilbara	Kimberley
% Vul 2009	23.5	28.5	25.2	28.8	26.6	31.4	31.4	22.5	41.3
% Vul 2012	22.0	23.1	23.7	26.2	24.4	26.3	30.7	21.4	40.3
% Vul 2015	20.1	21.5	22.6	19.4	21.7	22.1	27.6	26.4	43.4

Regions

*Australian Bureau of Statistics.

Graph 8: Percentage of Western Australian children who were developmentally vulnerable on the language and cognitive skills domain by ABS* region

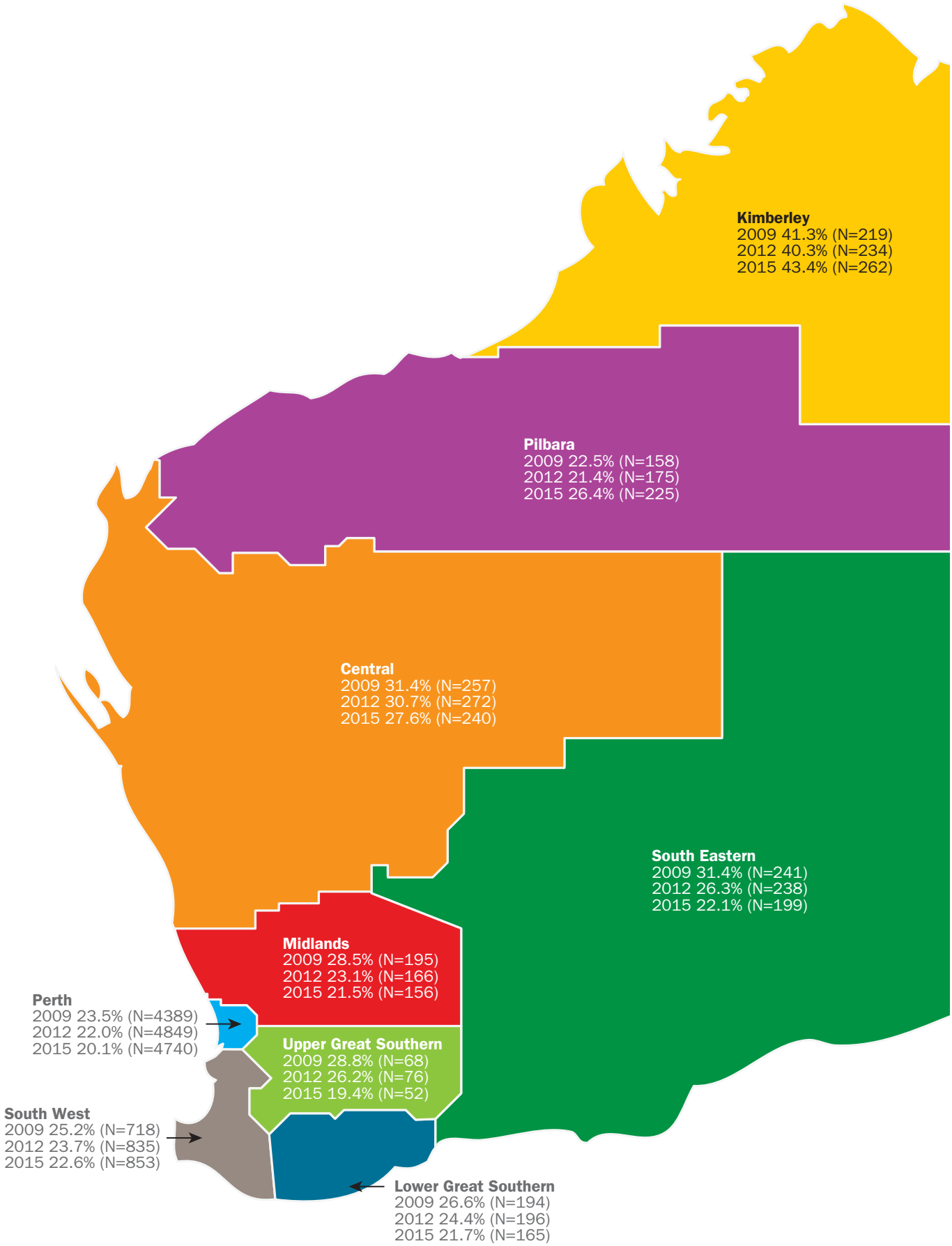


	Perth	Midlands	South West	Upper Great Southern	Lower Great Southern	South Eastern	Central	Pilbara	Kimberley
% Vul 2009	10.8	14.6	13.3	13.6	12.6	17.1	16.6	14.6	24.8
% Vul 2012	7.4	11.6	8.7	15.9	9.6	12.2	14.1	10.8	23.9
% Vul 2015	5.4	8.0	7.9	7.1	8.3	8.6	12.9	11.6	23.5

Regions

*Australian Bureau of Statistics.

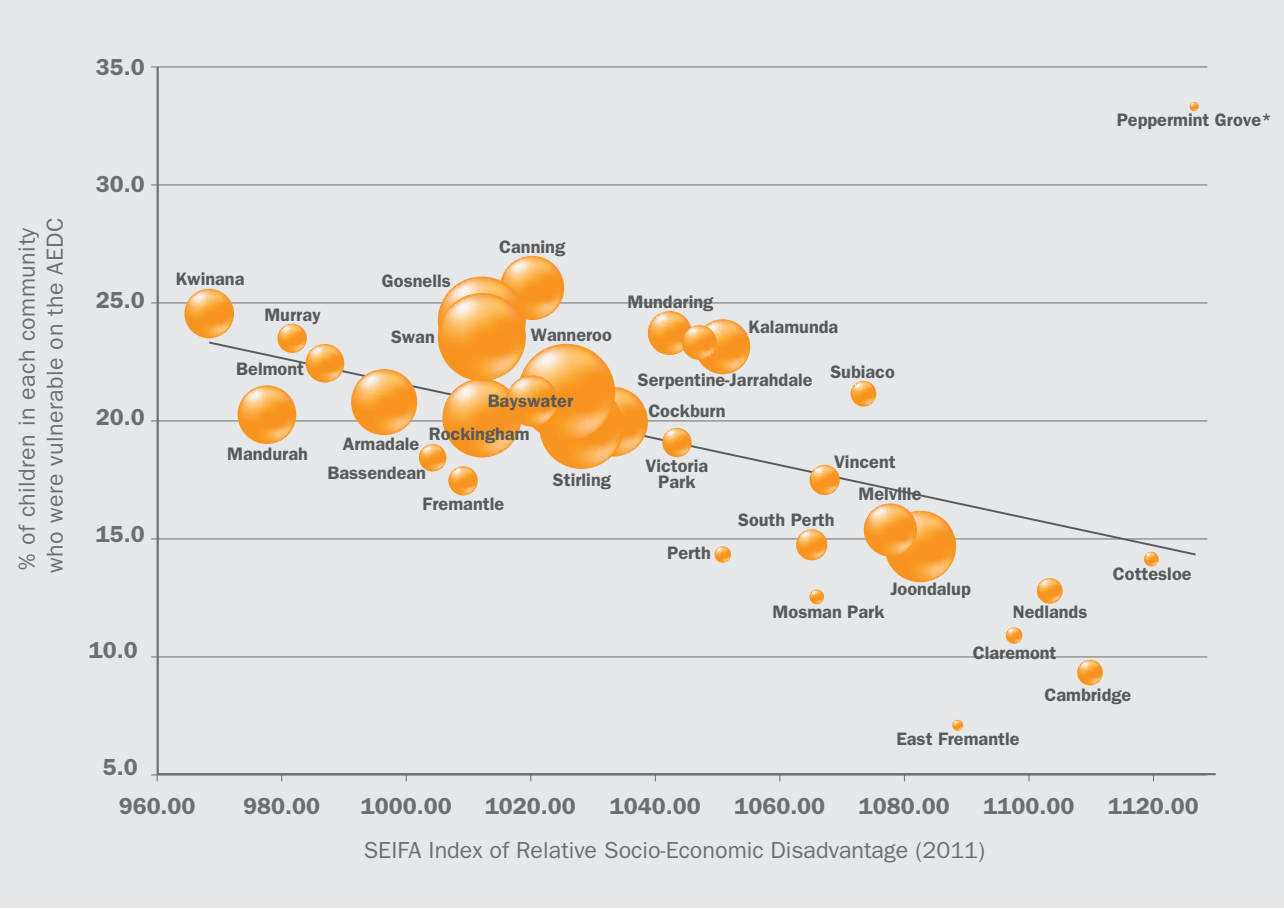
Graph 9: Percentage and number of Western Australian children who were developmentally vulnerable on one or more AEDC domains by region



How does developmental vulnerability vary across local government areas within the Perth metropolitan area?

- Children with developmental vulnerability live in nearly all communities, irrespective of their demographic or economic status (graphs 10 and 13 to 19).
- Graph 10 shows the percentage and number of children living in each local government area within the Perth metropolitan region who were developmentally vulnerable on one or more domains.
- There is a correlation between developmental vulnerability and socio-economic disadvantage, that is, the higher the level of socio-economic disadvantage the higher the proportion of developmental vulnerability within a local government area (graph 10).
- The size of the bubbles in graph 10 also shows that a large number of children in communities of middle socio-economic disadvantage (e.g. Wanneroo and Stirling) were vulnerable.
- Graphs 11 and 12 show there has been a significant improvement across many local government areas in the metropolitan region since 2009. The results indicate an overall decline in the percentage of developmentally vulnerable children, including areas with larger populations of children.

Graph 10: Level of developmental vulnerability on the AEDC in 2015 by metropolitan local government area

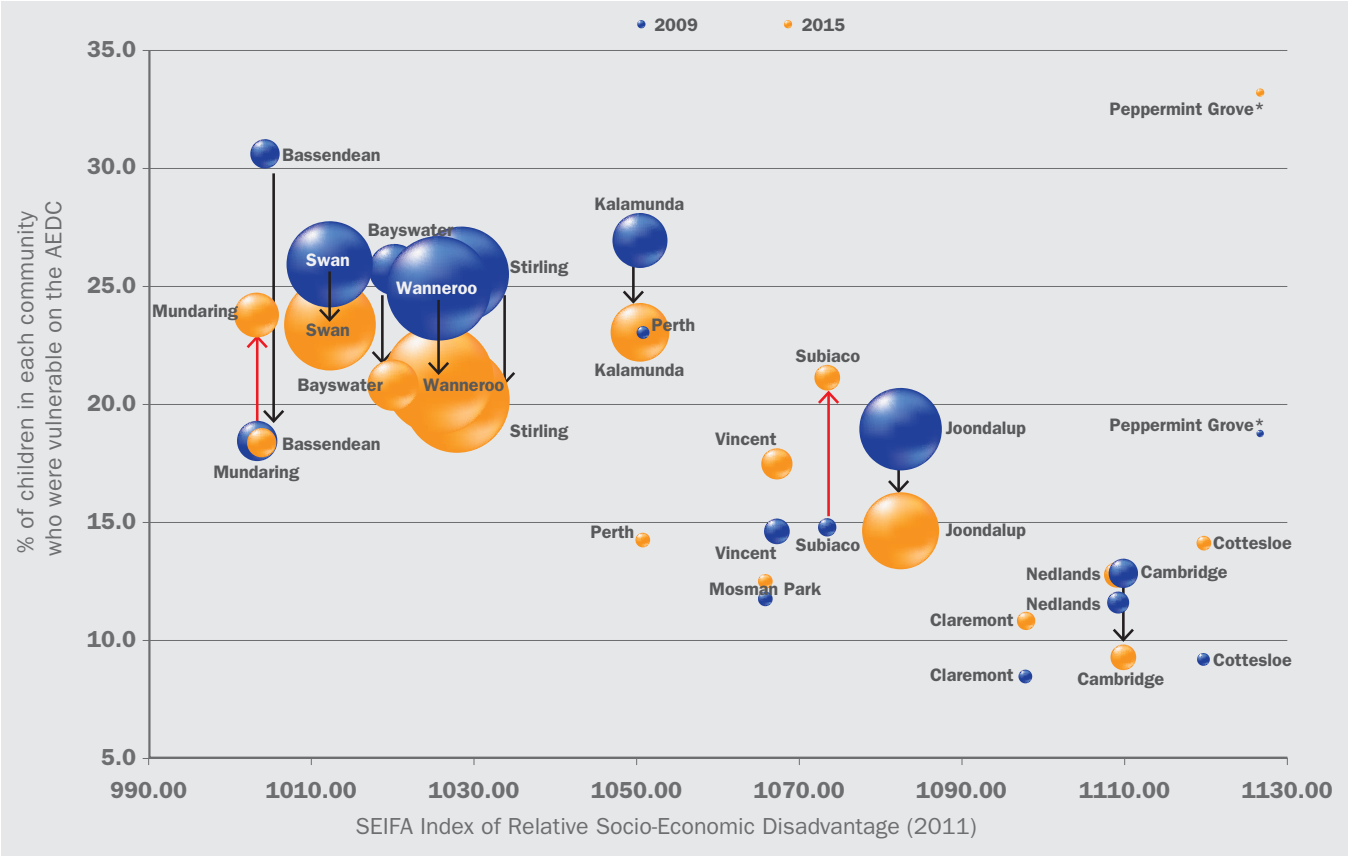


Bubble size: number of children in each community who were vulnerable on the AEDC.

* relatively small numbers; interpret with caution.

See additional notes on page 40.

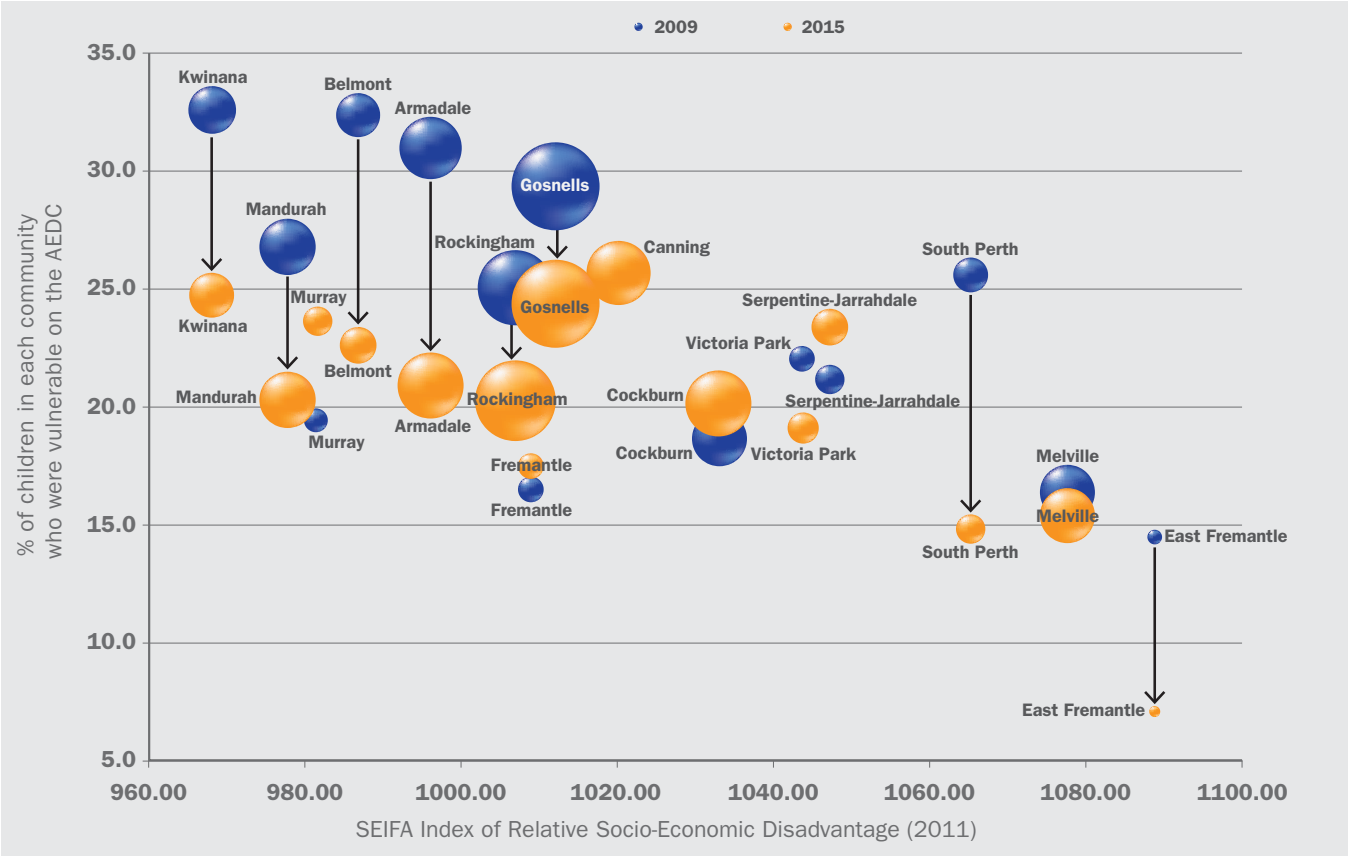
Graph 11: Change in developmental vulnerability from 2009 to 2015 in north metropolitan local government areas



↓ Statically significant decrease in developmental vulnerability.
↑ Statically significant increase in developmental vulnerability.

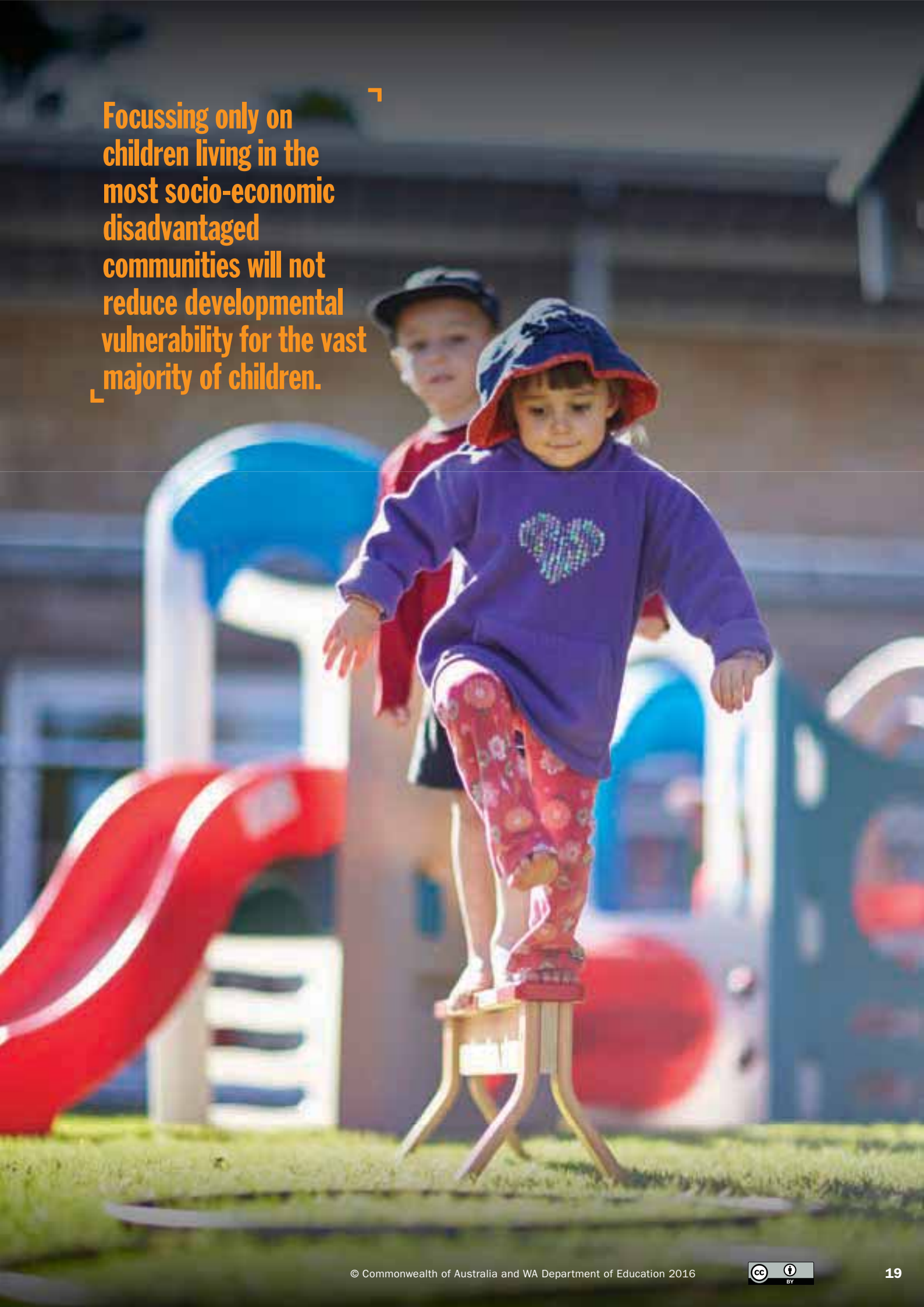
No arrow: indicates no statistically significant change in the results.
* relatively small numbers; interpret with caution.

Graph 12: Change in developmental vulnerability from 2009 to 2015 in south metropolitan local government areas



↓ Statically significant decrease in developmental vulnerability.
↑ Statically significant increase in developmental vulnerability.

No arrow: indicates no statistically significant change in the results.



Focussing only on children living in the most socio-economic disadvantaged communities will not reduce developmental vulnerability for the vast majority of children.

PROFILE AND DEMOGRAPHIC CHARACTERISTICS OF CHILDREN LIVING IN WESTERN AUSTRALIA

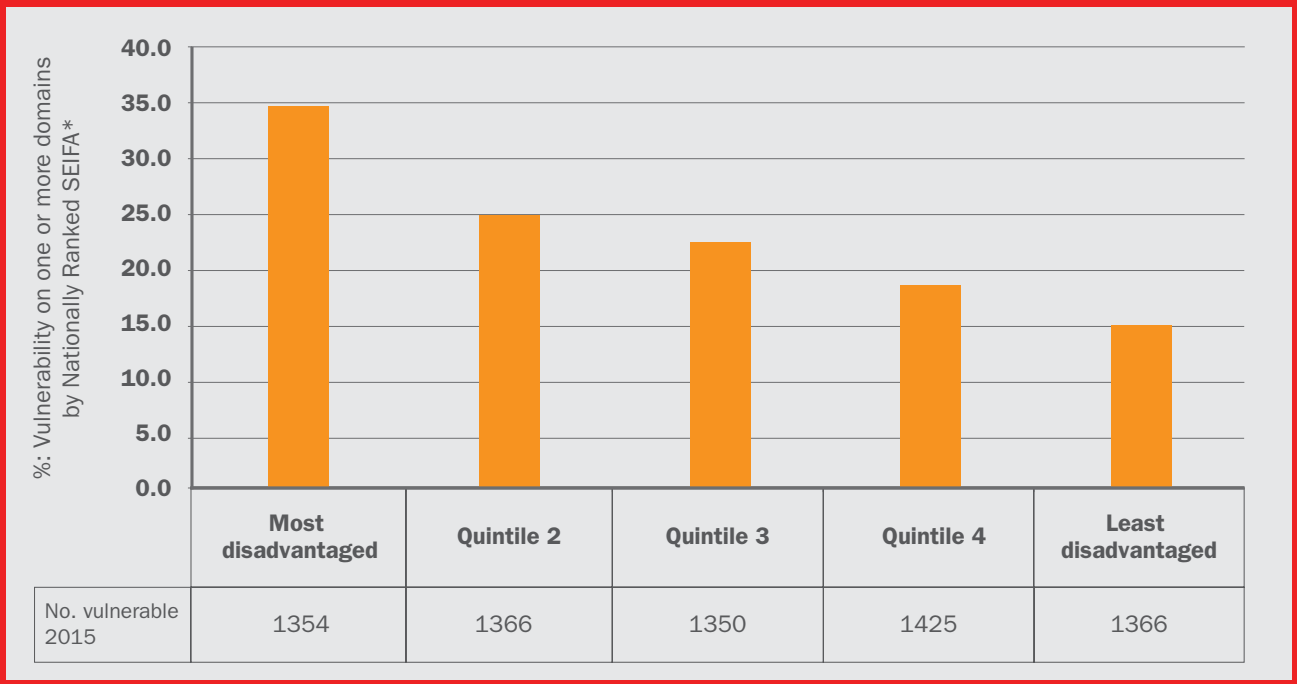
Socio-economic index for areas, geographic location and developmental vulnerability

Developmental vulnerability existed in nearly all suburbs and communities, irrespective of their geographic, demographic or economic status.

Socio-economic index for areas (SEIFA)

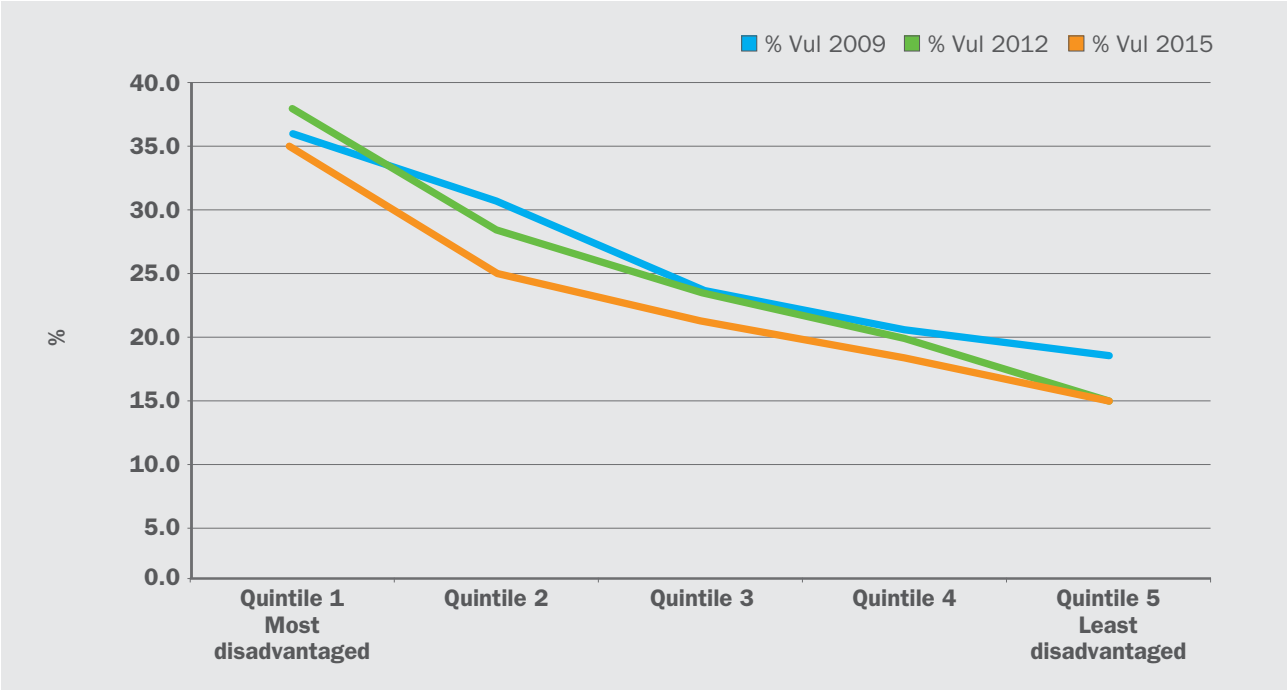
- Nearly 12% of Western Australian children (N=3880) live in communities classified in the lowest SEIFA category (Quintile 1 – most disadvantaged) compared with 28% of Western Australian children (N=8915) who live in the least disadvantaged areas (Quintile 5, table 8).
- The vulnerability rates are higher in less affluent communities. As the level of disadvantage reduced so did the percentage of children developmentally vulnerable one or more domains (graph 13).
- Children living in the most socio-economic disadvantaged communities are twice as likely to be developmentally vulnerable (35%) as children living in communities with low levels of socio-economic disadvantage (15%, graph 13).
- Since 2009, the gap has widened slightly between children living in high and low socio-economic disadvantage (graph 14).
- However, the number of developmentally vulnerable children, regardless of socio-economic status, was similar across quintiles. Graph 13 highlights that many children who are developmentally vulnerable live in middle to low levels of socio-economic disadvantage. Focussing only on children living in the most socio-economic disadvantaged communities will not reduce developmental vulnerability for the vast majority of children.

Graph 13: Percentage of Western Australian children who were developmentally vulnerable on one or more AEDC domains by economic status for 2015



*SEIFA – Socio-economic indexes for areas calculated at the National level. Quintiles are used for the AEDC comparisons to SEIFA. Quintile 1 represents the most disadvantaged and Quintile 5 the least disadvantaged. See additional notes on page 40.

Graph 14: Percentage of Western Australian children who were developmentally vulnerable on one or more AEDC domains by economic status from 2009 to 2015

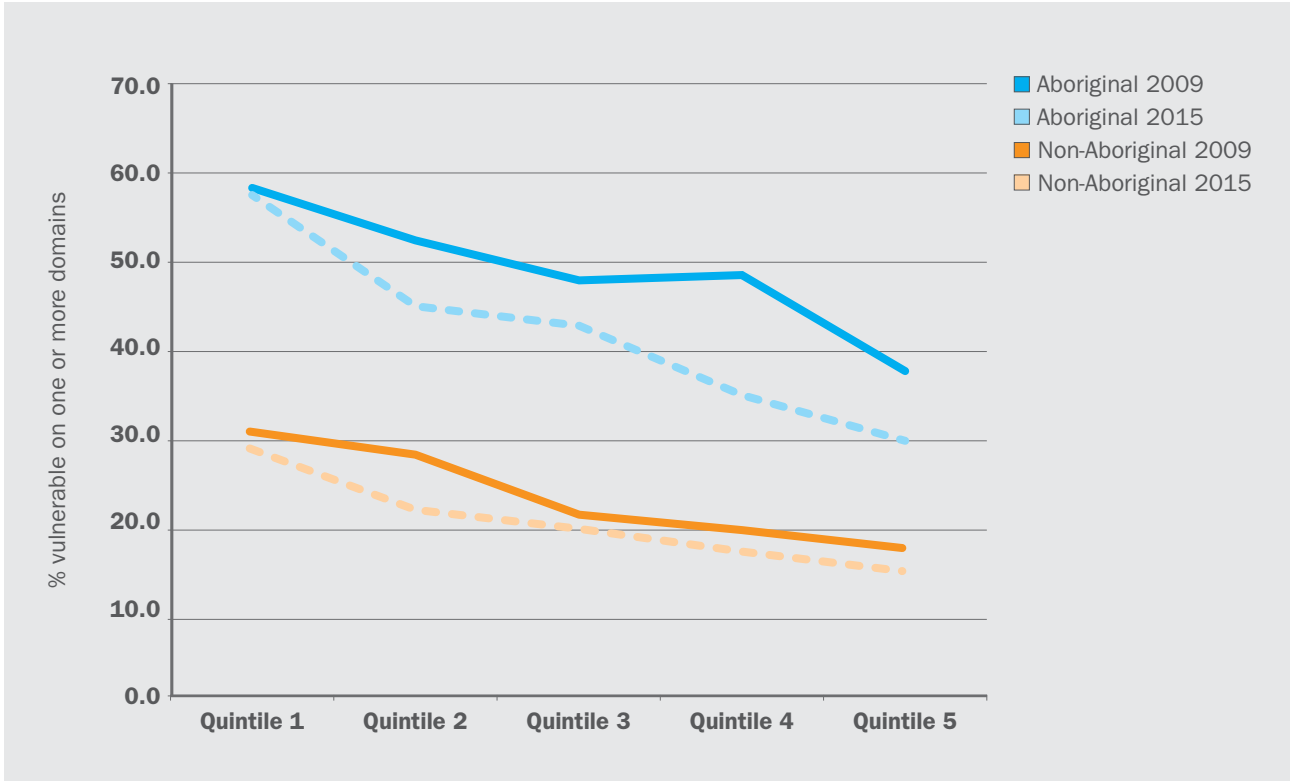


*SEIFA – Socio-economic indexes for areas calculated at the National level.
Quintiles are used for the AEDC comparisons to SEIFA.
Quintile 1 represents the most disadvantaged and Quintile 5 the least disadvantaged.
See additional notes on page 40.

Socio-economic index for areas (SEIFA) and Aboriginality

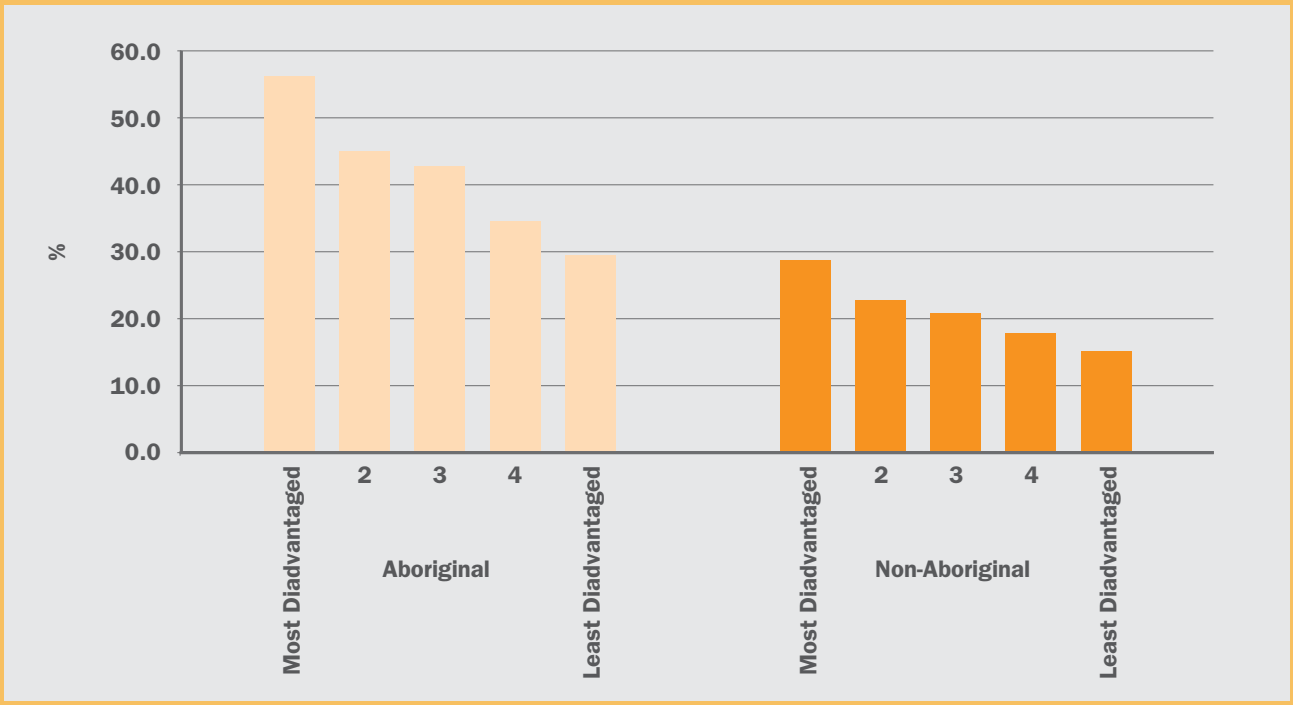
- In 2015, just under half of all Aboriginal children (42%) participating in the AEDC live in communities classified in the lowest SEIFA category (Quintile 1 – most disadvantaged) compared with 6% of Aboriginal children who live in the least disadvantaged areas (Quintile 5). In contrast, 10% of non-Aboriginal children live in the Quintile 1 (most disadvantaged) and 30% live in the least disadvantage areas (Quintile 5).
- From 2009 to 2015, the level of developmental vulnerability reduced for Aboriginal and non-Aboriginal children across all socio-economic groups. The greatest improvements occurred for children living in the more affluent communities. Aboriginal children living in the most disadvantaged communities (Quintile 1) experienced only a small shift, although not significant. These children remain the most disadvantaged (graph 15).
- Notwithstanding, the 2015 results demonstrate that Aboriginal children living in the most disadvantaged quintile have the highest percentage of children (56.5%) who were developmentally vulnerable. There was a similar trend for non-Aboriginal children, although the highest percentage was 28.7% (graph 16).
- Further, graph 17, shows that more than half of all Aboriginal children who were developmentally vulnerable lived in the most disadvantaged quintile. In contrast, the lowest number of non-Aboriginal children who were developmentally vulnerable lived in the most disadvantaged quintile, and the highest number lived in the least disadvantaged quintile.

Graph 15: Percentage of Aboriginal and non-Aboriginal children who were developmentally vulnerable on one or more AEDC domains by SEIFA 2009 and 2015



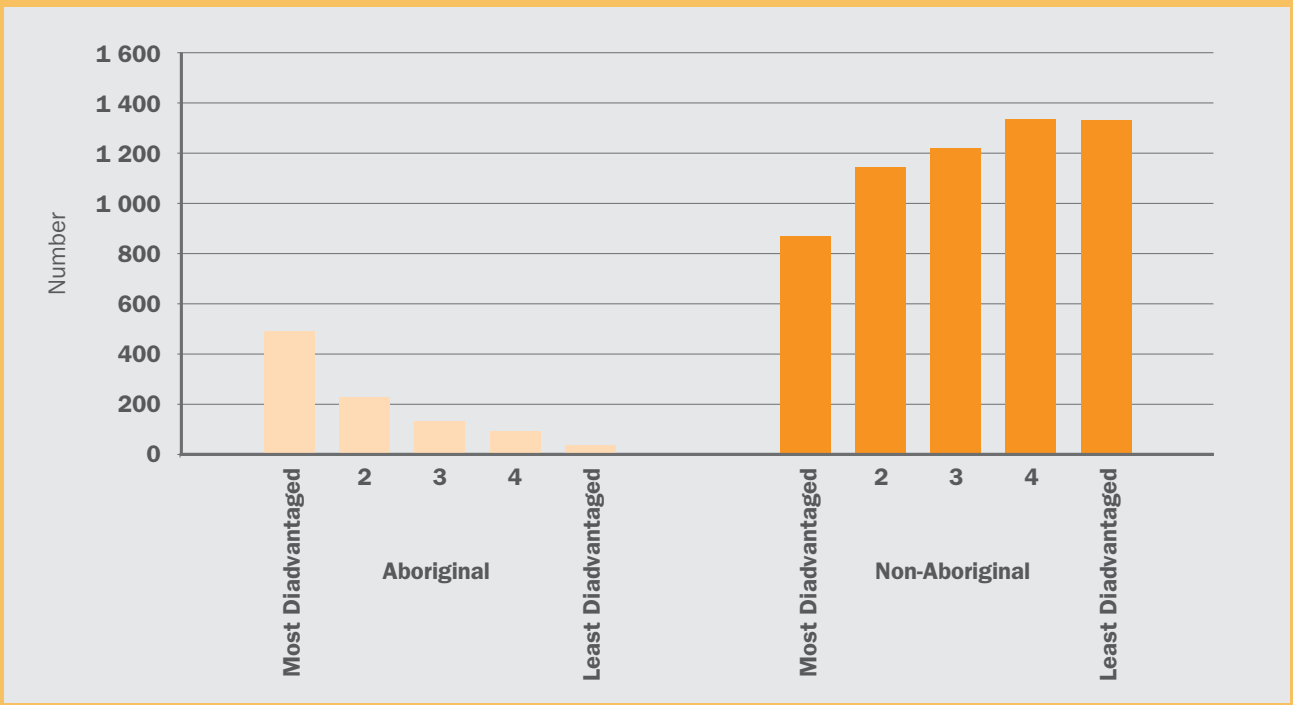
SEIFA – Socio-economic indexes for areas calculated at the National level.
Quintiles are used for the AEDC comparisons to SEIFA.
Quintile1 represents the most disadvantaged and Quintile 5 the least disadvantaged.
See additional notes on page 40.

Graph 16: Percentage of Aboriginal and non-Aboriginal children who were developmentally vulnerable on one or more AEDC domains by SEIFA in 2015



SEIFA – Socio-economic indexes for areas calculated at the National level.
Quintiles are used for the AEDC comparisons to SEIFA.
Quintile 1 represents the most disadvantaged and Quintile 5 the least disadvantaged.
See additional notes on page 40.

Graph 17: Number of Aboriginal and non-Aboriginal children who were developmentally vulnerable on one or more AEDC domains by SEIFA in 2015



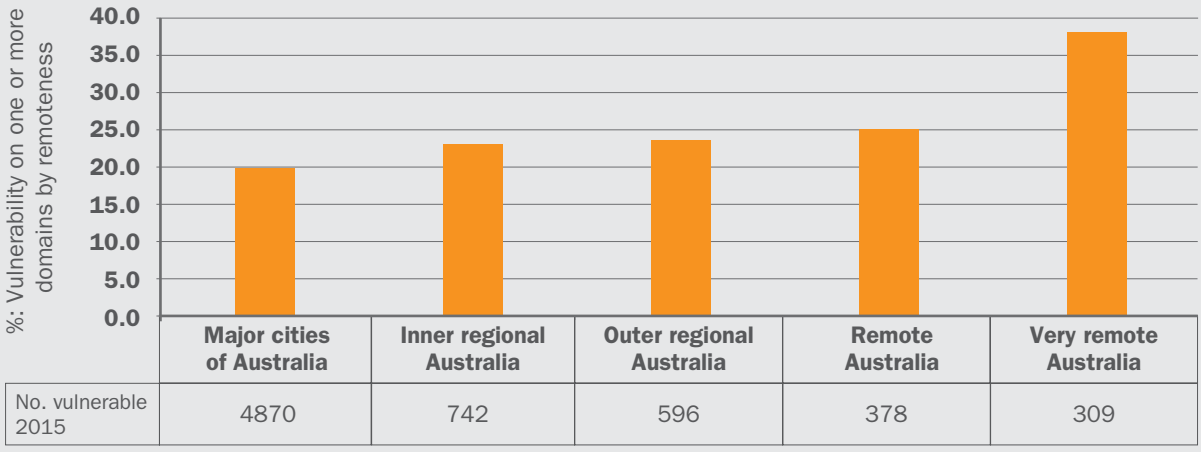
SEIFA – Socio-economic indexes for areas calculated at the National level.
Quintiles are used for the AEDC comparisons to SEIFA.
Quintile 1 represents the most disadvantaged and Quintile 5 the least disadvantaged.
See additional notes on page 40.

Geographic location

- Nearly 75% of Western Australian children lived in the metropolitan area, 16% lived in inner and outer regional areas and 7.0% lived in the remote or very remote areas of Western Australia (table 8).
- The further away from the metropolitan area children lived, the higher the **percentage** of children who were developmentally vulnerable (graph 18).

Children living in very remote locations were nearly twice as likely to be developmentally vulnerable than their city peers (38% versus 20%, graph 18). However, the **number** of developmentally vulnerable children was much higher in the metropolitan area (N=4870) compared to very remote areas (N=309, figure 18).

Graph 18: Percentage and number of Western Australian children who were developmentally vulnerable on one or more AEDC domains by remoteness for 2015



See additional notes on page 40.

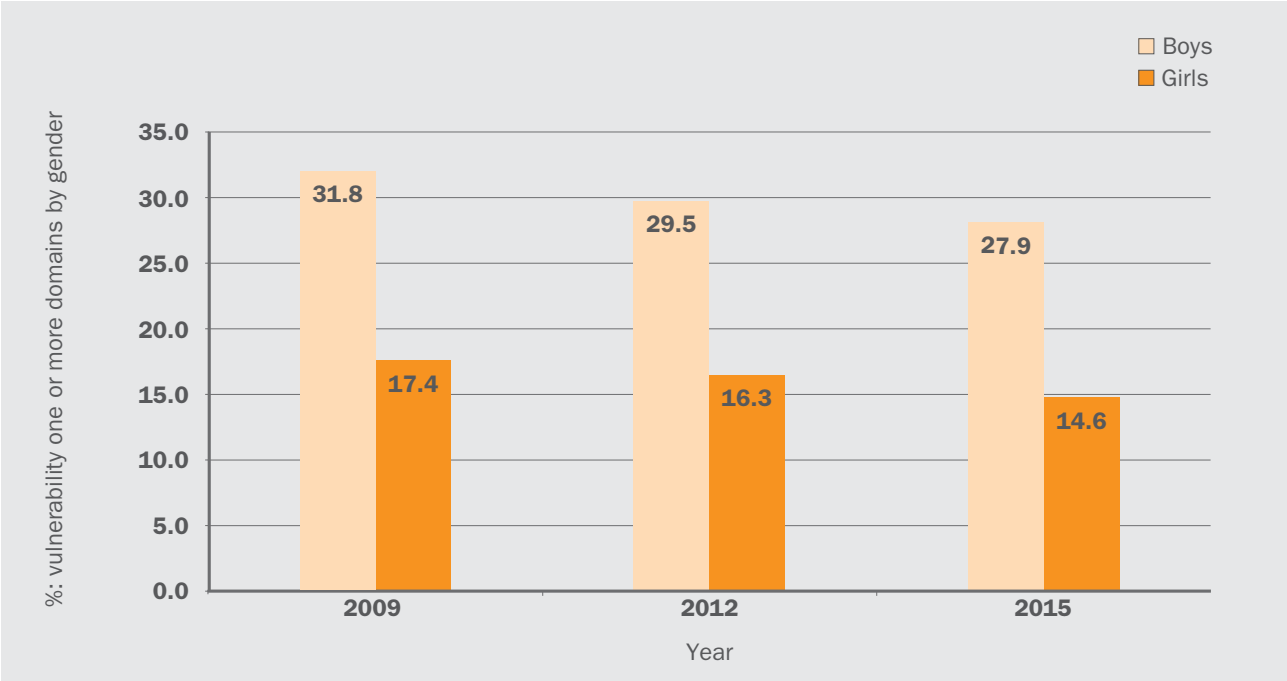
How do the results for different population groups compare in Western Australia?

Overall, vulnerability across population groups has improved since 2009 – apart from children identified as not yet proficient in English where more than 90% were developmentally vulnerable on one or more domains in each data AEDC cycle.

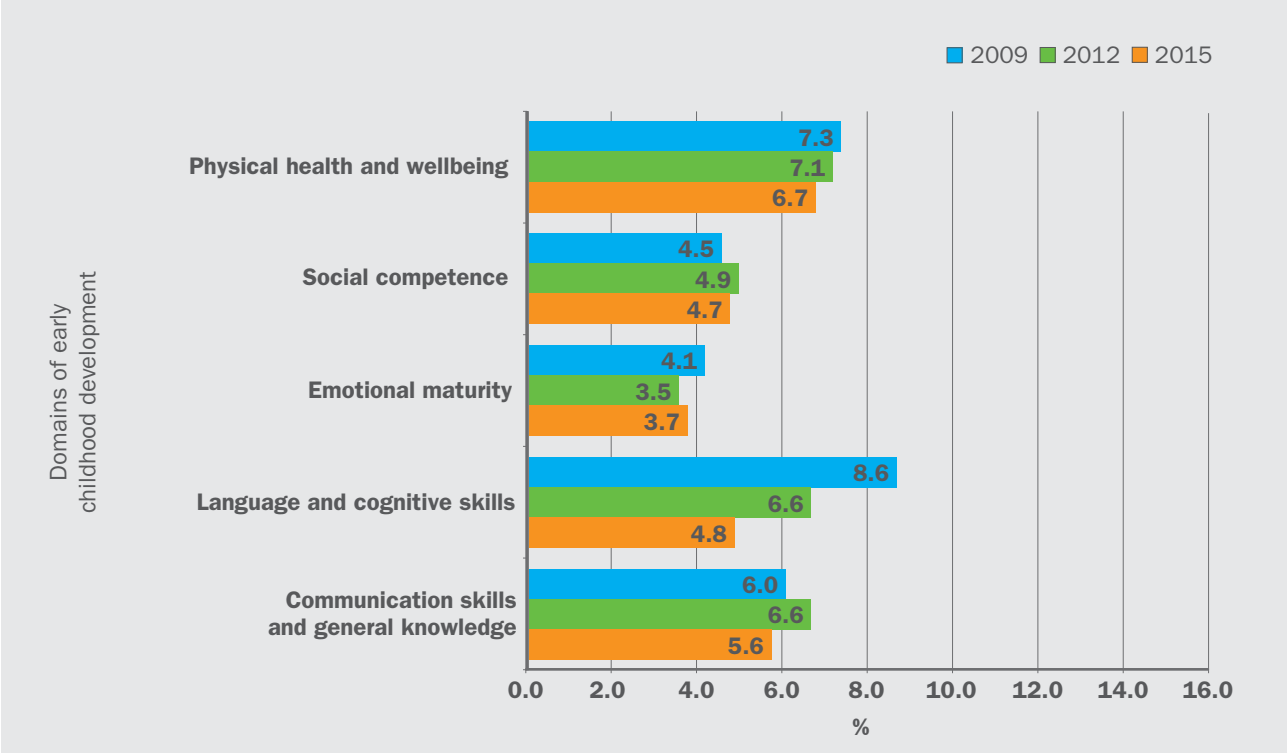
Gender

- In 2015, there were valid scores calculated for 16 411 boys (94%) and 15 962 girls (97%) on one or more domains. Boys represented 51.4% of the total children participating in the AEDC and girls represented 48.6%.
- While there was a decrease in the percentage of developmentally vulnerable boys and girls on one or more domains, throughout 2009 to 2015, the percentage of developmentally vulnerable boys was nearly double that of girls (graph 19).
- Boys were more likely to experience multiple vulnerabilities than girls (table 9).
- The gap in developmental vulnerability between boys and girls stayed about the same since 2009 (reducing by 1% – graph 19).
- Girls were least likely to be developmentally vulnerable on the emotional maturity domain and most likely to be vulnerable on the physical health and wellbeing domain (graph 20).
- With the exception of the language and cognitive domain, vulnerability in boys was similar across the domains (graph 21).

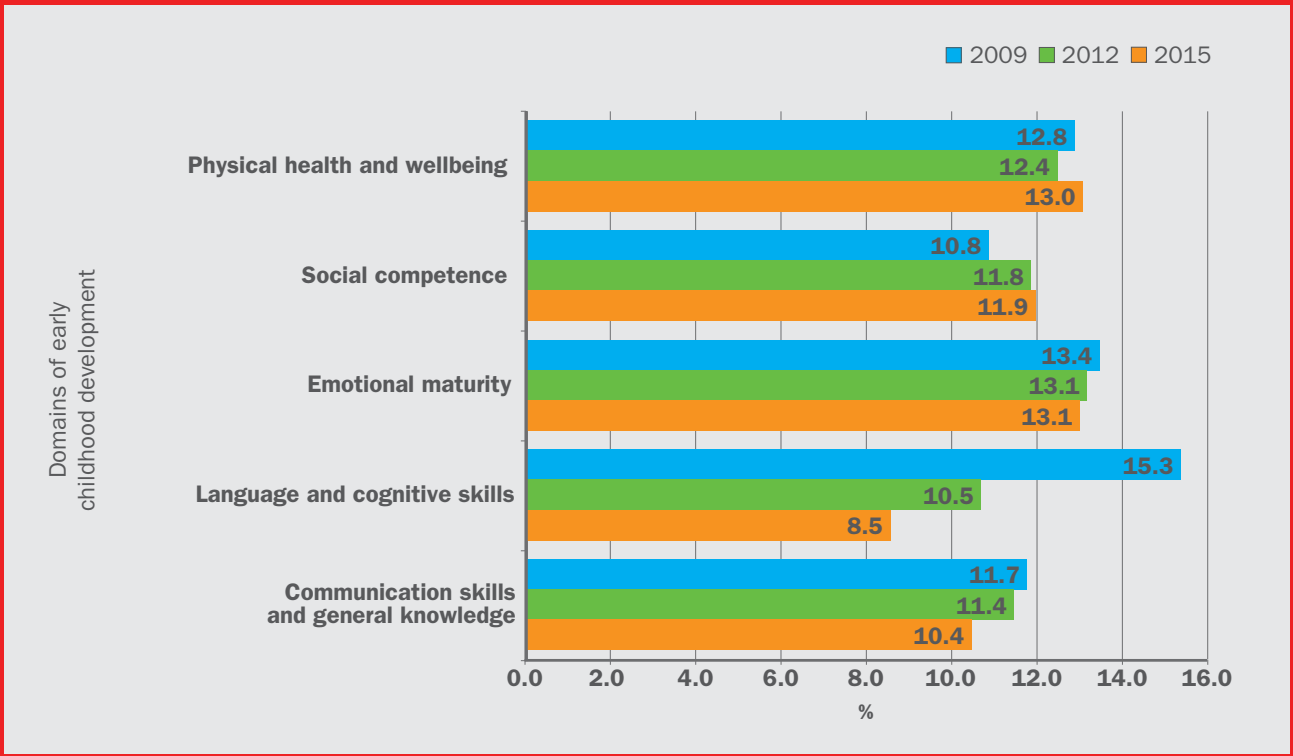
Graph 19: Percentage of Western Australian children who were developmentally vulnerable on one or more AEDC domains by gender



Graph 20: Percentage of girls who were developmentally vulnerable across all AEDC domains



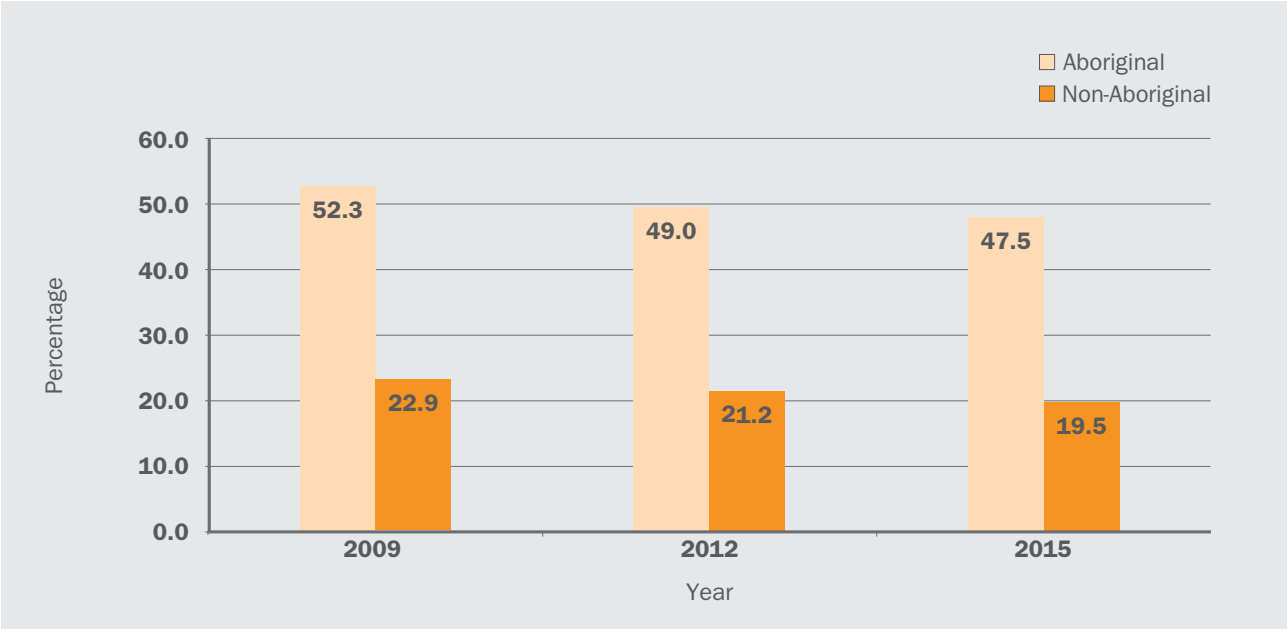
Graph 21: Percentage of boys who were developmentally vulnerable across all AEDC domains



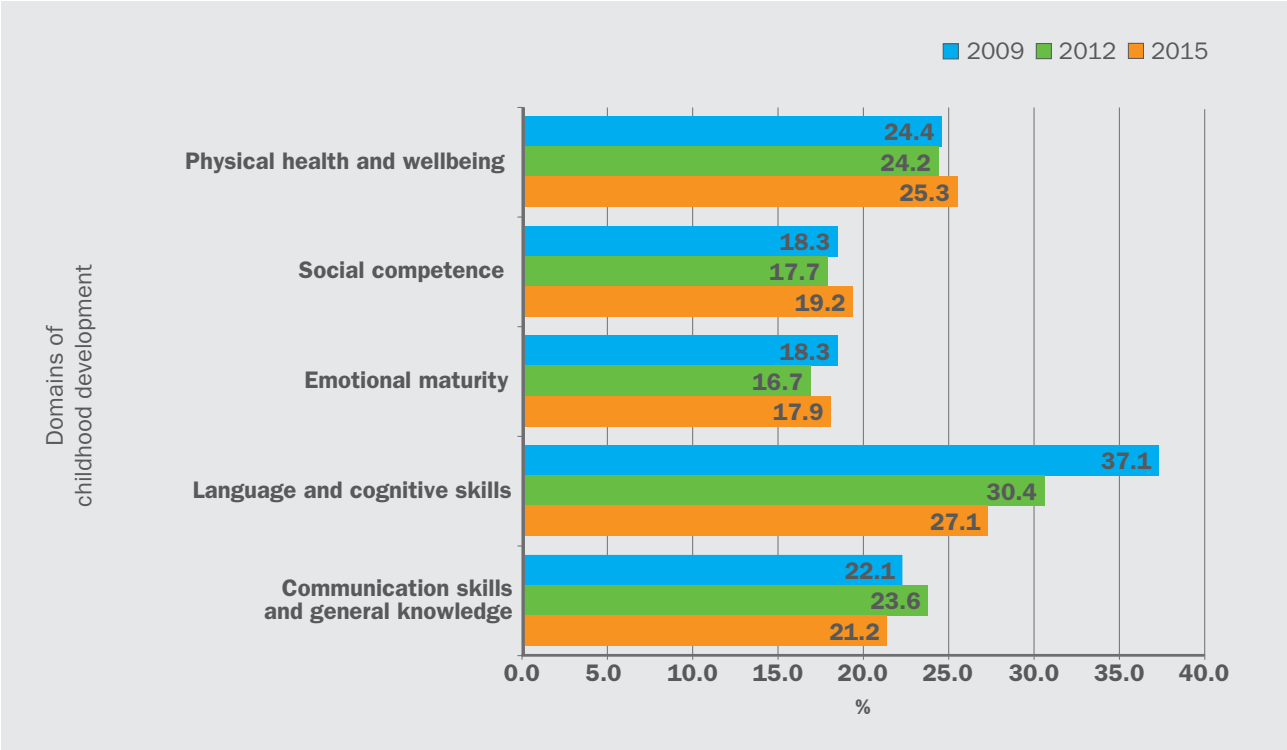
Aboriginality

- In 2015, Aboriginal children made up an estimated 6.6% (2230 children) who participated in the AEDC. Of this total, 2068 children (93%) had a valid score on one or more domains.
- There was an improvement in results for Aboriginal children. Just under half of Aboriginal children who entered school were developmentally vulnerable on one or more domains in 2015 (47.5%). This compares with 52.3% in 2009 and 49.0% in 2012 (graph 22). There was a similar pattern for the percentage of Aboriginal children vulnerable on two or more domains in 2015 – 32.2% compared with 28.8% in 2009 and 30.1% in 2012 (table 9).
- The overall gap between Aboriginal and non-Aboriginal children in the percentage of children who are developmentally vulnerable on one or more domains, has marginally improved with the gap reducing from 29.4% in 2009 to 28.0% in 2015 (graph 22).
- Although vulnerability has declined since 2009, Aboriginal children were more than twice as likely to be developmentally vulnerable on one or more domains and nearly three times as likely to be vulnerable on two or more domains, than non-Aboriginal children (graph 22 and table 9).
- The greatest improvement occurred in the language and cognitive skills domain with the proportion of developmental vulnerability reducing from 2009 to 2015 (37.1% down to 27.1% – graph 23). However, the biggest gap in development between Aboriginal and non-Aboriginal children continues to be in the language and cognitive skills area where Aboriginal children are five times as likely to be vulnerable (graph 24).
- Of the five domains, Aboriginal children were least likely to be vulnerable on the social competence and emotional maturity domains (graph 23).
- Vulnerability in Aboriginal children was higher in Western Australia than the national average (graph 25).

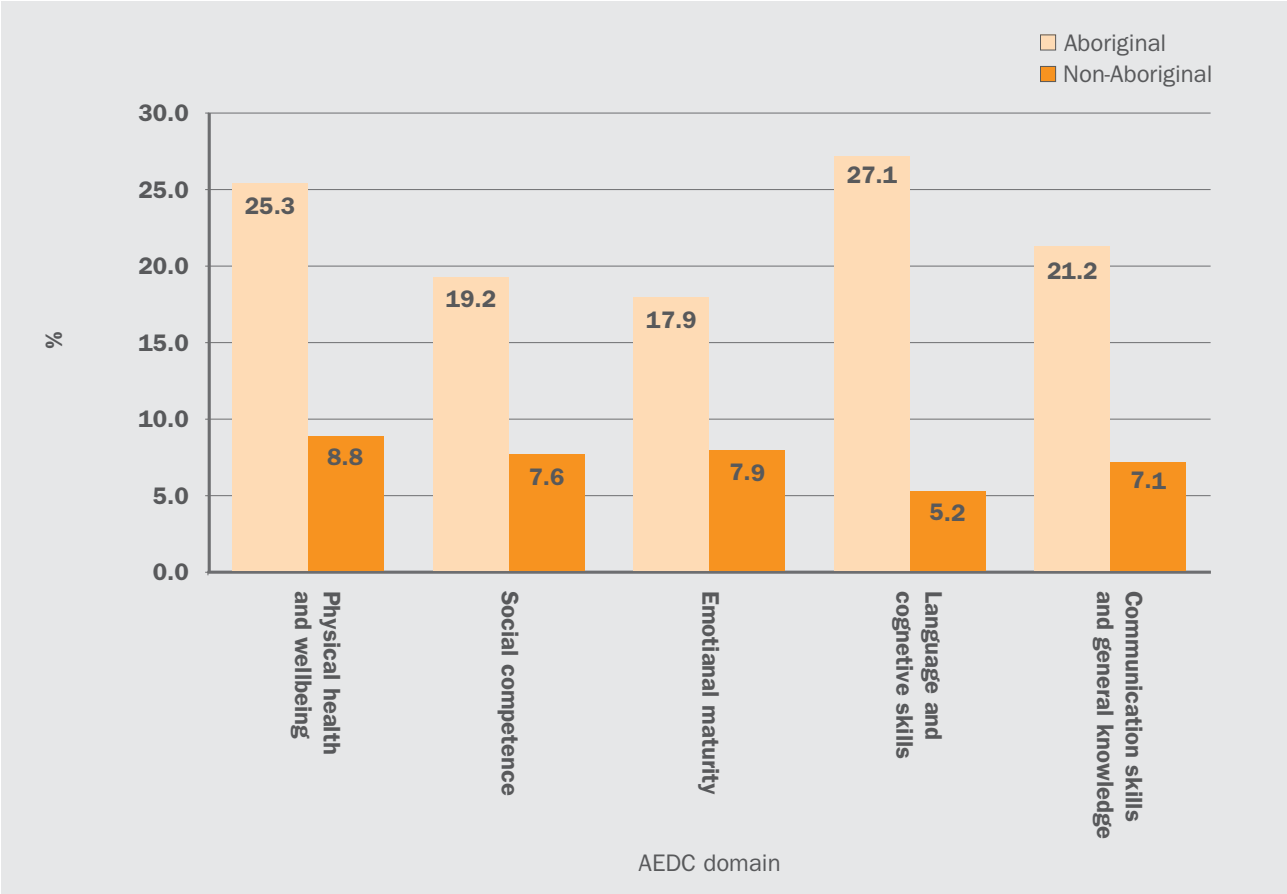
Graph 22: Percentage of Aboriginal and non-Aboriginal children who were developmentally vulnerable on one or more AEDC domains



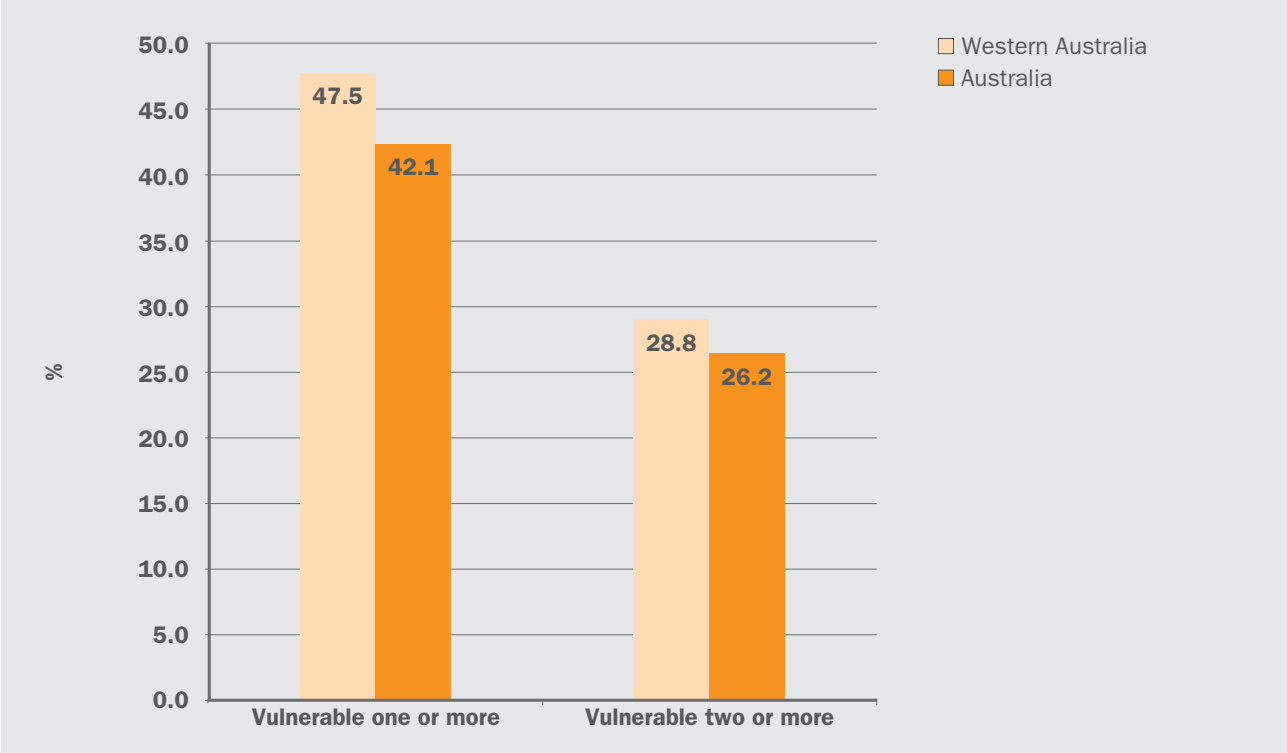
Graph 23: Percentage of Aboriginal children who were developmentally vulnerable by AEDC domain



Graph 24: Comparison of Aboriginal and non-Aboriginal children who were developmentally vulnerable by AEDC domain in 2015



Graph 25: Comparison of Aboriginal children who were developmentally vulnerable for Western Australia and Australia for 2015



The most improvement for Aboriginal children occurred in the language and cognitive skills domain – 37% down to 27%.

Language diversity

Children with a language background other than English (LBOTE)

In 2015, children with a LBOTE represented 19.4% (N=6568) of all children who participated in the AEDC. Aboriginal children who have LBOTE status were included in this group. There were 6305 children (96%) with a valid score on one or more domains.

Of this group, 87% were reported to be proficient in English, 12% were not and for 1%, children's proficiency in English was unknown.

LBOTE children who ARE proficient in English

- In 2015, 19.8% were developmentally vulnerable on one or more domains. This compared with 26.4% in 2009 and 22.7% in 2012 (graph 26).
- With the exception of children's social competence, significant improvements were made across all the domains (graph 28).
- Consistent with other population groups, the largest improvement occurred in the language and cognitive skills domain with developmental vulnerability falling to 6.0% in 2015, from 14.1% in 2009 and 8.8% in 2012 (graph 28).

LBOTE children who are NOT proficient in English

- There was a very high percentage of children developmentally vulnerable in 2009, 2012 and 2015. These children are most at risk with ≥90% experiencing difficulties on one or more domains and over 61.6% on two or more domains in 2015 (graph 26 and table 9).
- Although vulnerability was high, there was an improvement in the language and cognitive skills domain with the percentage of children vulnerable declining (58.1% in 2009, 45.6% in 2012 down to 38.9% in 2015 – graph 29). Notwithstanding, this group of children were nearly six times as likely to be vulnerable on this domain when measured against the overall Western Australian results of 6.6% (graph 3).

English only children who ARE proficient in English

This group represents the largest proportion of Western Australian children – 77% (N=25 965). Of this group 25 236 children (97%) had valid scores on one or more domains.

- In 2015, 17.1% of children were developmentally vulnerable on one or more domains. This compares with 20.1% in 2009 and 18.8% in 2012 (graph 27).
- Significant improvements were measured in three domains – emotional maturity; language and cognitive skills; and communication skills and general knowledge (graph 30).
- As with other population groups, the largest improvement occurred in the language and cognitive skills domain with developmental vulnerability falling to 4.3% in 2015, from 8.6% in 2009 and 6.1% in 2012 (graph 30).

English only children who are NOT proficient in English

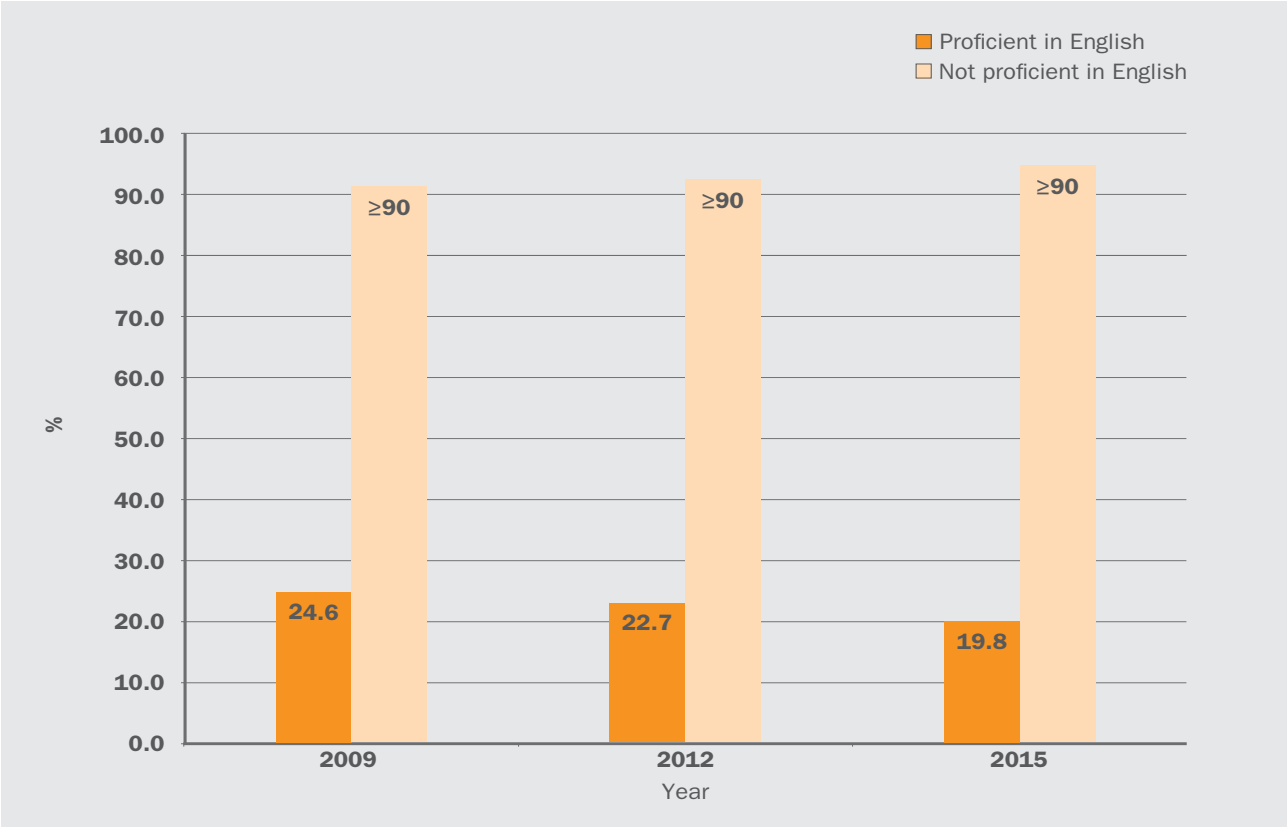
There were 1187 children (nearly 3%) in Western Australia who only speak English, but were reported as not proficient in English in 2015. There were 829 children (70%) with valid scores on one or more domains.

- Nearly all of these children were at risk with ≥90% reported to be developmentally vulnerable on one or more domains and 79.4% experiencing multiple vulnerabilities (graph 27 and table 9).
- While there was an improvement in language and cognitive skills domain, there was a significant increase in the percentage of children vulnerable across the other four domains since 2009 (graph 31).

In summary:

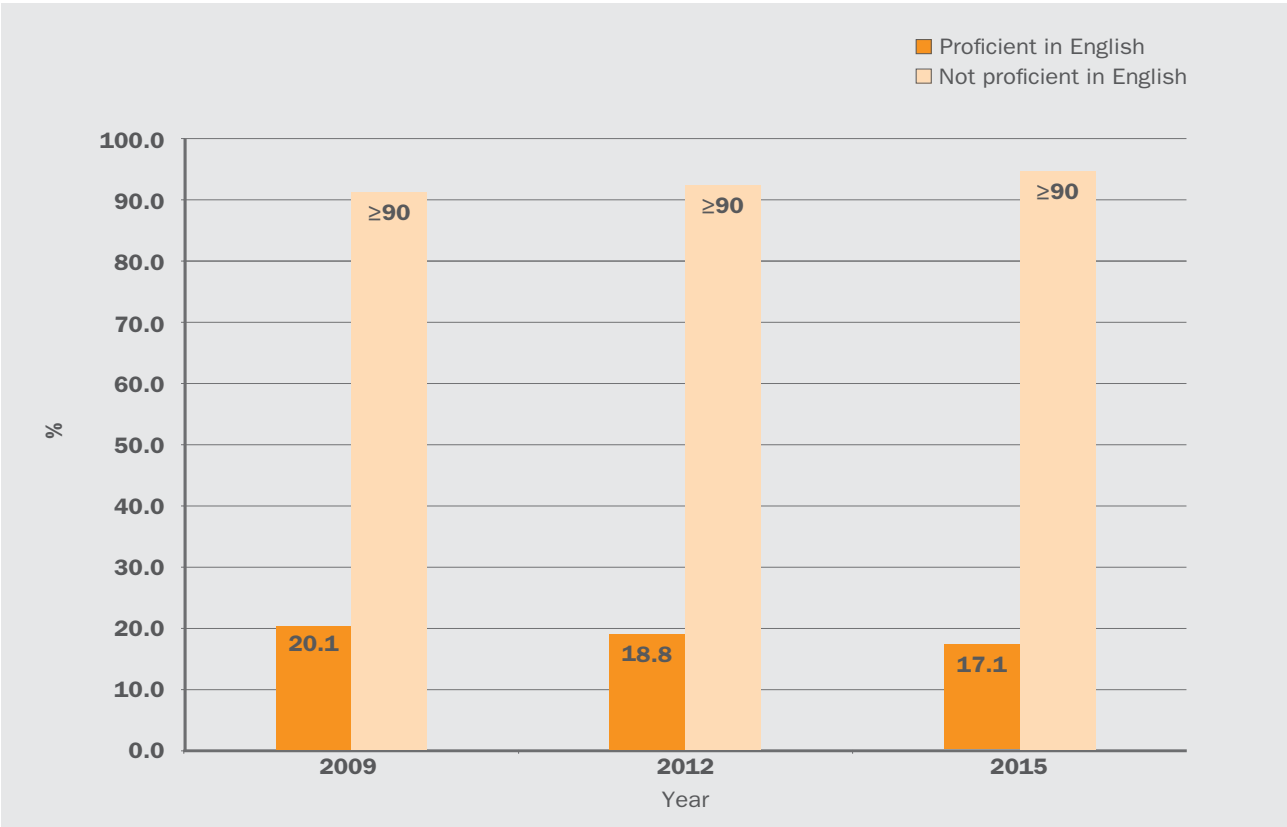
- Independent of a child's background, if a child is proficient in English then they were more likely to do well.
- Children who are not yet proficient in English (whether they have LBOTE or English only status) were nearly five times more likely to perform poorly on one or more domains than children who are proficient in English. These children were nearly seven times more likely to experience multiple vulnerabilities than children who are proficient in English (tables 8 and 9).
- Over the period 2009 to 2015, the gap between children who are proficient in English and those not yet proficient in English, in the percentage of children developmentally vulnerable on one or more domains, has widened (table 8).
- There was a larger number of children who were identified as speaking English, but not proficient in English (N=829) than LBOTE children who are not yet proficient in English (N=708, table 8).
- The children with the highest vulnerability of all were those who only speak English but are not proficient in English (table 8).

Graph 26: Percentage of children with a language background other than English, who were developmentally vulnerable on one or more AEDC domains

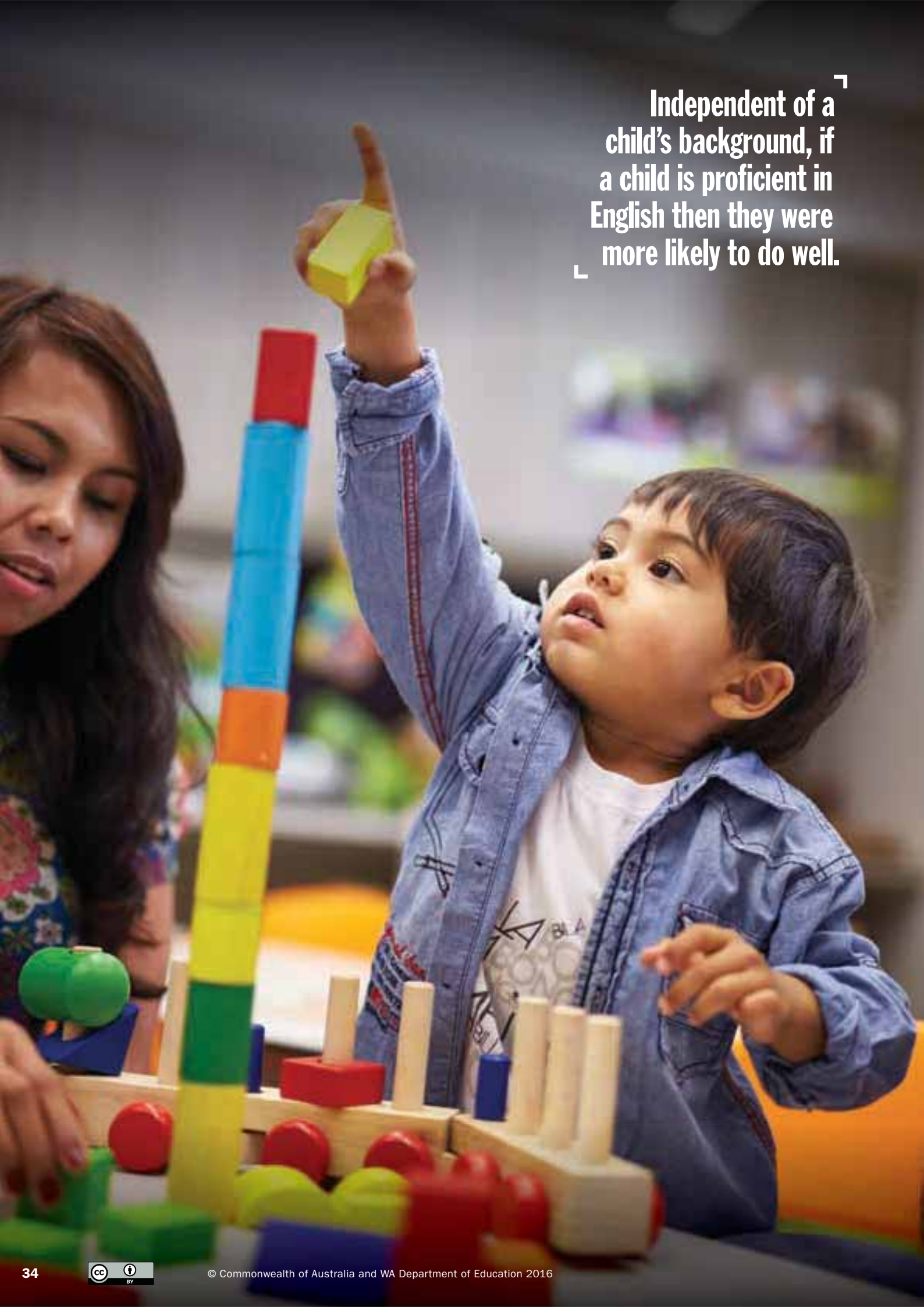


National AEDC reporting guidelines prohibit rates above 90% to be reported for privacy reasons.

Graph 27: Percentage of children who speak English only and were developmentally vulnerable on one or more AEDC domains

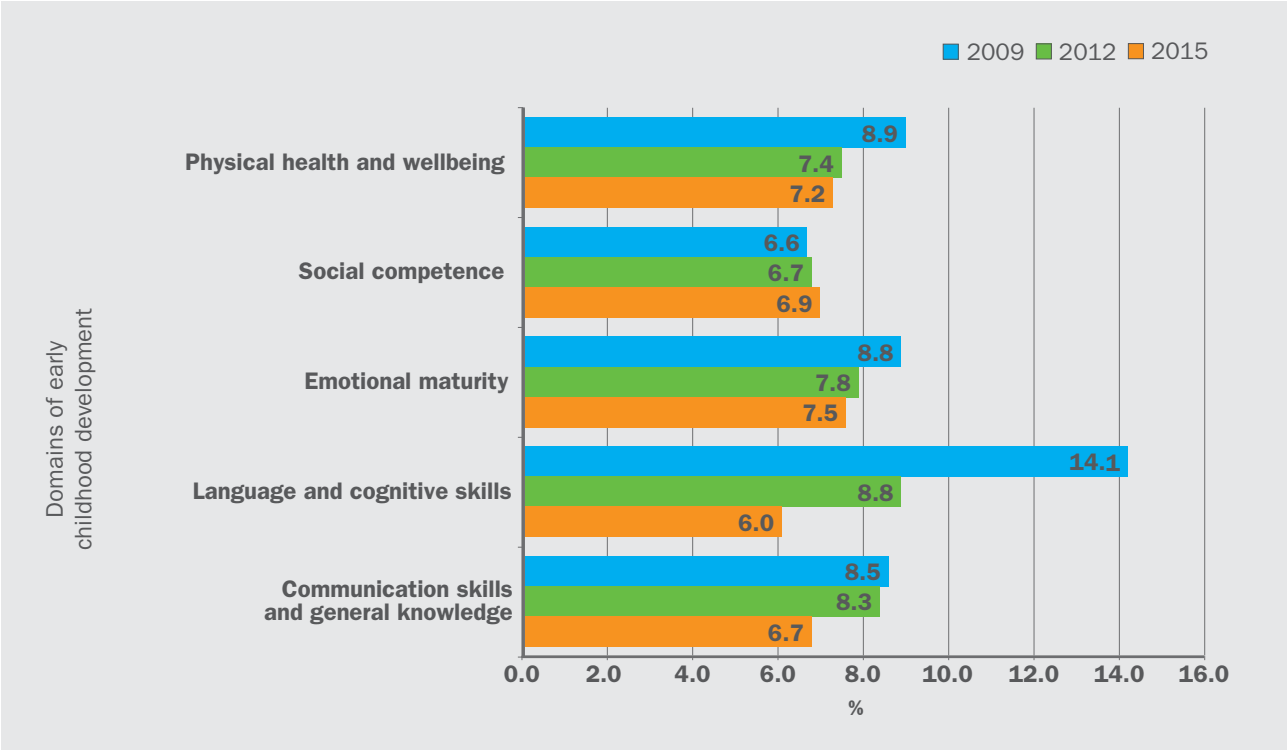


National AEDC reporting guidelines prohibit rates above 90% to be reported for privacy reasons.



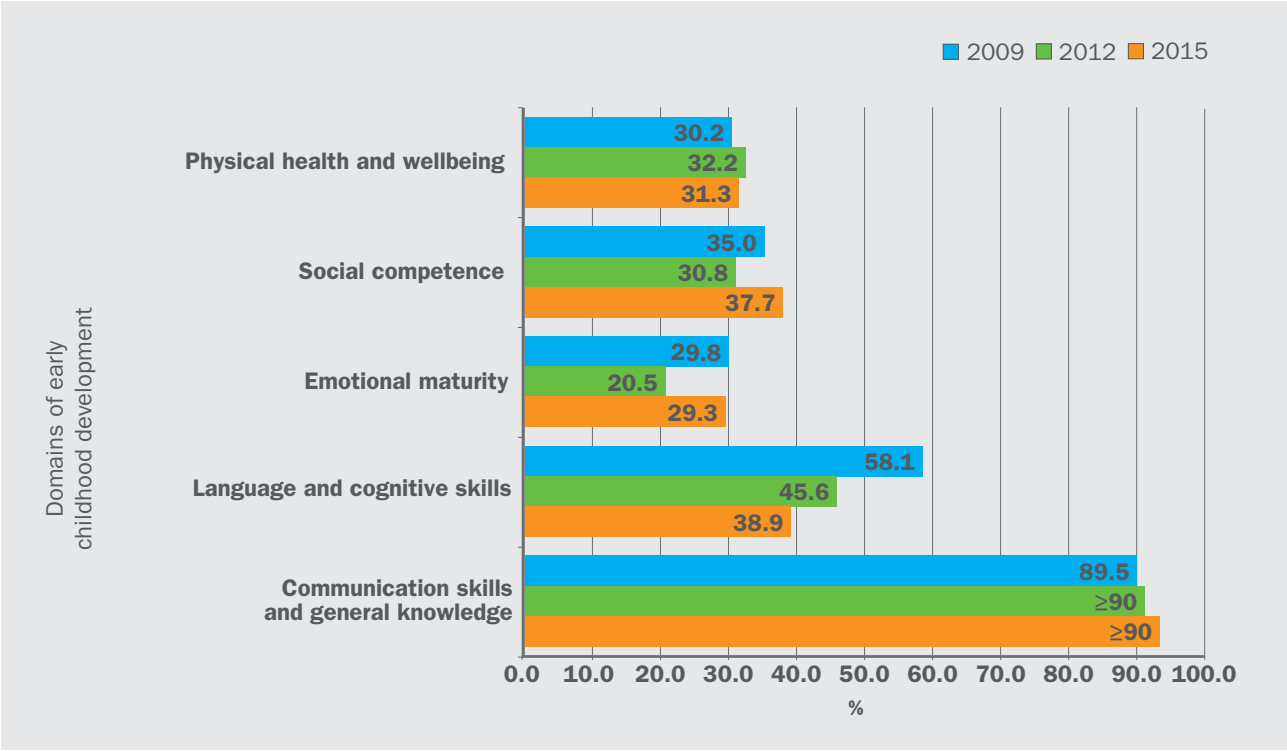
Independent of a child's background, if a child is proficient in English then they were more likely to do well.

Graph 28: Percentage of children with a language background other than English, who are proficient in English and were developmentally vulnerable by AEDC domain



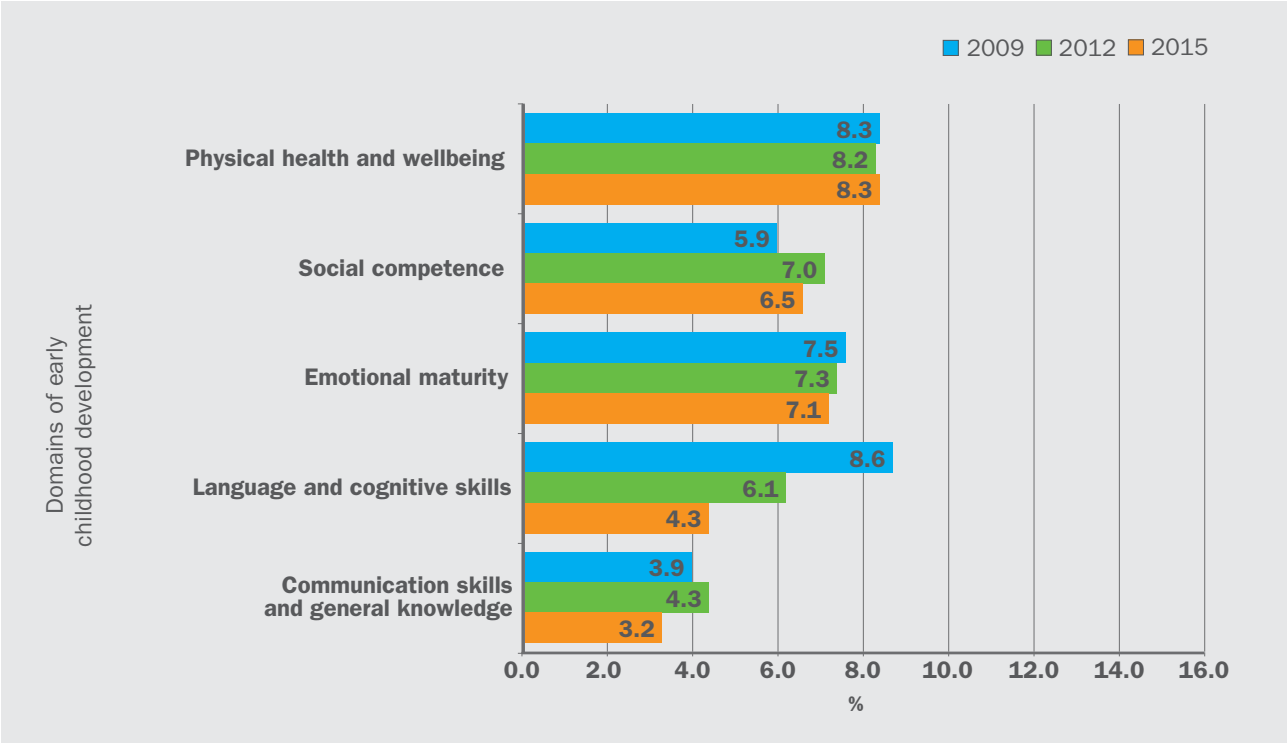
National AEDC reporting guidelines prohibit rates above 90% to be reported for privacy reasons.

Graph 29: Percentage of children with a language background other than English, who were not proficient in English and were developmentally vulnerable by AEDC domain



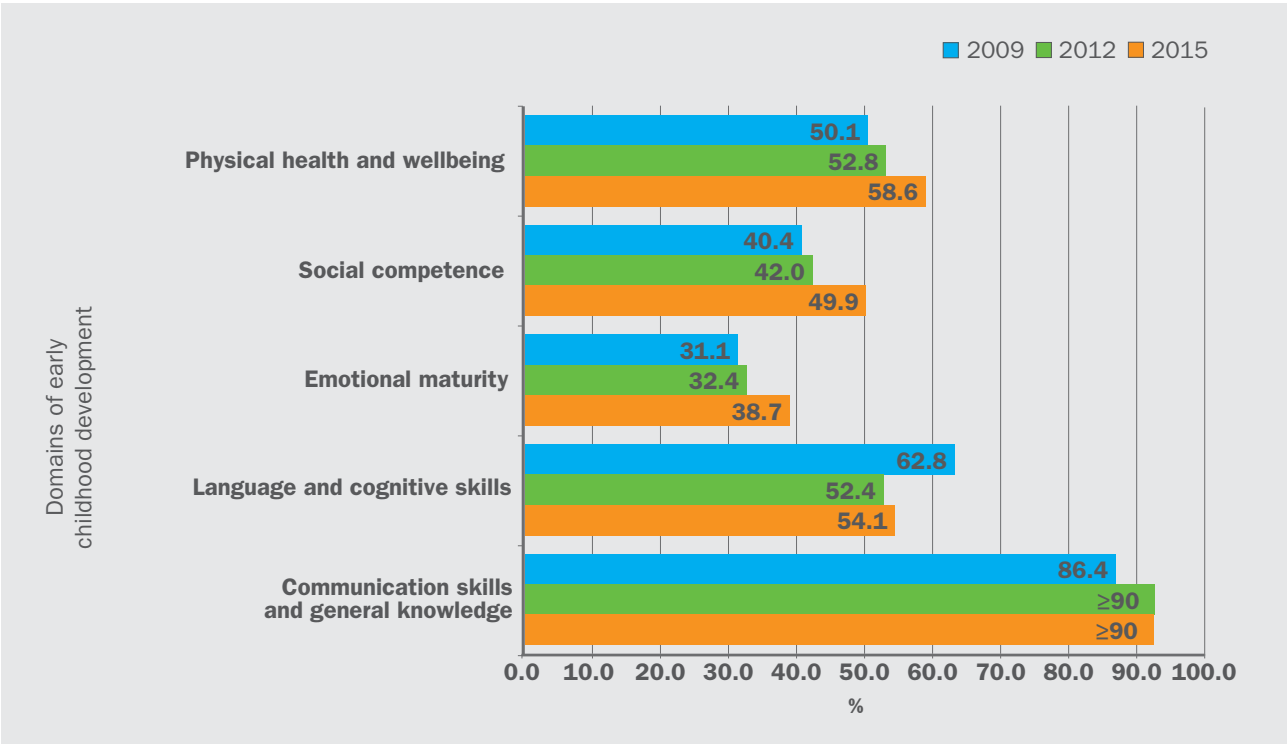
National AEDC reporting guidelines prohibit rates above 90% to be reported for privacy reasons.

Graph 30: Percentage of children who speak English only, who are proficient in English and were developmentally vulnerable by AEDC domain



National AEDC reporting guidelines prohibit rates above 90% to be reported for privacy reasons.

Graph 31: Percentage of children who speak English only, who were not proficient in English and were developmentally vulnerable by AEDC domain



National AEDC reporting guidelines prohibit rates above 90% to be reported for privacy reasons.

Further data on the percentages of children developmentally vulnerable on one or more domains and two or more domains by population group are in tables 7 and 8 – page 38/39.

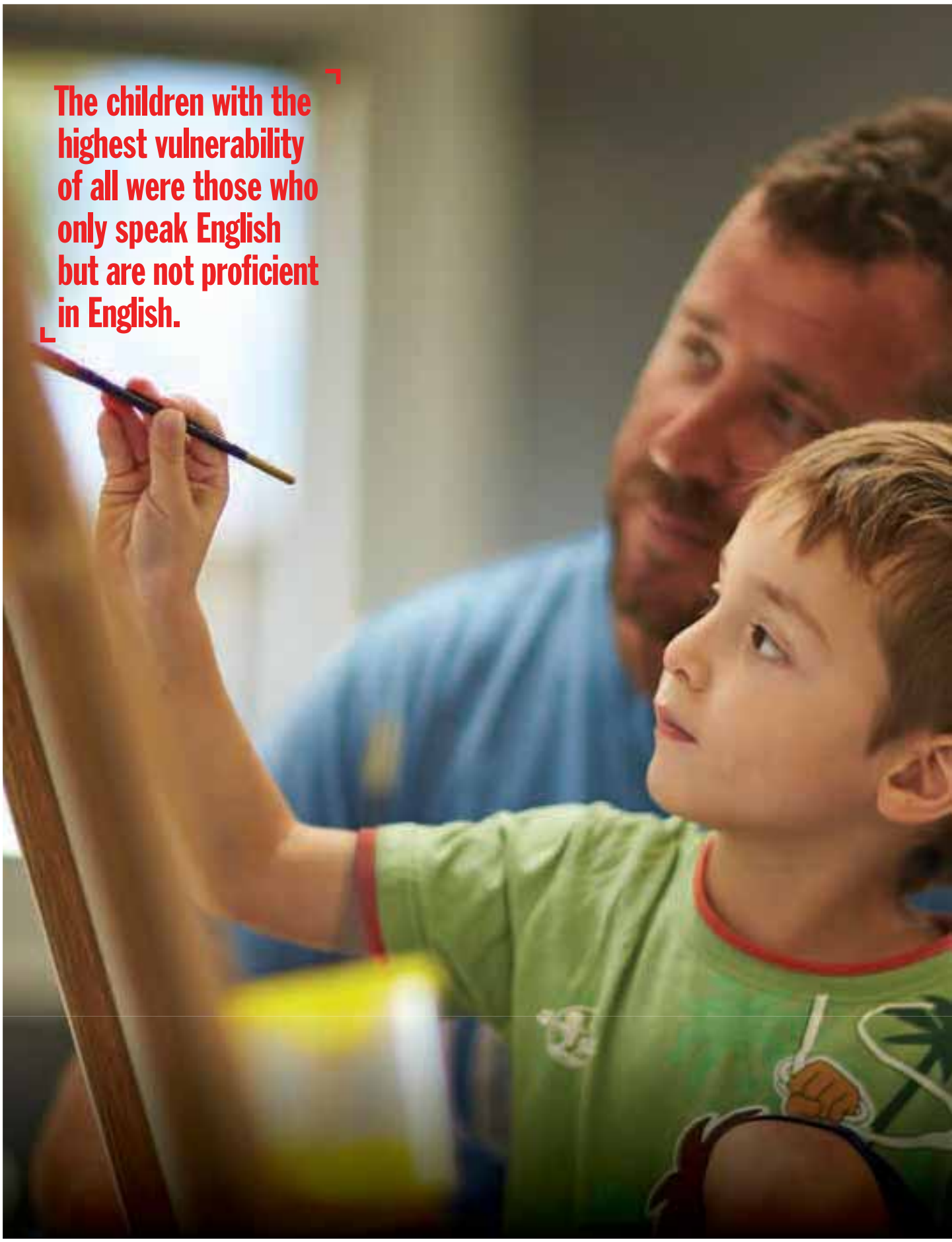


Table 8: Percentage of Western Australian children who were developmentally vulnerable on one or more AEDC domains, by demographic profile

	2009		2012		2015		Statistically significant change between 2009 and 2015*
	No. of children**	Developmentally vulnerable on one or more domain/s (%)	No. of children**	Developmentally vulnerable on one or more domain/s (%)	No. of children**	Developmentally vulnerable on one or more domain/s (%)	
Australia	246 421	23.6	272 282	22.0	286 025	22.0	Improved
Western Australia	26 052	24.7	30 631	23.0	32 373	21.3	Improved
Socio-economic status							
Quintile 1 (most disadvantaged)	3 076	35.9	3 883	37.6	3 880	34.9	No change
Quintile 2	4 585	30.7	5 289	28.2	5 469	25.0	Improved
Quintile 3	4 932	24.1	5 862	23.7	6 132	22.0	Improved
Quintile 4	5 882	21.2	7 185	19.8	7 818	18.2	Improved
Quintile 5 (least disadvantaged)	6 882	18.2	8 386	15.2	8 915	15.3	Improved
Geographic Location							
Major cities of Australia	19 157	23.6	22 780	22.1	24 279	20.1	Improved
Inner regional Australia	2 494	24.7	2 938	23.2	3 233	23.0	Improved
Outer regional Australia	2 304	28.9	2 581	25.5	2 549	23.4	Improved
Remote Australia	1 315	27.6	1 540	23.3	1 499	25.2	Improved
Very remote Australia	782	36.4	792	38.8	813	38.0	No change
Gender							
Male	13 275	31.8	15 487	29.5	16 411	27.9	Improved
Female	12 777	17.4	15 144	16.3	15 962	14.6	Improved
Aboriginality							
Aboriginal	1 594	52.3	2 033	49.0	2 068	47.5	Improved
Non-Aboriginal	24 458	22.9	28 598	21.2	30 305	19.5	Improved
Language diversity							
LBOTE †	3 825	36.9	4 776	32.6	6 305	28.2	Improved
Proficient in English	3 220	26.4	4 104	22.7	5 591	19.8	Improved
Not proficient in English	600	≥90%	670	≥90%	713	≥90%	No change
English only †	22 227	22.6	25 855	21.2	26 068	19.6	Improved
Proficient in English	21 423	20.1	25 001	18.8	25 236	17.1	Improved
Not proficient in English	788	≥90%	835	≥90%	829	≥90%	Declined

Improved: Statistically significant decrease in vulnerability.
Declined: Statistically significant increase in vulnerability.
No change: Neither increase nor decrease in vulnerability.
*The final column indicates the change in developmental vulnerability of children from 2009 to 2015 and the significance of the change.
**Total number of completed research instruments with valid domain scores.
†The subsets of these categories do not equal the total because teachers selected the 'Don't know' response.
See additional notes on page 40.

Table 9: Percentage of Western Australian children who were developmentally vulnerable on two or more AEDC domains by demographic profile

	2009		2012		2015		Statistically significant change between 2009 and 2015*
	No. of children**	Developmentally vulnerable on one or more domain/s (%)	No. of children**	Developmentally vulnerable on one or more domain/s (%)	No. of children**	Developmentally vulnerable on one or more domain/s (%)	
Australia	246 873	11.8	273 275	10.8	286 600	11.1	Improved
Western Australia	26 091	12.2	30 770	11.2	32 471	10.5	Improved
Socio-economic status							
Quintile 1 (most disadvantaged)	3 702	20.1	3 886	22.1	3 884	20.2	No change
Quintile 2	4 595	16.0	5 308	13.7	5 478	13.0	Improved
Quintile 3	4 944	11.9	5 889	11.4	6 153	10.6	Improved
Quintile 4	5 893	9.8	7 219	9.3	7 853	8.1	Improved
Quintile 5 (least disadvantaged)	6 892	7.7	8 441	6.1	8 951	6.6	Improved
Geographic Location							
Major cities of Australia	19 197	11.5	22 895	10.5	24 347	9.6	Improved
Inner regional Australia	2 493	11.7	2 953	11.0	3 258	11.3	No change
Outer regional Australia	2 306	14.3	2 581	13.3	2 558	11.7	Improved
Remote Australia	1 316	13.3	1 546	10.5	1 500	14.5	No change
Very remote Australia	779	23.4	795	25.4	815	23.6	No change
Gender							
Male	13 294	16.7	15 554	15.4	16 464	14.8	Improved
Female	12 797	7.5	15 216	7.0	16 014	6.1	Improved
Aboriginality							
Aboriginal	1 591	32.2	2 035	30.1	2 069	28.8	Improved
Non-Aboriginal	24 500	10.9	28 735	9.9	30 409	9.2	Improved
Language diversity							
LBOTE †	3 824	20.3	4 783	16.3	6 324	14.6	Improved
Proficient in English	3 222	11.5	4 116	9.2	5 610	8.6	Improved
Not proficient in English	596	67.4	665	60.8	713	61.6	Improved
English only †	22 267	10.8	25 987	10.3	26 154	9.5	Improved
Proficient in English	21 463	8.4	25 126	8.2	25 324	7.2	Improved
Not proficient in English	787	75.3	832	73.2	829	79.4	Declined

Improved: Statistically significant decrease in vulnerability.
Declined: Statistically significant increase in vulnerability.
No change: Neither increase nor decrease in vulnerability.
*The final column indicates the change in developmental vulnerability of children from 2009 to 2015 and the significance of the change.
**Total number of completed research instruments with valid domain scores.
†The subsets of these categories do not equal the total because teachers selected the 'Don't know' response.
See additional notes on page 40.

FURTHER INFORMATION

To find out more about the AEDC, visit aedc.gov.au.

Further reading

Australian Early Development Census – National Report 2015

Exploring change in the Australian version of the Early Development Instrument: The estimation of a critical difference for the 'vulnerable', 'at risk', and 'on track' categories

Australian Early Development Census: A Snapshot of Early Childhood Development in Western Australia by Education Region, 2012

Australian Early Development Census – 2012 Summary Report: Children with Additional Health and Development Needs in Western Australia

The Australian Early Development Index – Indigenous Adaptation Study 2009

Online community maps, community and school profiles (available to schools).

Additional notes

1. Information about children with special needs is not included in the AEDC domains results tables because of the already identified substantial needs of this group. However, teachers completed background information on children with special needs to enable communities to be responsive to all children.
2. Figures in tables may not add up to 100% due to rounding.
3. Numbers may not correspond precisely with percentages due to rounding.
4. The difference between the proportion of vulnerable children in 2009 and 2015 was statistically significant if it exceeded the critical difference.
5. Children are considered 'LBOTE' (Language Background other than English) if they speak a language other than English at home and/or have English as a Second Language (ESL) status.
6. Children from LBOTE may be proficient in their home languages.
7. It is possible for children to be Aboriginal and have LBOTE status.
8. The term 'Aboriginal' respectfully refers to Aboriginal peoples and Torres Strait Islanders.
9. 'Proficient in English' refers to what is expected of the average monolingual English speaker in a similar phase of development.
10. The geographic location for the AEDC is based on Australian Statistical Geographical Standard (ASGS) Remoteness Areas, developed by the Australian Bureau of Statistics (ABS) to classify remoteness.
11. The AEDC classifies socio-economic status according to the Socio-Economic Indexes for Areas (SEIFA), developed by the Australian Bureau of Statistics (ABS). The Index for Relative Socio-Economic Disadvantage (IRSED) is used in the AEDC results. The IRSED looks at census information that reflect disadvantage such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations. Every geographical area in Australia is given a SEIFA score that ranks the disadvantage of an area compared with other areas in Australia.
12. Quintiles are used for the AEDC comparisons to SEIFA. The lowest quintile (Quintile 1) represents the most socio-economically disadvantaged area; the highest quintile (Quintile 5) represents the least socio-economically disadvantaged areas.
13. Bubble plots:
    - the horizontal axis shows the SEIFA score for each community (local government area), representing the level of socio-economic disadvantage
    - the community SEIFA score is a broad measure combining these different areas and as such may not accurately reflect the level of disadvantage experienced in all sections of the community
    - the vertical axis shows the percentage of children who are developmentally vulnerable on one or more domains of the AEDC in each community
    - the size of the bubble show the number of children developmentally vulnerable on one or more domains of the AEDC in each community.
14. Further information regarding results for communities (local government areas) and local communities (suburbs/towns) is available from aedc.gov.au
15. Scores are flagged as invalid for children who may have been in the class for less than one month; are less than four years old; or where teachers complete less than 75% of the items in any given domain.

Data sources

Australian Early Development Census: Core AEDC Microdata Pivot WA 2009-2015

The Social Research Centre: custom data.

APPENDIX A

The tables below provide further AEDC data for Western Australian children.

Table 5: Percentage of Western Australian children who were developmentally on track, at risk or vulnerable, by AEDC domain

Domain	% On track			% Developmentally at risk			% Developmentally vulnerable		
	2009	2012	2015	2009	2012	2015	2009	2012	2015
Physical health and wellbeing	77.7	78.0	78.8	12.2	12.2	11.3	10.1	9.8	9.9
Social competence	76.2	76.9	77.1	16.1	14.7	14.5	7.7	8.4	8.4
Emotional maturity	74.0	75.5	75.3	17.2	16.2	16.2	8.8	8.3	8.5
Language and cognitive skills	67.3	75.8	82.7	20.7	15.6	10.6	12.0	8.6	6.6
Communication skills and general knowledge	76.9	76.7	79.4	14.3	14.3	12.6	8.9	9.1	8.0

Table 6: Change in the percentage of children who were developmentally vulnerable by State and Territory

	2009		2012		2015		Statistically significant change between 2009 and 2015*
	No. of children**	Developmentally vulnerable on one or more domain/s (%)	No. of children**	Developmentally vulnerable on one or more domain/s (%)	No. of children**	Developmentally vulnerable on one or more domain/s (%)	
Australia	246 421	23.6	272 282	22.0	286 025	22.0	No change
Western Australia	26 052	24.7	30 631	23.0	32 373	21.3	Improved
New South Wales	82 710	21.3	88 921	19.9	90 956	20.2	Improved
Victoria	57 277	20.3	63 584	19.5	67 670	19.9	Improved
Queensland	52 603	29.6	57 994	26.2	62 027	26.1	Improved
South Australia	15 009	22.8	17 355	23.7	18 451	23.5	Declined
Tasmania	5 699	21.8	6 086	21.5	6 159	21.0	No change
Northern Territory	2 865	38.7	3 117	35.5	3 248	37.2	Improved
Australian Capital Territory	4 180	22.2	4 594	22.0	5 157	22.5	No change

Improved: Significant decrease in vulnerability.
Declined: Significant increase in vulnerability.
No change: Neither increase nor decrease in vulnerability.
*The final column indicates the change in developmental vulnerability of children from 2009 to 2015 and the significance of the change.
**Total number of completed research instruments with valid domain scores.

Table 7: Percentage of children who were developmentally vulnerable by AEDC domain for each State and Territory in 2015

	AUST	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Physical health and wellbeing	9.7	10.9	8.5	15.9	12.4	10.8	10.0	7.9	9.9
Social competence	9.9	9.4	9.2	18.5	12.4	10.8	8.6	8.7	8.4
Emotional maturity	8.4	8.2	6.8	15.5	10.1	9.7	8.9	8.0	8.5
Language and cognitive skills	6.5	5.9	4.8	21.5	8.1	6.8	7.5	6.3	6.6
Communication skills and general knowledge	8.5	7.7	8.0	16.2	10.5	8.2	6.4	7.6	8.0
Developmentally vulnerable on one or more domains	22.0	22.5	20.2	37.2	26.1	23.5	21.0	19.9	21.3
Developmentally vulnerable on two or more domains	11.1	10.3	9.6	23.1	14.0	12.2	10.7	9.9	10.5

Positive early experiences are essential in ensuring children get the best start in life so they start school ready and eager to learn, and build the skills necessary for healthy development, wellbeing and lifelong learning.

LIST OF GRAPHS AND TABLES

Graphs

Tables

TO FIND OUT MORE ABOUT THE AEDC VISIT AEDC.GOV.AU

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