Thriving in Adversity

Identification of off-diagonal South Australian communities using AEDC and NAPLAN data

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FRASER MUSTARD CENTRE

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1. Executive Summary

Socioeconomic inequalities in children's developmental and educational outcomes have been observed in Australia over many years. In communities with higher levels of socioeconomic disadvantage, children tend to have a higher level of developmental vulnerability and face more challenges at school. However, there are always exceptions to the rule and these exceptions can provide vital information and lessons that can be applied to other communities.

In some areas of Australia with high levels of socioeconomic disadvantage, there are individuals, schools and communities that are performing much better than would be expected. This report identifies communities in South Australia whose children are doing better than expected on developmental and educational outcomes given their level of socioeconomic disadvantage, and explores these communities to see what lessons can be learned that may be transferable to other communities.

Data from the Australian Early Development Census (AEDC) was used to identify the level of developmental vulnerability for each community in South Australia in 2009 and 2012. This information was supplemented by information on Year 3 NAPLAN results in 2009 and 2012 for each community in South Australia, using data from the Department for Education and Child Development on children attending government schools. These results were plotted against the level of socioeconomic status (SES) for each community based on Socioeconomic Index for Areas (SEIFA) scores provided by the Australian Bureau of Statistics.

Of particular interest to this research project were the communities that were performing much better or worse on the AEDC and NAPLAN than would be expected given their SES. These communities are sometimes referred to as 'off-diagonal' communities (see *Introduction section* for details). In this report, we focused on the 'off-diagonal' communities who were doing better than expected given their level of SES and had high levels of socioeconomic disadvantage. They are referred to as communities who were *thriving in adversity*.

Our analyses identified that the South Australian communities most consistently exceeding expectations on both the AEDC and NAPLAN, in 2009 and 2012, were:

- Wattle Range
- Yorke Peninsula
- Mount Gambier, and
- Port Adelaide Enfield.

As a comparison, we also identified four communities that were facing adversity and performing 'as expected' considering their socioeconomic profile. These communities were:

- Renmark Paringa
- Port Augusta
- Salisbury, and
- Playford.

Each of these eight communities were considered in terms of their location within the state, land and population size, and age distribution of the population. Child-level factors, including demographics and early childhood experiences prior to school were also explored. These factors were explored as they may have contributed to the difference between 'thriving in adversity' and 'as expected' communities. In general, we found that there was a lower proportion of children who spoke a language other than English at home in 'thriving' communities, and children were generally transitioning more effectively into the primary school environment. However, there was no notable difference in the proportion of Indigenous children or any substantial difference in preschool attendance in 'thriving in adversity' compared to 'as expected' communities.

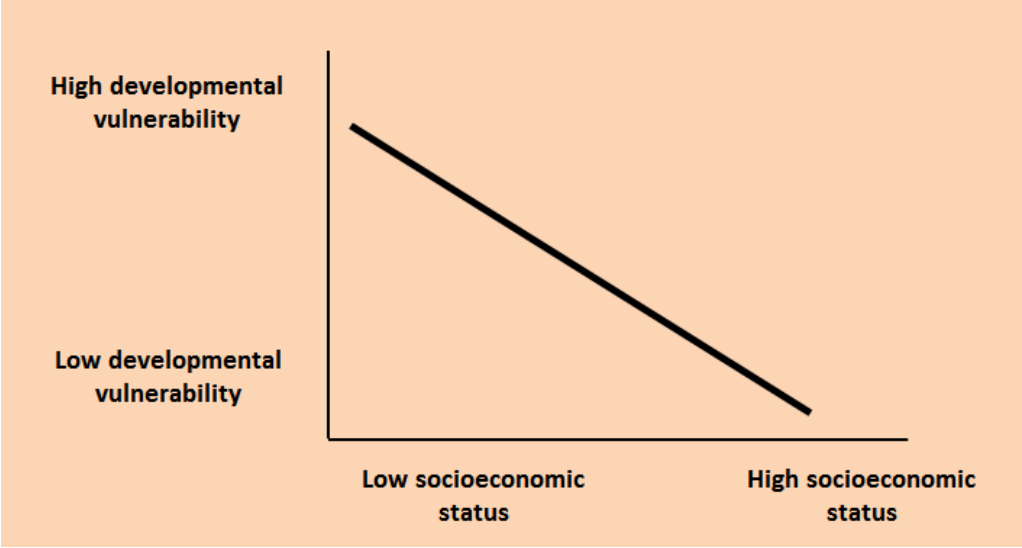
In addition to the quantitative analyses, we carried out desktop analysis and undertook community consultation. We explored the programs and services that were available for young children and their families in each of the eight communities and aimed to identify factors that may have promoted resilience and improved child development and educational outcomes. One noticeable difference was that 'thriving in adversity' communities tended to provide early literacy programs to young children (0 to 2 years) by a trained facilitator through their local libraries. Another key difference was that the 'thriving in adversity' communities had more playgroups per 100 children and a much higher proportion of children were attending playgroups in these communities. Thriving communities had a tendency to work collaboratively across different agencies and sectors, with co-location of key early childhood education services (playgroup, preschool school and childcare), pooling input from a range of services. Community involvement emerged as an important feature of 'thriving in adversity' communities. However, differences in health services and playgrounds between 'thriving in adversity' and 'as expected' communities were not notable.

2. Introduction

While there is a general association between socioeconomic status and children's developmental and educational outcomes, there are always exceptions with some communities performing better or worse than expected given their level of socioeconomic status. Communities with high levels of socioeconomic disadvantage who are performing better than expected can be referred to as 'resilient'. Throughout this report, these resilient communities are described as 'thriving in adversity' indicating that the communities are facing some challenges from a socioeconomic perspective but are thriving in the face of this adversity.

There are a range of different ways to identify these thriving communities. One method of identifying communities that are thriving in adversity is to plot socioeconomic status (SES) against performance on a key measure of children's outcomes such as the AEDC for all communities within South Australia. Communities with higher SES are more likely to have lower levels of developmental vulnerability on the AEDC. Communities with lower SES are more likely to have higher levels of developmental vulnerability. This relationship between SES and children's outcomes can be represented by a diagonal line (as shown in Figure 1).

Figure 1. Relationship between socioeconomic status and AEDC results



Of particular interest to this research project were the communities that lie off this diagonal line. To lie off the diagonal, communities either had much better or worse outcomes than would be expected given their level of SES. Communities that are performing better or worse than expected given their level of socioeconomic status are sometimes referred to as 'off-diagonal' communities.

In this report, we focused on communities that were 'thriving in adversity'. That is, we specifically focused on the 'off-diagonal' communities who were doing better than expected given their level of SES (i.e. thriving) and had high levels of socioeconomic disadvantage (i.e. living in adversity). These communities are located in the lower left hand quadrant of Figure 1.

This report is split into four sections. First, we present a literature review of the impact of socioeconomic disadvantage on child development and educational outcomes. Second, we present the results of a set of comprehensive analyses using the AEDC and NAPLAN data for South Australia to identify communities who were 'thriving in adversity'. Third, we explore the background characteristics of the different communities (size, population, location, etc.) and the demographic characteristics of the children living in these communities. Finally, we present the results of desktop analyses and community consultations to explore the programs and services available in each of the communities for children aged 0 to 5 years and their families/caregivers.

3. Reasons for undertaking this research

This Fraser Mustard Centre project was commissioned by the Office for Strategy and Performance in the Department for Education and Child Development, South Australia. Data from the Australian Early Development Census (AEDC) and the National Assessment Program – Literacy and Numeracy (NAPLAN) reveal that although socioeconomic status is a strong predictor of developmental and educational outcomes, it is not destiny. Despite adversity, there are some low income individuals, schools and communities that are performing better than would be predicted by the statistical models. This project aimed to identify these communities and determine if there are any lessons to be learned that may be transferable to other communities.

4. Literature Review

Interest in the impact of socioeconomic status (SES) on child development stems from the fact that families of high SES can afford a variety of goods and services and have social connections that benefit their children (Brooks-Gunn & Duncan, 1997). Whereas children from lower SES families do not have access to the same resources and are therefore more at risk of developmental vulnerability. Consequently, inequalities in SES that are evident and ever increasing across Australia, are leading to increasing inequalities in child development and education outcomes. The future human capability of Australia, and thus it's prosperity and productivity are undermined through poor child development. As such, it is critical to understand mechanisms and interventions that can support child development, especially for those residing in poor socioeconomic communities.

Although substantial evidence from overseas highlights the impact of a child's neighbourhood or community on developmental outcomes (e.g. Hanson et al., 2011; Lapointe, Ford, & Zumbo, 2007; Leventhal & Brooks-Gunn, 2000; Mayer & Jencks, 1989), Australian research in the area is more limited (Edwards, 2005). With the inequality gap in Australia widening, and an increase in the concentration of joblessness and lower income families in Australian neighbourhoods, research has become increasingly important. Results from Edwards (2005) were consistent with international studies that have indicated that neighbourhood disadvantage is associated with poorer outcomes for children (e.g. Leventhal & Brooks-Gunn, 2000). Children living in disadvantaged areas had lower social/emotional and learning outcomes than children living in more affluent neighbourhoods. This was the case even when controlling for other child and family-level variables that may impact development, including family income, parent employment and maternal education.

The community in which children are raised can have substantial impact across multiple developmental domains including cognitive, physical health and well-being and social and emotional competence. Inequalities can be seen at both the individual and neighbourhood/community level. The consequences of disadvantage not only persist, but accumulate throughout the lifespan (Bradley & Corwyn, 2002). In the following section, inequalities in key areas of cognitive, health and socio-emotional outcomes based on socioeconomic position are reviewed.

4.1. Cognitive and Educational Inequalities

Feinstein (2003) found that children's cognitive development was already related to SES by age 22 months, with children from higher SES families generally exhibiting superior abilities. Highlighting the long-term impact of such inequalities, children in the lowest quartile of ability scores at 22 months were significantly less likely to have educational qualifications by age 26 than those in the top quartile. Feinstein's analyses suggested that a child's score was amenable to change, but improvement was more likely for children of medium or high SES. Sixty percent of low SES children in the lowest quartile of ability scores at 22 months were still there at age 10. In contrast, children of high SES were more likely to be in the top quartile at age 10 than still be in the bottom. Similarly, Brinkman, Sincovich, and Gregory (2013) found that children who performed poorly on the AEDC were more likely to improve their development trajectory if they were of higher SES. Using NAPLAN scores as a predictor of access to higher education, Huong and Justman (2014) found that a student

in the lowest SES quartile in year nine, with NAPLAN scores in the bottom quintile, had less than a 1% chance of achieving and Australian Tertiary Admission Rank (ATAR) above 70. In contrast, a student in the highest SES quartile, with similarly low NAPLAN scores in year 9, had a 13.5% chance of achieving an ATAR above 70 at the completion of year 12. Again it was demonstrated that higher SES increased the likelihood of improvement, even at a later age.

Washbrook and Waldfogel (2010) revealed a difference in performance on a 'naming vocabulary' test between five-year-olds from the highest and middle income quintiles that was equivalent to approximately 11 months in developmental age. Another study found a strong correlation between SES and vocabulary, literacy, phonological awareness and syntax, and that children from lower socioeconomic areas performed more poorly on tasks assessing selective attention, inhibition, cognitive control and working memory throughout school (Jednorog et al., 2012). Jednorog et al. (2012) also found that on average, children who lived in poor socioeconomic circumstances had lower levels of grey matter at age 10 years and an increased likelihood of physical indicators of developmental delay when compared to children who have had all the advantages associated with living in high socioeconomic circumstances. Tomalski et al. (2013) demonstrated that these effects of socioeconomic inequalities on brain activity were detectable from early infancy.

Both family-level disadvantage and area-level disadvantage have been shown to relate to lower scores on the Early Development Index (EDI) at age 5 (Australian Bureau of Statistics, 2015), and literacy skills at age 8 (Santos, Brownell, Ekuma, Mayer, & Soodeen, 2012). Children from families living in poor socioeconomic circumstances face more challenges at school; are more likely to have problems getting along with other children, attending to tasks and learning new skills, and in general exhibit lower school achievement and lower IQ in later childhood (Alexander, Entwisle, & Dauber, 1993; Duncan, Brooks-Gunn, & Klebanov, 1994; Hess, Holloway, Price, & Dickson, 1982). Similarly, research in Australia has shown that indicators of family disadvantage, such as maternal smoking, age and education and area-level disadvantage are related to the AEDC and later literacy and numeracy scores throughout school (Moore et al., 2014).

As not all studies are able to capture family level indicators of socioeconomics, often neighbourhood level socioeconomic indicators captured through the population Census undertaken by the Australian Bureau of Statistics are used as proxy family indicators of SES. Such research has shown that children residing in lower SES areas on average have lower levels of school attendance, lower AEDC scores and lower NAPLAN scores (Brinkman et al., 2012; Huong & Justman, 2014). Also at the community level, IQs at age 5 were higher in neighbourhoods with greater concentrations of affluent people, whilst prevalence of low income neighbours increased children externalising behaviour problems (Duncan et al., 1994). Living in a high SES neighbourhood has also been shown to have a positive influence on school readiness and school achievement (Leventhal & Brooks-Gunn, 2000).

Malacova et al. (2008) found that the relationship between perinatal characteristics and numeracy outcomes vary across different socioeconomic and demographic groups of children. The SES of a child's neighbourhood at birth was shown to modify the relationship between perinatal characteristics (intrauterine growth in terms of weight and length, first birth and Apgar scored) and numeracy attainment at age 8 years. Term birth and increased growth in head circumference and length were associated with higher numeracy scores, especially among children from disadvantaged

neighbourhoods. Malacova et al. (2009) found that literacy skills of children with similar perinatal characteristics also differ according to their neighbourhood SES and maternal factors.

4.2. Health Inequalities

Socioeconomic disadvantage also has important health implications. Generally, the lower a person's socioeconomic position, the more likely they are to have problems with their health. Marmot (2010) suggests that health inequalities in England are the result of social inequalities, and hence the social determinants of health should be of greater concern when aiming to reduce health inequalities across lifespan.

With the foundations of poor health thought to be laid in early childhood and having lifelong influence on health and wellbeing, a key recommendation of the Marmot Review (2010) is to 'give every child the best start in life'. There is evidence that inequalities may begin even before birth. For example, children from socio-economically disadvantaged families are more likely to be born prematurely, have low birth weight, and a birth defect or disability than children from higher SES families (Crooks, 1995; Vrijheid, Dolk, Alberman, & Scott, 2000; Wasserman, Shaw, Selvin, Gould, & Leonard Syme, 1998). Disadvantaged mothers are particularly more likely to have babies of low birth weight, which is associated with infant mortality, as well as a number of long-term health outcomes (Marmot, 2010).

Power (1991) demonstrated that SES measured in middle childhood related to health status at 23 years, even when controlling for the SES of the individual at age 23. Children from lower SES families are more likely to go on to live sedentary lifestyles (Newacheck, Hung, Park, Brindis, & Irwin, 2003) and have a higher body mass index (Chen & Paterson, 2006).

To counter the effect of socioeconomic inequalities on health outcomes, the Marmot Review (2010) suggests increasing expenditure in the early years, providing more holistic support for families from before birth, increasing paid parental leave, providing evidence-based parenting support programmes and children's centres, as well as providing quality early education and childcare with high quality staff, and supporting the transition into primary school. Reactions to the Marmot Review (2010) have been mixed. It has been suggested that perhaps it would be more beneficial to address health inequalities first, and thereby improve the socioeconomic position of the disadvantaged rather than the other way around (Subramantam, Kawachi, & Subramanian, 2010). Other opinions range from thinking there is not enough emphasis on the influence of income on health, to too much emphasis. Some believe that not much can be done to address health inequalities, whilst others suggest much can be done with the correct course of action (Marmot, Allen, & Goldblatt, 2010). Overall though, there is agreement that there must be substantial, high quality research evidence on which to base action (Lynch, Law, Brinkman, Chittleborough, & Sawyer, 2010).

4.3. Social and Emotional Inequalities

There are also a number of social, emotional and psychological disparities between children of different levels of SES. Disadvantage leads to more negative psychological outcomes, including higher levels of emotional and behavioural difficulties, including higher prevalence of anxiety and depression. Conversely, positive psychological outcomes, such as optimism and self-esteem are associated with socioeconomic advantage (Goodman, 1999). Children from disadvantaged families are also more likely to exhibit maladaptive social functioning (Bolger, Patterson, & Thompson, 1995; Brooks-Gunn & Duncan, 1997) and experience poor neurobehavioural development (Kramer, 1987).

4.4. Disentangling Socioeconomic Inequalities

The relationship between socioeconomic disadvantage and child development is complex. Disentangling the effects of disadvantage from the web of overlapping, mediating and moderating factors presents significant challenges. Nevertheless, as evidenced throughout our discussion, disadvantage in the early years lays the foundation for accumulating negative influences and outcomes throughout the lifespan, across multiple domains of development. Since the consequences become increasingly difficult and costly to change over time, there is widespread acknowledgement of the advantages of early intervention for both quality of life and future community and economic development (Feinstein, 2003; Shonkoff & Boyce, 2009). To weaken the association between early disadvantage and poorer outcomes throughout life, attempts to reduce inequality should be targeted towards the very early years; before birth to school-age (Shonkoff, 2014).

Despite overwhelming evidence of the link between socioeconomic disadvantage and poorer child development outcomes, developmental inequalities based on SES are not inevitable. Neighbourhoods that are quite similar in economic deprivation can differ substantially in other conditions (Coulton & Pandey, 1992). Lynch et al. (2010) demonstrate that there is almost as much variation in developmental vulnerability within social groups as there is difference between the most and least disadvantaged areas. Indeed, in some areas of Australia with high levels of socioeconomic disadvantage, there are individuals, schools and communities that are performing significantly better than we would expect based on the strong link between SES and child development.

The modifiable factors that may be adapted to improve child development outcomes at the community level remain to be fully understood (Goldfeld et al., 2010). Are there local community level factors that are consistently related to better outcomes for children in these off-diagonal communities? Can any of these be translated to other South Australian communities to promote the same resilience?

We are therefore interested in the South Australian communities that are performing better than expected given their level of disadvantage, that is, those that have broken the link between social determinants and development outcomes that a body of research indicates is strong. We attempt to learn what promotes their resilience and identify modifiable factors that may be implemented elsewhere to reduce the slope of inequity and improve outcomes for South Australian children.

Before detailing the methodology used in the current report, it is worth mentioning an analogous Australian study – the Kids in Communities Study (KICS) [1] – that aims to answer similar questions to those posed here. The KICS study aims to identify communities with child development outcomes that differ significantly from that predicted by their socio-economic status (off diagonal communities) and also aims to conduct community investigations into the modifiable community level factors that influence these outcomes (Goldfeld et al., 2014). There are several key differences between the current study and the Goldfeld et al. study. Firstly, the current study has a specific South Australian focus whereas Goldfeld et al. have included South Australia as one of five jurisdictions under investigation. Second, Goldfeld et al. use data from Australian Early Development Census (AEDC) to identify the off diagonal communities whereas the current study also uses educational outcomes from government schools in SA to supplement the AEDC data. Finally, the current study has been limited to desktop analysis focusing on service provision and community consultation, whereas the KICS study has funding that will enable the exploration of a broader set of factors such as community governance and spatial elements of the physical environment such as public transport networks.

5. Identification of Thriving in Adversity communities

5.1. Method

Two primary data sources on children's developmental and educational outcomes were used to identify the communities who were thriving in adversity. The first was the Australian Early Development Census (AEDC), which is a teacher rated assessment that is completed for children in their first year of full time schooling. The second was the National Assessment Program – Literacy and Numeracy (NAPLAN), which is a standardised test that children complete in Years 3, 5, 7 and 9. For both of these measures, we explored the performance of children living in different communities across South Australia, and explored the relationship between these outcomes and the level of socioeconomic disadvantage in each community. Socioeconomic disadvantage was measured using the Australian Bureau of Statistics SEIFA Index of Relative Socioeconomic Disadvantage (IRSD).

In the next section, we provide details of the two primary data sources: the AEDC and NAPLAN, and the measure of socioeconomic disadvantage used in these analyses. We also provide details of the South Australian communities who were explored in the analysis, and the data analysis process.

5.1.1. Australian Early Development Census (AEDC)

The AEDC measures child development across five developmental domains: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, and communication and general knowledge skills. For each of the five domains, children with scores in the bottom 10%

[1] The Kids in Communities Study (KICS) is a current Australian study

are classified as 'developmentally vulnerable'. The AEDC data on these five domains can be combined into a single indicator of child development, specifically the proportion of children who are vulnerable on 1 or more domains of the AEDC.

The AEDC was collected as a national census in 2009 and 2012 for all children in their first year of full time schooling, in Government, Independent and Catholic schools. In South Australia, AEDC data were collected on 15,009 children in 2009 and 17,355 children in 2012. In 2009, 22.8% of South Australian children were developmentally vulnerable on 1 or more domains of the AEDC, and 23.7% were developmentally vulnerable on 1 or more domains of the AEDC in 2012. As NAPLAN data was obtained only from government schools, AEDC data from government schools only (excluding Independent and Catholic schools) was also examined to ensure comparability. This sub-population included 9,705 children in 2009, of which 26.2% were developmentally vulnerable on 1 or more domains of the AEDC, and 11,246 children in 2012, of which 27.0% were developmentally vulnerable on 1 or more domains of the AEDC. The AEDC data from the whole population provides the most comprehensive information on child development outcomes for South Australian communities. The AEDC data (government schools only) and the NAPLAN data from government schools are treated as ancillary indicators.

The AEDC results can be presented at various levels of geographical aggregation; at the state, community and local community level. Across South Australia, an "AEDC Community" generally corresponds to a Local Government Area (LGA). For this project, we have focused on the AEDC results at the LGA level.

5.1.1. National Assessment Program – Literacy and Numeracy

The NAPLAN assessment provides information on children's academic achievement across four domains: reading, writing, numeracy and language conventions (spelling, grammar and punctuation). Unlike the AEDC, NAPLAN assessments cannot be combined into a single indicator of child development (i.e. vulnerable on 1 or more domains). Instead, we decided to focus on reading and numeracy abilities when exploring community level differences in the NAPLAN results, as these are considered core skills that link to later measures of success.

NAPLAN assessments have been completed by children in Years 3, 5, 7, and 9 since 2008. For this project, data were requested for all who children who completed the NAPLAN assessments in South Australian Government schools in 2009 and 2012, so as to align with the AEDC data collections.

Using the student's residential address, the Department for Education and Child Development (DECD) identified the suburb, postcode and LGA where the student resided. Information on the LGA was used in the current analyses as this was the level of geography that most closely aligned with that used in the AEDC analyses.

Given that the AEDC is completed when the child is in their first year of full time schooling, we wanted to assess academic achievement at as young an age as possible. Therefore, we focused on

the Year 3 NAPLAN results as this represents the first assessment of academic achievement during the school years.

5.1.2. Socioeconomic Disadvantage

The Australian Bureau of Statistics (ABS) releases four different socioeconomic indices for areas based on information collected during the census. We focus on the Index of Relative Socioeconomic Disadvantage (IRSD), which is designed to provide a general measure of disadvantage. Low scores indicate that there are a high proportion of disadvantaged people living in the area, and high scores indicate that there are a low proportion of socioeconomically disadvantaged people living in the area.

The ABS release new SEIFA indices every five years when the census data becomes available. For the 2009 AEDC data, each community has been assigned a SEIFA score based on the 2006 census data, and with the release of the 2012 AEDC data each community will be assigned a SEIFA score based on the 2011 census data. At the time of writing this report, the 2011 SEIFA data was not available for each of the AEDC communities. Therefore, for the analysis of the AEDC data, we have had to rely on the 2006 SEFIA IRSD scores. For the NAPLAN data, we assigned each community (local government area) a SEIFA score based on the 2011 census.

5.1.3. South Australian communities

Between the 2009 and 2012 AEDC data collections, boundary changes were made to some of the AEDC communities based on feedback from communities. In SA, seven communities underwent boundary changes between the two AEDC data collections. Given that we want to explore the AEDC results at both time points, we have focused on the 56 communities in South Australia without any boundary changes between 2009 and 2012 (these are listed in Table 1).

The majority of the remaining 56 communities correspond closely to an LGA, in which case NAPLAN results for these communities are also available. Those communities in Table 1 with an asterisk next to them do not easily translate to an LGA. Reasons for the lack of correspondence vary; in some cases, the AEDC community was created by aggregating two small LGAs, while in others the AEDC community represented a custom geographical area.

Table 1. Communities in South Australia that did not undergo boundary changes

Adelaide	Northern Areas
Adelaide Hills	Norwood Payneham St Peters
Alexandrina	Onkaparinga
Barunga West	Peterborough
Burnside	Playford
Campbelltown	Port Adelaide Enfield
Ceduna	Port Augusta
Charles Sturt	Port Pirie and Districts
Clare and Gilbert Valleys	Prospect
Coober Pedy (*)	Renmark Paringa

Copper Coast	Robe/Kingston (*)
Far North and Flinders (*)	Salisbury
Flinders Ranges	Southern Mallee/Karoonda East Murray (*)
Gawler	Streaky Bay
Goyder	Tatiara
Grant	Tea Tree Gully
Holdfast Bay	The Coorong
Kangaroo Island	The Lands (*)
Lower Eyre Peninsula (*)	Tumby Bay
Mallala	Unley
Marion	Victor Harbor
Mid Murray	Wakefield
Mitcham	Walkerville
Mount Barker	Wattle Range
Mount Gambier	West Torrens
Mount Remarkable/Orroroo/Carrieton (*)	Whyalla
Murray Bridge	Yankalilla
Naracoorte and Lucindale	Yorke Peninsula

The AEDC communities of Mount Remarkable/Orroroo/Carrieton, Southern Mallee/ Karoonda East Murray and Robe/Kingston are instances where two LGAs have been combined together to increase the size of the community and allow reporting of results. To compare AEDC results for these communities with NAPLAN results, we will approximate the AEDC geographic region in the NAPLAN data by combining the scores for children living in the corresponding LGAs[2].

Two of the AEDC communities (Coober Pedy and the Lands) were created using custom boundaries, which are not directly comparable to any LGAs. For two other communities (Lower Eyre Peninsula, and Far North and Flinders), the AEDC community boundaries are quite different to LGA boundaries. These four communities will be excluded from the NAPLAN analysis. As such, NAPLAN results can be calculated for 52 of the 56 AEDC communities shown in Table 1[3].

5.1.4. Data Analysis

For the AEDC and NAPLAN outcomes in 2009 and 2012, we created a bubble plot which indicates the relationship between results on these assessments and the socioeconomic status (SES) across communities.

Figure 2 shows the bubble plot for the 2009 AEDC results by SES. The y-axis shows the proportion of children who are vulnerable on one or more domains of the AEDC. The x-axis shows the score on

[2] Mount Remarkable/Orroroo/Carrieton is a combination of Mount Remarkable and Orroroo/Carrieton District Councils; Southern Mallee/ Karoonda East Murray is a combination of the Southern Mallee and Karoonda East Murray District Councils; and Robe/Kingston is a combination of Robe and Kingston District Councils.

[3] We have attempted to align the communities as closely as possible for the AEDC and NAPLAN analyses. However, we acknowledge that the boundaries are not directly comparable when exploring results across different datasets

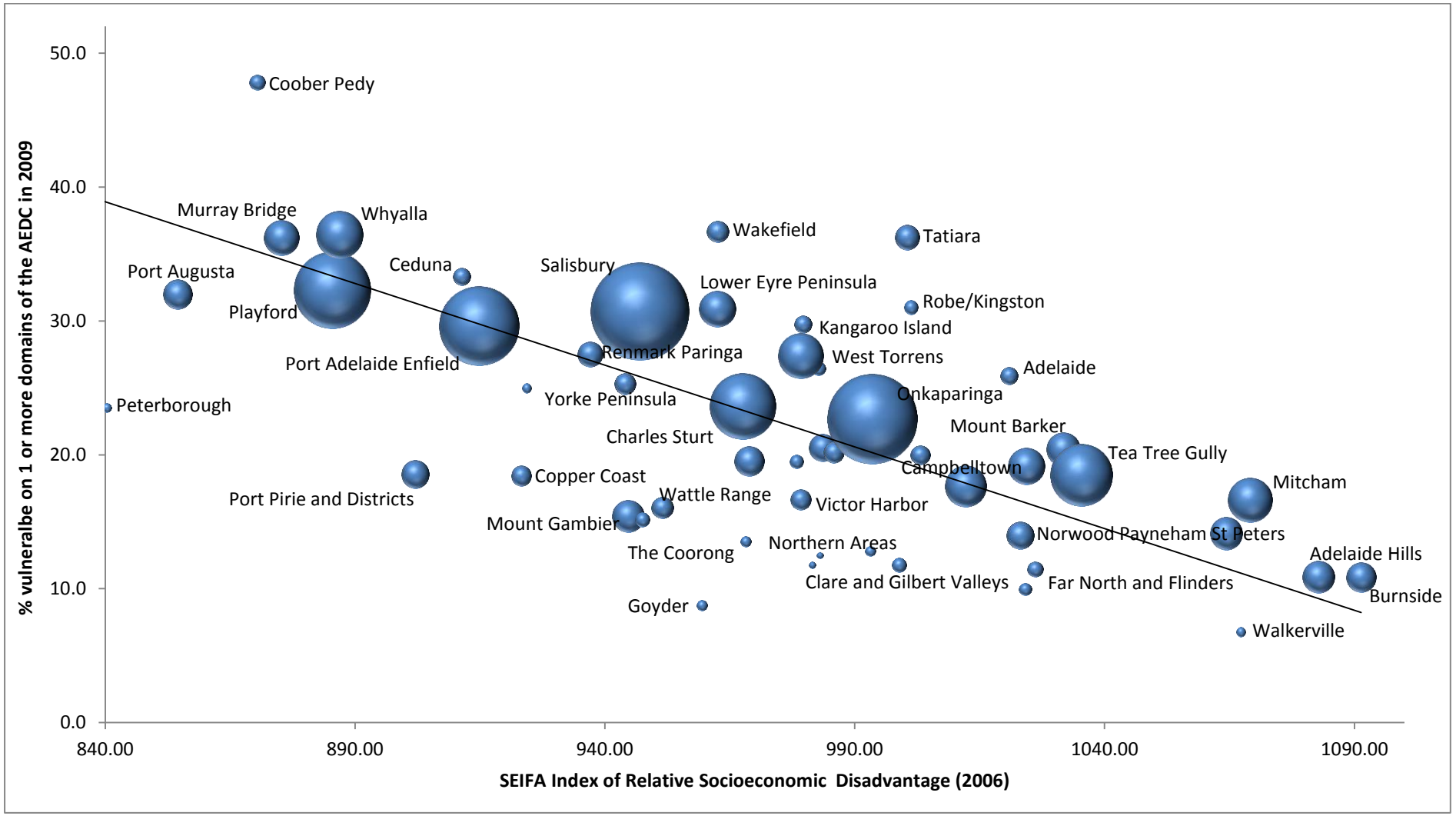
the SEIFA IRSD. The size of the bubble indicates the number of children in each community who are vulnerable on the AEDC. Thus, the bubble plot indicates the proportion and number of children in each community who are vulnerable on the AEDC, and the community's level of socioeconomic disadvantage.

As an example, consider the community of Coober Pedy in the far North of South Australia (top left corner of Figure 2). The proportion of children who are vulnerable on the AEDC is high (48%) but the bubble is very small suggesting that very few children in Coober Pedy are vulnerable on the AEDC. This is in part a reflection of the relatively small number of children in the Cooper Pedy community. Coober Pedy has a SEFIA score of 870, indicating this community has a high level of socioeconomic disadvantage.

As a contrast, consider the community of Salisbury in northern Adelaide. The proportion of children who are vulnerable on the AEDC is lower than in Cooper Pedy (31%) but the bubble is much bigger suggesting that a large number of children in Salisbury are vulnerable on the AEDC. Thus, although the proportion of children in Salisbury is lower than in Cooper Pedy, the number of children that are vulnerable is much higher given the larger size of the Salisbury community. Salisbury has a SEIFA score of 947, indicating that this community is less disadvantaged than Coober Pedy but slightly more disadvantaged than the average South Australian community (the mid-point of the plot).

The diagonal line on Figure 2 shows the relationship between the proportion of children who are developmentally vulnerable on the AEDC and socioeconomic disadvantage. Low scores on SEIFA (representing high levels of disadvantage) are associated with higher levels of vulnerability. Some communities sit on the line (e.g. Playford and Port Adelaide Enfield), suggesting that children in these communities are performing 'as expected' based on each community's level of socioeconomic disadvantage. However, other communities are further off the line, and can be referred to as 'off-diagonal communities'. The communities that are located above the line (e.g. Wakefield and Tatiara) are performing worse than expected given the level of socioeconomic disadvantage in these communities. The communities that are located below the line (e.g. Goyder and Mount Gambier) are performing better than expected given their level of socioeconomic disadvantage.

Figure 2. Vulnerability on the AEDC (all schools) in 2009 by SES for all LGAs in South Australia



After generating the bubble plot, we calculated the equation of the diagonal (regression) line. For Figure 1, the regression line can be expressed by the equation below.

$$\hat{Y} = 141.41 - 0.122 * SEIFA\ score$$

$\hat{Y}$ is the expected level of developmental vulnerability for a particular community. When we enter a community's SEIFA score into this equation we can calculate this "expected" score. That is, the percentage of children who we would expect to be vulnerable on the AEDC based on the level of socioeconomic status in the community. For example, in the community of Port Pirie and Districts the SEFIA score is 901.98, and based on this SEFIA score we would predict that 40.39% of children would be vulnerable on 1 or more domain of the AEDC.

$$\hat{Y} = 141.41 - 0.122 * (901.98)$$

$$\hat{Y} = 40.39$$

The "expected" value of developmental vulnerability for each community was then compared to its "observed" value. For example, in Port Pirie and Districts, 18.6% of children were vulnerable in 2009 (see Figure 1), which is much better than the expected value of 40.39%. The difference between the expected score and the observed score is 12.8 percentage points. Thus, the level of developmental vulnerability in the Port Pirie and Districts community is 12.8 percentage points lower than expected given the level of socioeconomic disadvantage in Port Pirie and Districts. This same process was followed for all of the communities.

Communities with AEDC data on less than 30 children were excluded. Communities with a SEFIA score of 960 points[4] or higher were also excluded as they have low levels of socioeconomic disadvantage, and cannot be classified as 'living in adversity'. The remaining 15 communities were divided into two groups: those who were exceeding expectations and those who were performing as expected in adversity. Communities that consistently scored 3 percentage points or more lower than their expected value (given that developmental vulnerability is a negative outcome) were classified as 'thriving in adversity'. The other communities were classified as performing 'as expected in adversity'[5].

[4] Communities with SEIFA scores less than 960 points, correspond closely to Deciles 1 to 4.

[5] One community (The Lands) performed more than 10 percentage points worse than expected, and was excluded from the 'as expected' group.

Figure 3. Vulnerability on the AEDC (Government schools only) in 2009 by SES for all LGAs in South Australia

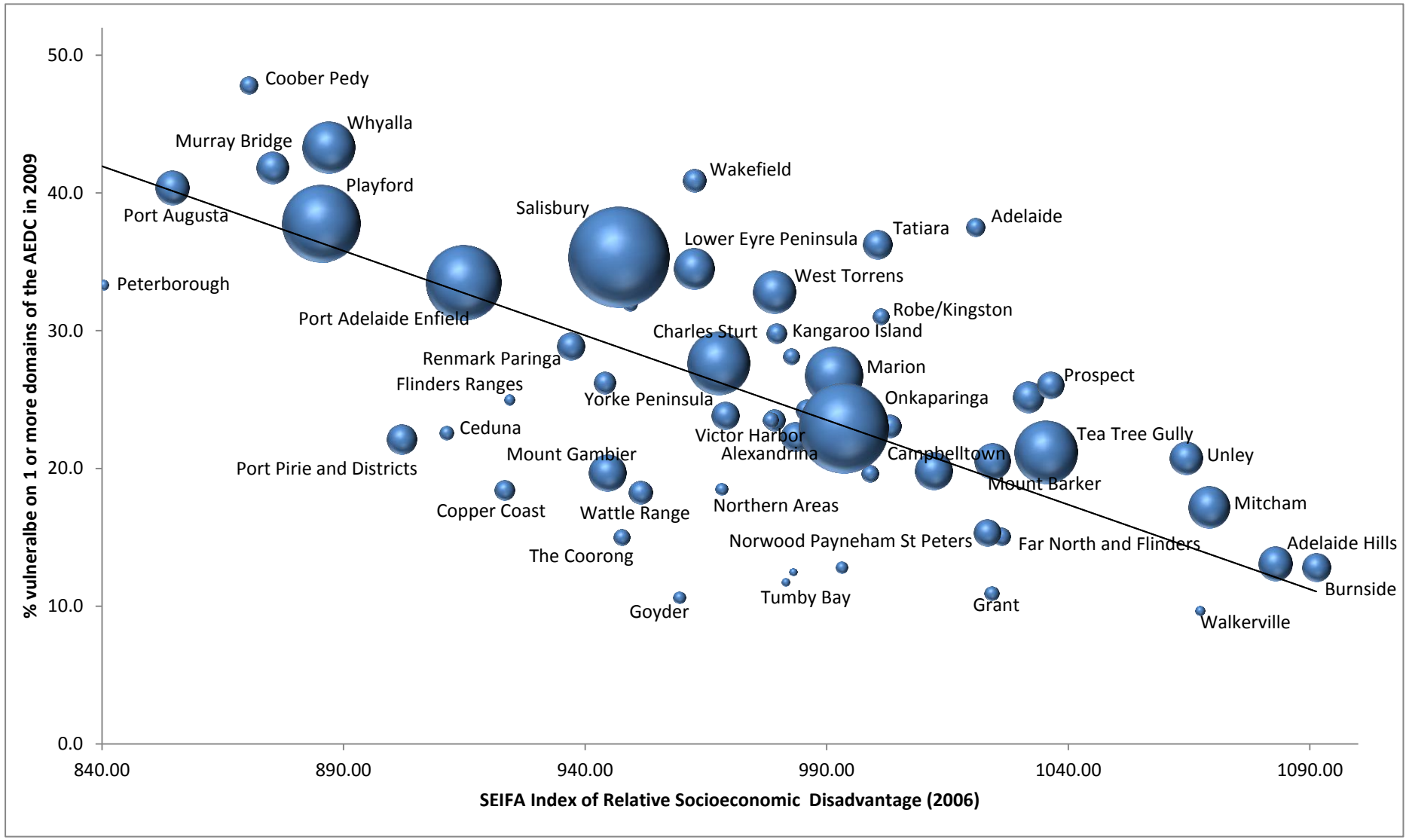


Figure 3 shows the bubble plot for the 2009 AEDC results for Government school only by SES. Some of the smaller communities move a bit once the Independent and Catholic school children are removed. For instance, in the Adelaide CBD, the percentage of vulnerable children increases from 25.9% (all children) to 37.5% (Government children only). However, the level of developmental vulnerability remains quite stable for most of the communities.

5.2. Results – Australian Early Development Census (AEDC)

Using the 2009 AEDC data from all schools (see Figure 2) there were seven communities who were performing better than expected (shown in yellow in Table 2, below). All of these communities had a SEIFA score lower than 960 points, had AEDC data for at least 30 children, and scored 3 or more percentage points lower in developmental vulnerability on the AEDC than expected given their level of socioeconomic disadvantage. There were nine communities who were classified as performing as expected given their level of socioeconomic adversity. These communities are shown in white in Table 2.

When AEDC data was considered from Government schools only, seven communities were again shown to be performing better than expected (see Table 2). Port Augusta was shown to be exceeding expectations when all schools were examined, but as expected when considering government schools only. In contrast, the community of Ceduna was shown to be performing as expected when all schools were included, but exceeding expectations when considering government schools only. This is an unusual result, as children attending Independent and Catholic schools tend to be from higher SES areas, so one might expect the community's performance on the AEDC to be poorer when they are excluded. Due to this unusual result and the small number of children living in the community, the data from Ceduna should be interpreted with caution.

Table 2. Communities thriving and performing as expected based on 2009 AEDC results

	Community	SEIFA IRSD (2006)	2009 AEDC data % vulnerable on 1 or more domains			
			N	Observed value	Expected value	Difference between observed and expected value
	All Schools					
Exceeding Expectations	Goyder	959.47	57	8.8	24.4	15.6
	Port Pirie and Districts	901.98	194	18.6	31.4	12.8
	Mount Gambier	944.58	317	15.5	26.2	10.7
	The Coorong	947.50	66	15.2	25.8	10.7
	Copper Coast	923.23	103	18.4	28.8	10.3
	Wattle Range	951.47	137	16.1	25.3	9.3
	Port Augusta	854.53	125	32.0	37.2	5.2
Meeting Expectations	Playford	885.37	876	32.3	33.4	1.1
	Yorke Peninsula	944.01	83	25.3	26.2	0.9
	Mid Murray	886.28	64	32.8	33.3	0.5
	Port Adelaide Enfield	914.77	1,015	29.7	29.8	0.2
	Renmark Paringa	937.00	109	27.5	27.1	-0.4
	Murray Bridge	875.30	163	36.2	34.6	-1.6
	Ceduna	911.30	42	33.3	30.2	-3.1
	Whyalla	886.91	288	36.5	33.2	-3.3
	Salisbury	946.87	1,503	30.7	25.9	-4.8
	Government Schools Only					
Exceeding Expectations	Goyder	959.47	47	10.6	27.3	16.6
	The Coorong	947.40	60	15.0	28.7	13.7
	Copper Coast	923.23	76	18.4	31.7	13.2
	Port Pirie and Districts	901.98	140	22.1	34.3	12.2
	Ceduna	911.93	31	22.6	33.2	10.6
	Wattle Range	951.47	104	18.3	28.2	10.0
	Mount Gambier	944.58	239	19.7	29.1	9.4
Meeting Expectations	Yorke Peninsula	944.01	61	26.2	29.2	2.9
	Renmark Paringa	937.00	90	28.9	30.0	1.1
	Mid Murray	886.28	53	35.8	36.3	0.4
	Port Augusta	854.53	99	40.4	40.1	-0.2
	Port Adelaide Enfield	914.77	585	33.5	32.7	-0.8
	Playford	885.37	561	37.8	36.4	-1.4
	Murray Bridge	875.30	86	41.9	37.6	-4.3
	Salisbury	946.87	996	35.3	28.8	-6.5
	Whyalla	886.91	217	43.3	36.2	-7.1

Figure 4. Vulnerability on the AEDC (all schools) in 2012 by SES for all LGAs in South Australia

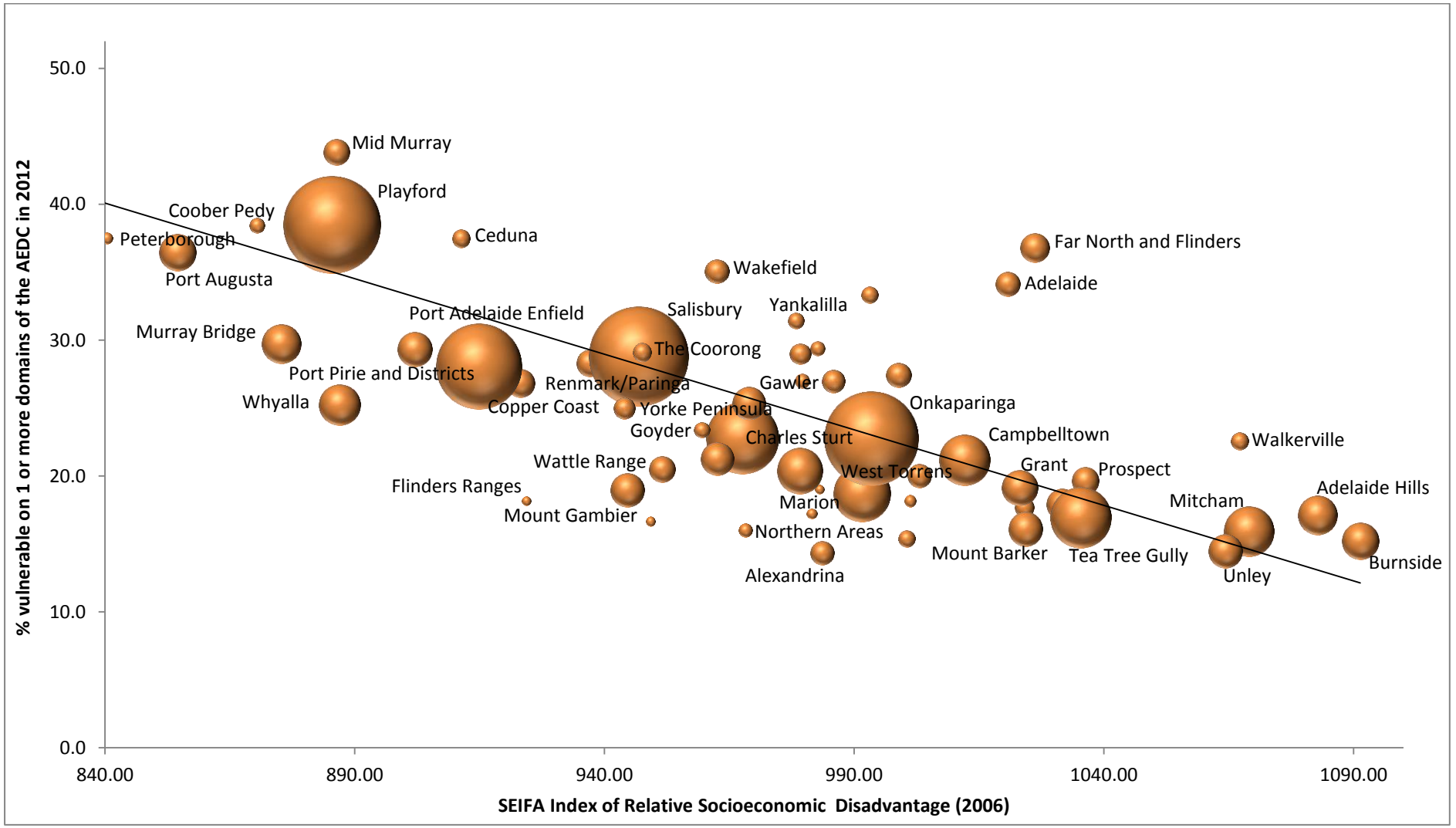


Figure 5. Vulnerability on the AEDC (Government schools only) in 2012 by SES for all LGAs in South Australia

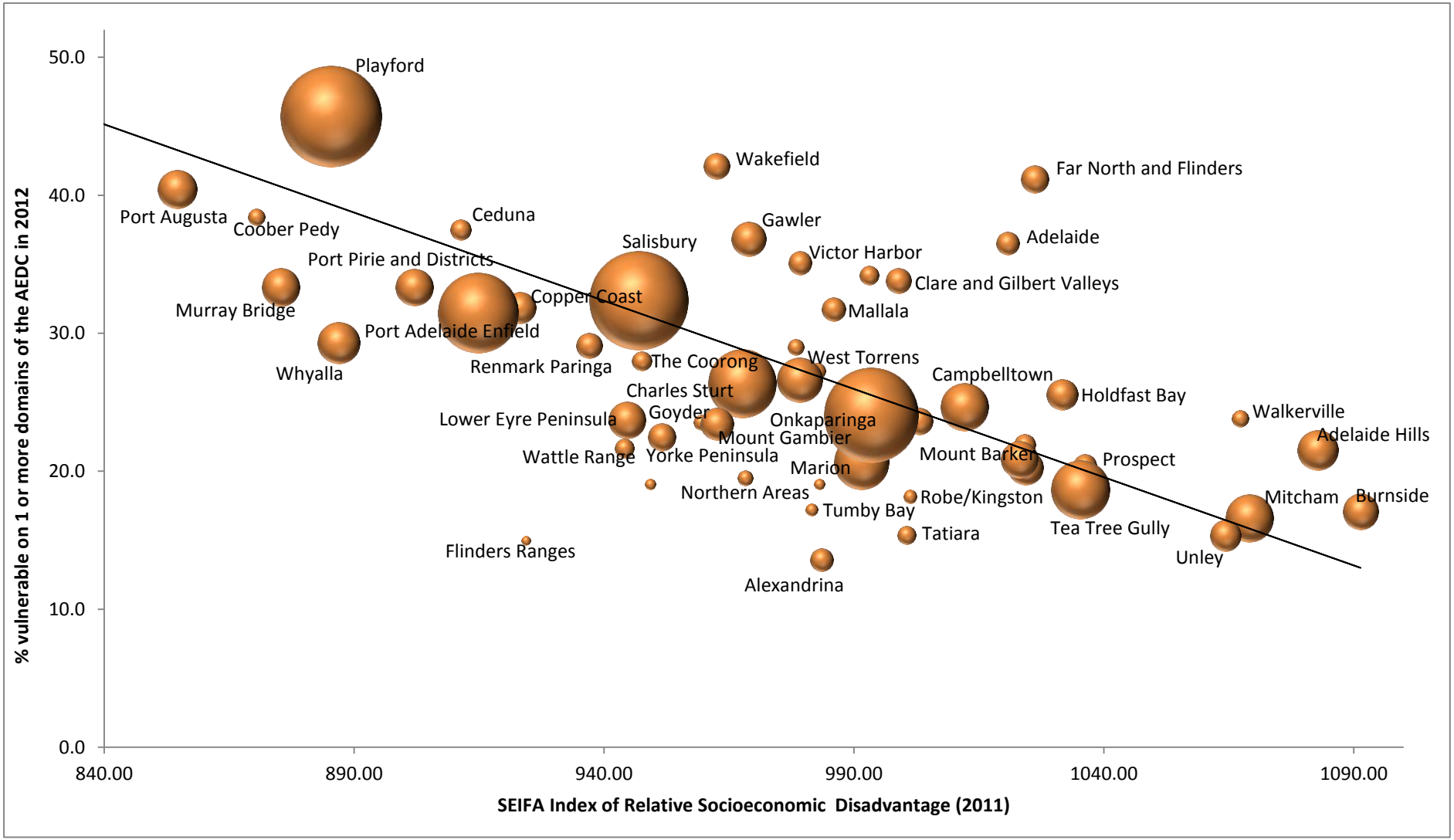


Table 3. Communities thriving and performing as expected based on 2012 AEDC results

	Community	SEIFA IRSD (2006)	2012 AEDC data % vulnerable on 1 or more domains			
			N	Observed value	Expected value	Difference between observed and expected value
	All schools					
Exceeding Expectations	Whyalla	886.91	313	25.2	34.2	8.9
	Mount Gambier	944.58	279	19.0	27.7	8.7
	Wattle Range	951.47	156	20.5	26.9	6.4
	Murray Bridge	875.30	239	29.7	35.5	5.7
	Copper Coast	923.23	138	26.8	30.1	3.3
	Port Pirie and Districts	901.98	191	29.3	32.5	3.1
	Port Adelaide Enfield	914.77	1,213	28.1	31.0	2.9
	Yorke Peninsula	944.01	84	25.0	27.8	2.8
	Goyder	959.47	47	23.4	26.0	2.6
Meeting Expectations	Port Augusta	854.53	170	36.5	37.8	1.3
	Renmark Paringa	937.00	113	28.3	28.5	0.2
	Salisbury	946.87	1,611	28.8	27.4	-1.4
	The Coorong	947.50	55	29.1	27.4	-1.7
	Playford	885.37	1,145	38.5	34.3	-4.2
	Ceduna	911.30	40	37.5	31.4	-6.1
	Mid Murray	886.28	73	43.8	34.2	-9.6
	Government schools only					
Exceeding Expectations	Yorke Peninsula	944.01	60	21.7	31.8	10.1
	Whyalla	886.91	215	29.3	39.1	9.8
	Wattle Range	951.47	120	22.5	30.8	8.3
	Mount Gambier	944.58	215	23.7	31.7	8.0
	Murray Bridge	875.30	156	33.3	40.6	7.3
	Goyder	959.47	34	23.5	29.8	6.3
	Port Adelaide Enfield	914.77	740	31.5	35.5	4.1
	Port Pirie and Districts	901.98	150	33.3	37.2	3.8
	Renmark Paringa	937.00	79	29.1	32.7	3.6
	The Coorong	947.50	50	28.0	31.4	3.4
Meeting Expectations	Port Augusta	854.53	136	40.4	43.2	2.8
	Copper Coast	923.23	113	31.9	34.5	2.6
	Salisbury	946.87	1090	32.4	31.4	-0.9
	Ceduna	911.30	40	37.5	36.0	-1.5
	Playford	885.37	809	45.7	39.3	-6.4
	Mid Murray	886.28	65	46.2	39.2	-7.0
	The Lands	820.00	52	76.9	47.7	-29.3

Figure 4 shows the bubble plot for the 2012 AEDC results for all schools by level of socioeconomic disadvantage. Figure 5 uses data from Government schools only. The level of developmental vulnerability in most communities did not change substantially when looking at the children from government schools only.

Using the 2012 AEDC data from all schools, there were nine communities who were thriving in adversity (shown in yellow in Table 3 above). There were seven communities who were classified as living in adversity but who were not thriving. These communities were considered to be performing 'as expected' given their level of socioeconomic adversity.

Using the 2012 data from Government schools only, ten communities were shown to be thriving in adversity (see bottom panel of Table 3). These were very similar to those identified when data was from all schools, with the addition of Renmark Paringa and the Coorong, which performed 'as expected' when considering all schools. For both of these communities, the level of developmental vulnerability changed less than 1 percentage point when children from Independent and Catholic schools were excluded but the socioeconomic gradient was slightly different in Figures 3 and 4, so the expected values shifted a little. In both cases, their observed value was reasonably close to the expected value (± 4 percentage points). The Copper Coast shifted from the 'thriving group' to the 'as expected' group when considering government schools only. They still performed better than expected but the difference between their observed and expected score decreased from 3.3 percentage points to 2.6 percentage points to just push them out of the 'thriving' category.

Table 4 combines the results from the AEDC data for all schools and government schools only in 2009 (from Table 2) and 2012 (from Table 3) to identify four groups of communities. The communities in bold stayed in the same group regardless of whether the AEDC results were based on the whole population (all schools) or just the government schools. The first group of communities were thriving in adversity in both 2009 and 2012. These were Goyder, Port Pirie and Districts, Mount Gambier, and Wattle Range. The second group of communities were thriving in adversity in 2009 but reverted back up to the regression line in 2012. These communities changed depending on whether children from the Independent and Catholic schools were or were not included. The third group of communities were performing as expected in 2009 but were classified as thriving in adversity in 2012. Yorke Peninsula, Port Adelaide/Enfield, Murray Bridge, and Whyalla consistently fell into this group. The last group of communities were experiencing adversity but were performing about as we would expect. Salisbury and Playford were consistently in this group and several other communities - Mid Murray, Ceduna, Renmark/Paringa, and Port Augusta fell into this group depending on whether children attending independent and Catholic schools were or were not included in the analysis.

Table 4. Types of communities based on 2009 and 2012 AEDC results

		SA Communities	
Group Name	**Description**	**Full Population**	**Government Schools Only**
Consistently exceeding expectations	These communities are thriving in adversity in both 2009 and 2012	**Goyder** **Port Pirie and Districts** **Mount Gambier** **Wattle Range** Copper Coast	The Coorong
Exceeding expectations in 2009 only	Communities thriving in adversity in 2009 ONLY (i.e. they didn't stay below the regression line in 2012 and rose back up to what would be expected considering the socioeconomic status)	The Coorong Port Augusta	Copper Coast Ceduna
Exceeding expectations in 2012 only	Communities thriving in adversity in 2012 ONLY (not thriving in 2009 – thus they have improved their results between 2009 and 2012)	**Yorke Peninsula** **Port Adelaide Enfield** **Murray Bridge** **Whyalla**	Renmark Paringa
Consistently meeting expectations	Communities that are classified as living in adversity but were not thriving in 2009 or 2012	**Salisbury** **Playford** **Mid Murray** Ceduna Renmark Paringa	Port Augusta

Communities in bold belonged to the same group whether AEDC data was from the full population or from government schools only.

5.3. Results – National Assessment Program – Literacy and Numeracy (NAPLAN)

The NAPLAN results for each domain are expressed as a raw score between 0 and 1,000. These raw scores can be converted to proficiency bands from one to ten. Children's performance on the NAPLAN can be expressed by the proficiency band (1-10) that they have achieved, and children at different year levels are expected to have reached a specific band to have met the National Minimum Standard. For students in Year 3, the minimum standard is Band 2. Thus, students who score within Band 1 are considered below the National Minimum Standard, students who score within Band 2 are considered to be at the National Minimum Standard, and students who score in Band 3 or higher are considered to be above the National Minimum Standard.

We explored the percentage of South Australian children in Year 3 who were below the National Minimum Standard (Band 1), at the National Minimum Standard (Band 2), and above the National Minimum Standard (Band 3 to 6) for the reading domains in 2009 (see Table 5).

Table 5. Year 3 South Australian results in 2009 for NAPLAN Reading

	Reading	
	n	%
Band 1 – below minimum standard	660	5.9
Band 2 – at minimum standard	1,595	14.3
Band 3 to 6 – above minimum standard	8,923	79.8

Given that less than 10% of children were below the National Minimum Standard at the state level, and the significant variation seen across SA communities, it is likely that some communities will have no children who are below the National Minimum Standard. This is problematic when creating a bubble plot because these communities will not be present on (or 'drop off') the bubble plot. Therefore, we need to use a different method to group children into 'vulnerable' or 'not vulnerable' on the NAPLAN. The AEDC results focus on the proportion of children who are vulnerable on 1 or more domains, which corresponds to approximately 25% of children at the state level. For consistency, we will therefore explore the children who fall into the bottom 25% of NAPLAN scores or the bottom quartile of scores. This will make the analysis to identify the thriving in adversity communities using the NAPLAN data as comparable as possible to the same analysis using the AEDC data.

Figure 6. Year 3 NAPLAN Reading in 2009 by SES for all LGAs in South Australia

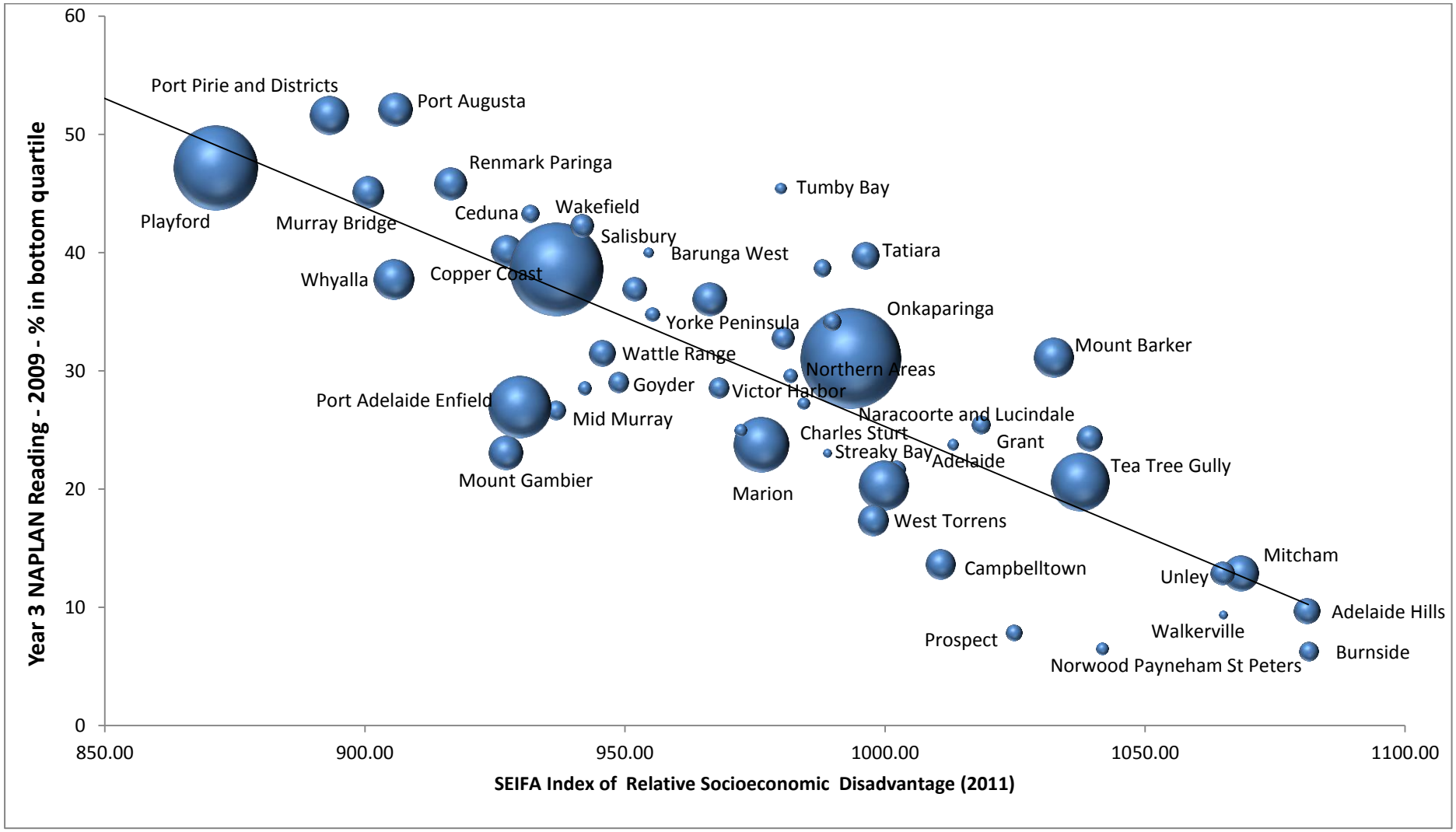


Figure 6 shows the bubble plot for Year 3 NAPLAN results in 2009 on the Reading aspect. The socioeconomic gradient for NAPLAN is similar to the gradient seen for the AEDC. Six communities were classified as 'thriving in adversity' (see Table 6).

Table 6. Communities thriving and performing as expected based on 2009 Yr3 NAPLAN Reading

			2009 NAPLAN data on Reading % in bottom quartile		
	Community	**SEIFA IRSD (2011)**	**N**	**Observed value**	**Expected value**	**Difference between observed and expected value**
Exceeding Expectations	Mount Gambier	926.99	212	23.11	38.75	15.64
	Port Adelaide Enfield	929.70	611	27.00	38.25	11.24
	Mid Murray	936.65	60	26.67	36.96	10.30
	The Coorong	948.72	62	29.03	34.73	5.70
	Whyalla	905.49	180	37.78	42.72	4.95
	Wattle Range	945.54	92	31.52	35.32	3.80
Meeting Expectations	Playford	871.26	642	47.20	49.05	1.86
	Copper Coast	927.19	102	40.20	38.71	-1.48
	Murray Bridge	900.57	93	45.16	43.63	-1.53
	Salisbury	936.72	966	38.61	36.95	-1.66
	Yorke Peninsula	951.75	65	36.92	34.17	-2.75
	Renmark Paringa	916.50	96	45.83	40.69	-5.14
	Ceduna	931.69	30	43.33	37.88	-5.45
	Wakefield	941.66	52	42.31	36.04	-6.27
	Port Pirie and Districts	893.13	122	51.64	45.01	-6.63
	Port Augusta	905.84	94	52.13	42.66	-9.47

Figure 7. Year 3 NAPLAN Reading in 2012 by SES for all LGAs in South Australia

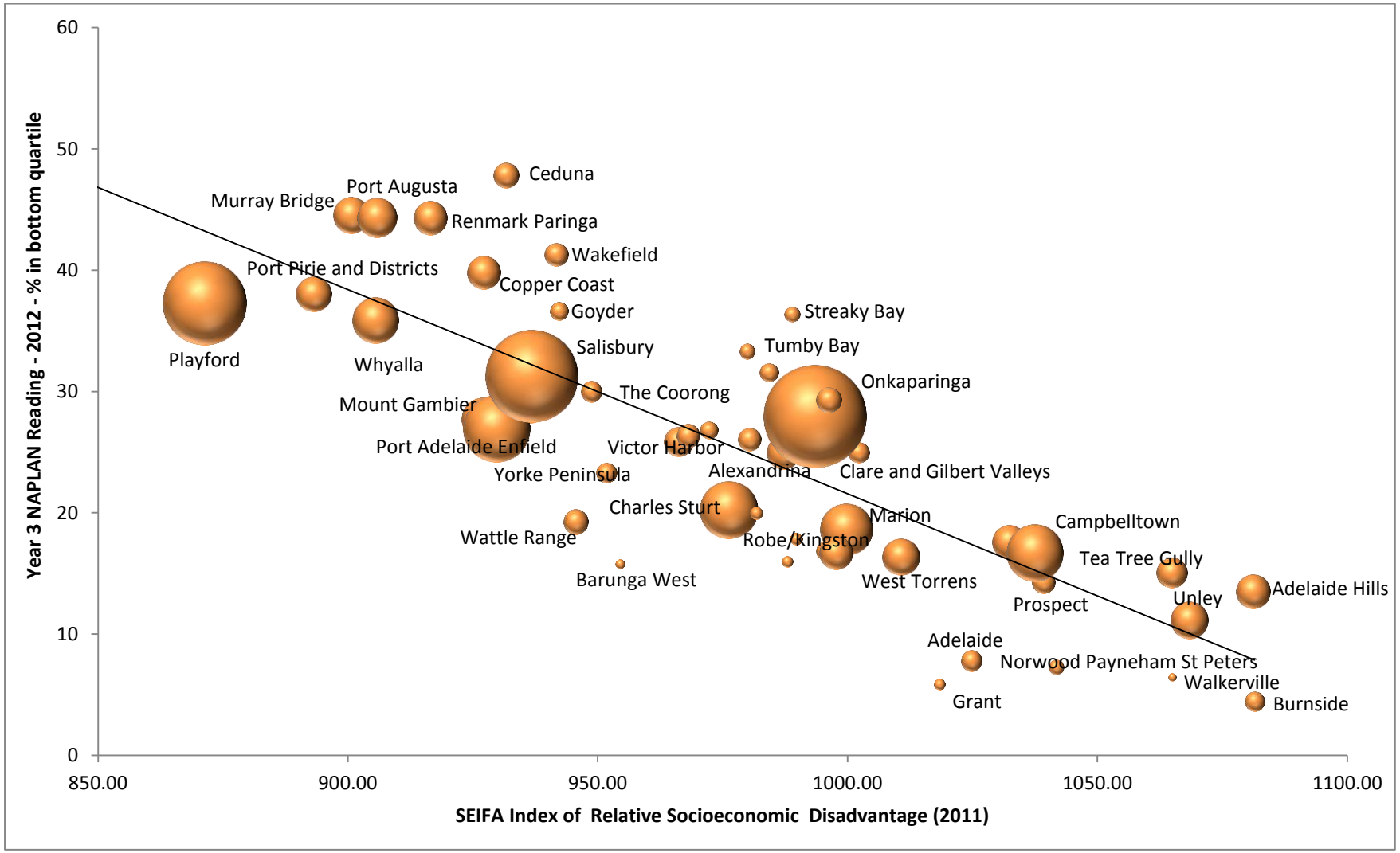


Figure 7 shows the bubble plot for Year 3 NAPLAN results in 2012 on the Reading aspect. Six communities were classified as 'thriving in adversity' and the remaining 10 communities[6] were performing as expected (see Table 7).

Table 7. Communities thriving and performing as expected based on 2012 Yr 3 NAPLAN Reading

			2012 NAPLAN data on Reading % in bottom quartile		
	Community	SEIFA IRSD (2011)	N	Observed value	Expected value	Difference between observed and expected value
Exceeding Expectations	Wattle Range	945.54	10	19.27	30.75	11.48
	Port Adelaide Enfield	929.70	59	26.95	33.41	6.46
	Yorke Peninsula	951.75	60	23.33	29.70	6.37
	Mount Gambier	926.99	22	27.75	33.87	6.11
	Playford	871.26	64	37.31	43.25	5.94
	Mid Murray	936.65	60	28.33	32.24	3.91
Meeting Expectations	Whyalla	905.49	20	35.89	37.49	1.60
	Port Pirie and Districts	893.13	11	38.05	39.57	1.51
	Salisbury	936.72	95	31.31	32.23	0.92
	The Coorong	948.72	50	30.00	30.21	0.21
	Goyder	942.22	30	36.67	31.30	-5.36
	Copper Coast	927.19	98	39.80	33.83	-5.96
	Murray Bridge	900.57	10	44.55	38.31	-6.24
	Port Augusta	905.84	12	44.35	37.43	-6.93
	Renmark Paringa	916.50	88	44.32	35.63	-8.68
	Wakefield	941.66	46	41.30	31.40	-9.91

[6] One community (Ceduna) performed more than 10 percentage points worse than expected, and was excluded from the 'as expected' group.

Figure 8. Year 3 NAPLAN Numeracy in 2009 by SES for all LGAs in South Australia

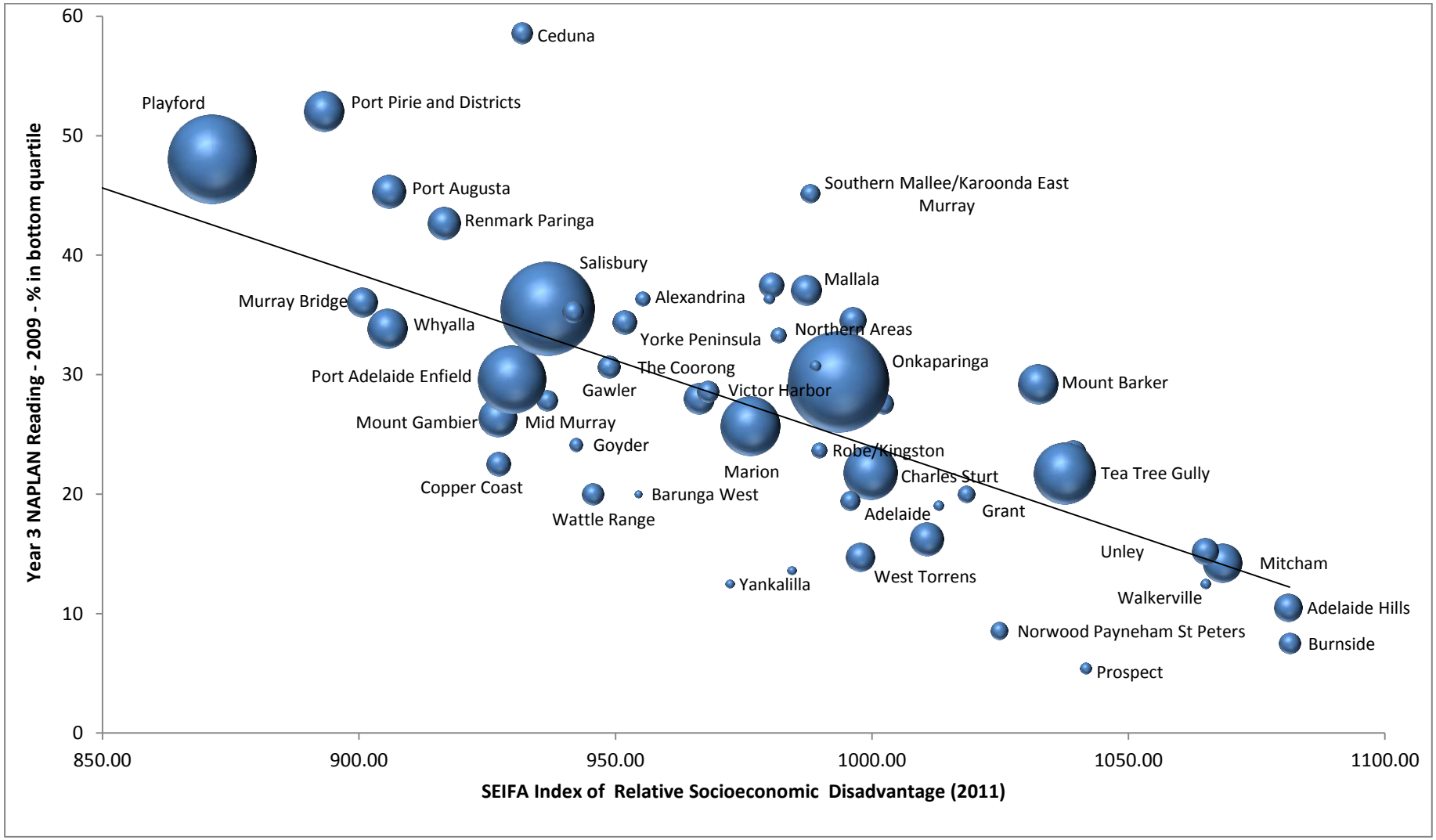


Figure 8 shows the bubble plot for Year 3 NAPLAN results in 2009 on the Numeracy aspect. Six communities were classified as 'thriving in adversity' and nine communities[7] were performing as expected (see Table 8).

Table 8. Communities thriving and performing as expected based on 2009 Yr 3 NAPLAN Numeracy

			2009 NAPLAN data on Numeracy % in bottom quartile			
	Community	SEIFA IRSD (2011)	N	Observed value	Expected value	Difference between observed and expected value
Exceeding Expectations	Copper Coast	927.19	102	22.55	34.28	11.73
	Wattle Range	945.54	95	20.00	31.65	11.65
	Mount Gambier	926.99	212	26.42	34.31	7.89
	Mid Murray	936.65	61	27.87	32.92	5.05
	Port Adelaide Enfield	929.70	614	29.64	33.92	4.28
	Whyalla	905.49	180	33.89	37.38	3.49
Meeting Expectations	Murray Bridge	900.57	97	36.08	38.09	2.01
	The Coorong	948.72	62	30.65	31.19	0.55
	Salisbury	936.72	971	35.53	32.91	-2.62
	Wakefield	941.66	51	35.29	32.20	-3.09
	Yorke Peninsula	951.75	64	34.38	30.76	-3.62
	Playford	871.26	643	48.06	42.28	-5.77
	Renmark Paringa	916.50	96	42.71	35.81	-6.90
	Port Augusta	905.84	97	45.36	37.33	-8.03

[7] One community (Port Pirie and Districts) performed more than 10 percentage points worse than expected, and was excluded from the 'as expected' group.

Figure 9. Year 3 NAPLAN Numeracy in 2012 by SES for all LGAs in South Australia

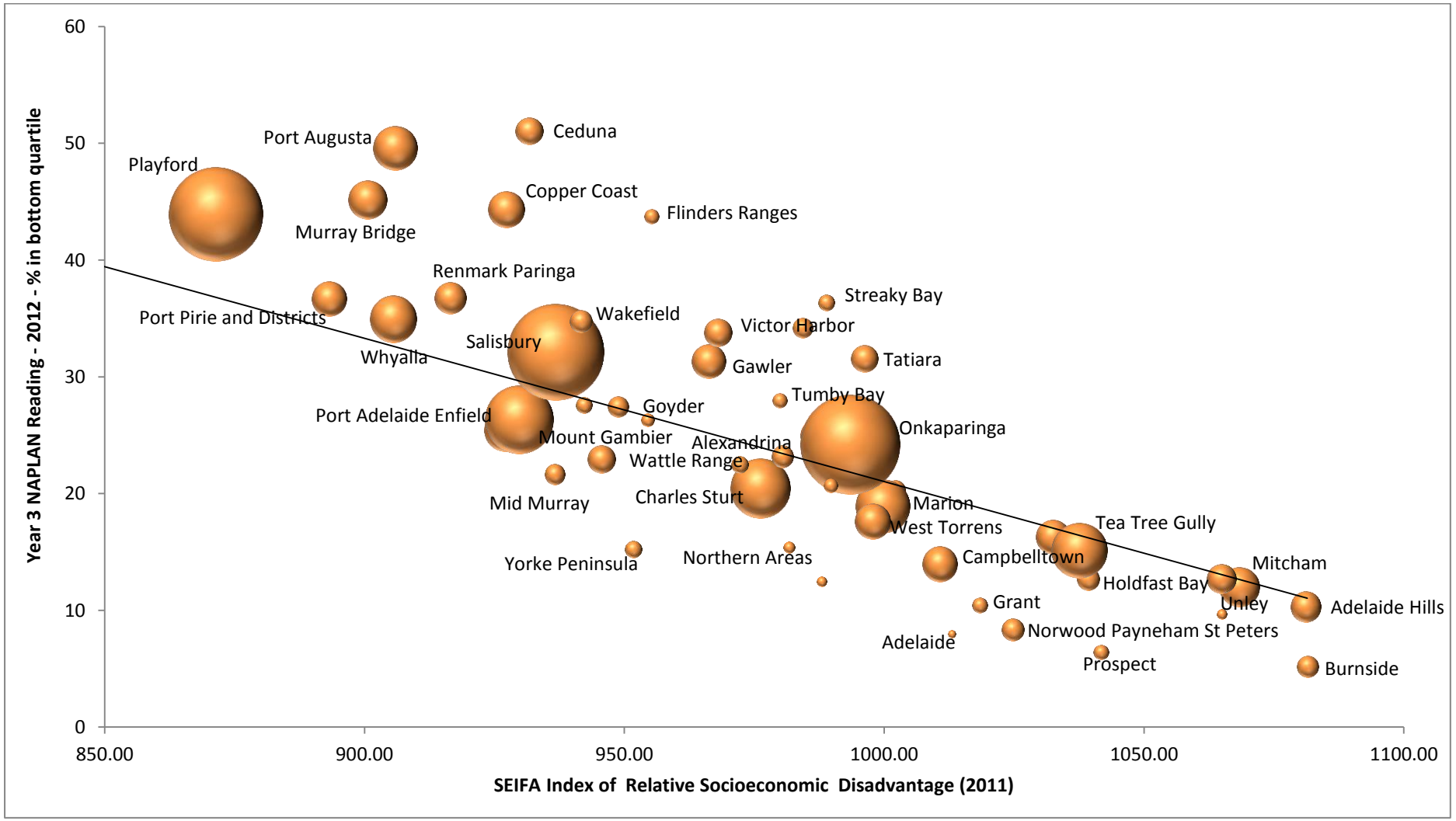


Figure 9 shows the bubble plot for Year 3 NAPLAN results in 2012 on the Numeracy aspect. Five communities were classified as 'thriving in adversity' and eight communities[8] were performing as expected (see Table 9).

Table 9. Communities thriving and performing as expected based on 2012 Yr3 NAPLAN Numeracy

			2012 NAPLAN data on Numeracy % in bottom quartile			
	Community	SEIFA IRSD (2011)	N	Observed value	Expected value	Difference between observed and expected value
Exceeding Expectations	Yorke Peninsula	951.75	59	15.25	26.93	11.68
	Mid Murray	936.65	60	21.67	28.78	7.12
	Wattle Range	945.54	109	22.94	27.69	4.76
	Mount Gambier	926.99	224	25.45	29.97	4.52
	Port Adelaide Enfield	929.70	577	26.34	29.64	3.29
Meeting Expectations	Goyder	942.22	29	27.59	28.10	0.51
	The Coorong	948.72	51	27.45	27.30	-0.15
	Whyalla	905.49	206	34.95	32.61	-2.35
	Port Pirie and Districts	893.13	109	36.70	34.12	-2.57
	Salisbury	936.72	946	32.14	28.77	-3.36
	Renmark Paringa	916.50	87	36.78	31.26	-5.53
	Wakefield	941.66	46	34.78	28.17	-6.61
	Playford	871.26	655	43.97	36.81	-7.16

In Table 10 we present the communities that were thriving at one or both time points, and those that were performing as expected based on AEDC data from the full population (all schools). We explore whether the same communities emerged as thriving in adversity or performing as expected based on the AEDC data from Government schools only and the NAPLAN.

[8] Four communities (Murray Bridge, Copper Coast, Port Augusta, and Ceduna) performed more than 10 percentage points worse than expected, and were excluded from the 'as expected' group.

Table 10. Thriving in adversity communities – AEDC and NAPLAN combined

Community groups based on AEDC data from full population	Are the communities thriving based on AEDC data and Year 3 NAPLAN results from Government school only?					
	2009			2012		
	AEDC (Government schools only)	NAPLAN Reading	NAPLAN Numeracy	AEDC (Government schools only)	NAPLAN Reading	NAPLAN Numeracy
Thriving in adversity (2009 & 2012)						
Goyder	✓	-	-	✓	-	-
Port Pirie and Districts	✓	-	×	✓	-	-
Mount Gambier*	✓	✓	✓	✓	✓	✓
Copper Coast	✓	-	✓	-	-	×
Wattle Range*	✓	✓	✓	✓	✓	✓
Thriving in adversity (2009 only)						
The Coorong	✓	✓	-	✓	-	-
Port Augusta	-	-	-	-	-	×
Thriving in adversity (2012 only)						
Yorke Peninsula*	-	-	-	✓	✓	✓
Port Adelaide Enfield*	-	✓	✓	✓	✓	✓
Murray Bridge	-	-	-	✓	-	×
Whyalla	-	✓	✓	✓	-	-
As Expected						
Renmark Paringa	-	-	-	✓	-	-
Salisbury	-	-	-	-	-	-
Playford	-	-	-	-	✓	-
Ceduna	✓	-	-	-	×	×
Mid Murray	-	✓	✓	-	✓	✓

Note. ✓indicates community was thriving; - indicates community was performing as expected; x indicates community was performing > 10 percentage points worse than expected.

We aimed to identify communities that are considered to be thriving (or performing as expected) across multiple time points and data sources. For instance, the Port Pirie and Districts community was classified as exceeding expectations in both 2009 and 2012 based on the AEDC results but was not classified as exceeding expectations based on the NAPLAN data. On the other hand, the community of Mount Gambier exceeded expectations based on AEDC data and NAPLAN data in 2009 and 2012, so there is more evidence to support the identification of Mount Gambier as a 'thriving in adversity' community than Port Pirie and Districts.

Based on Table 10, we have identified four communities who were most consistently 'thriving in adversity' (indicated by an asterisk above). Mount Gambier and Wattle Range were thriving in 2009 and 2012 based on both groups of the AEDC and NAPLAN. Yorke Peninsula was thriving in adversity in 2012 (but not 2009) on the AEDC and the NAPLAN. Port Adelaide Enfield was thriving in adversity in 2012 (but not 2009) on the AEDC, and in both 2009 and 2012 on the NAPLAN. It is important to note that regardless of whether AEDC data was used from all schools or from Government schools only, the communities that emerged as the most consistently 'thriving in adversity' across the AEDC and NAPLAN remained the same.

Based on Table 10 we will also focus on the four communities who were most consistently performing 'as expected' in adversity. The community of Salisbury was performing as expected in 2009 and 2012 based on both sets of AEDC data and the NAPLAN. Playford was performing consistently as expected on all measures, except that they were thriving in reading in 2012. Renmark/Paringa was also consistently performing as expected on all measures, except that they were thriving on the AEDC (Government schools only) in 2012. Finally, Port Augusta was performing as expected on all measures, except that they were thriving on the AEDC (all schools) in 2009 and performing worse than expected on numeracy in 2012.

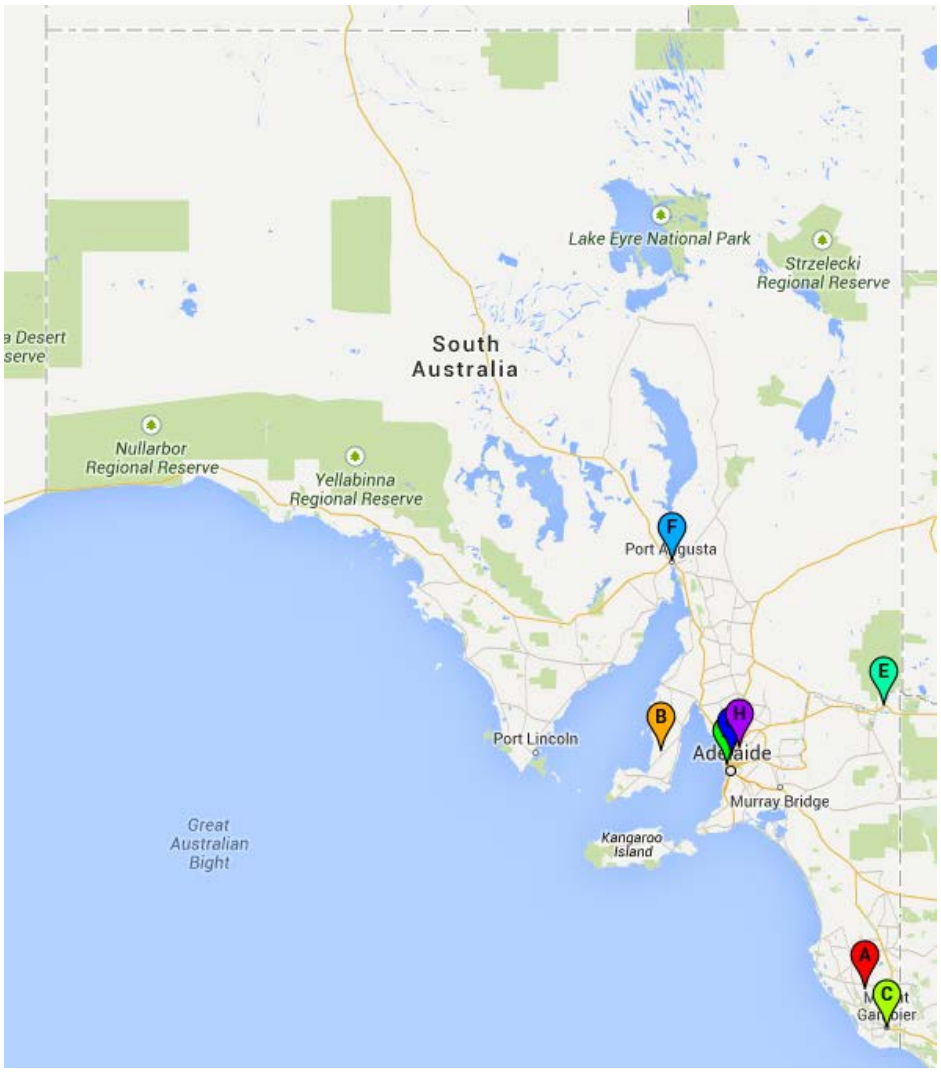
Table 11. South Australian communities identified for further investigation

Thriving in adversity	'As expected' in adversity
Mount Gambier	Renmark/Paringa
Wattle Range	Salisbury
Yorke Peninsula	Playford
Port Adelaide Enfield	Port Augusta

Table 11 shows the final eight South Australian communities that are the focus of this report.

Figure 10 shows where in South Australia, all of the 'thriving in adversity' and 'as expected' communities are located.

Figure 10. 'Thriving in adversity' and 'as expected' communities



'Thriving in Adversity' Communities

- Wattle Range
- Yorke Peninsula
- Mount Gambier
- Port Adelaide Enfield

'As Expected' Communities

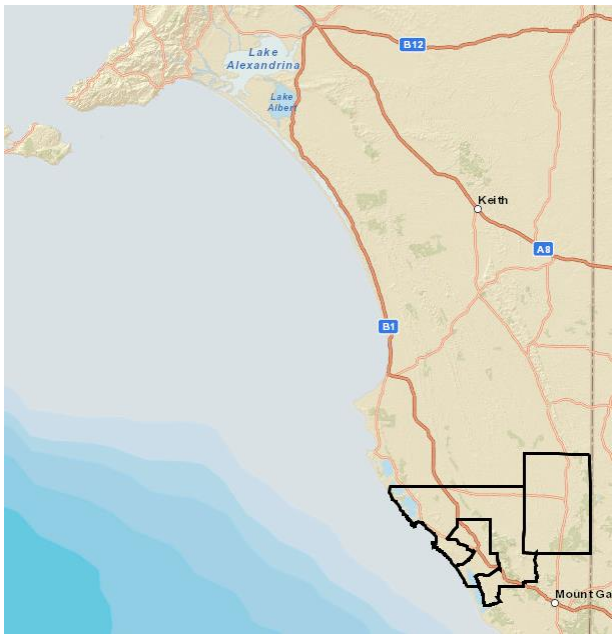
- Renmark Paringa
- Port Augusta
- Salisbury
- Playford

In the previous section we identified four communities that were performing 'as expected' on the AEDC and NAPLAN based on their level of socioeconomic disadvantage, and four communities that were performing better than expected; said to be 'thriving in adversity'. In this section, we explore each of these eight communities in an attempt to understand some of the key unchangeable factors that may distinguish 'thriving' communities compared to 'as expected' communities, before we go on to consider the influence of more modifiable programs and services.

Firstly, we give some background information on each of the communities including their location within the state, the size (land and population) and information on the age distribution of people living in the area. Secondly, we explore characteristics of the children living in each community (child level factors) including their demographic characteristics and their early childhood experiences prior to school, factors that are known to impact child development and educational outcomes.

6.1. Background information for each community

1. Wattle Range



Wattle Range is a community located in the South East of the state in the Limestone Coast area, approximately 350 kilometres from Adelaide's Central Business District (CBD). Wattle Range is the name of the local government area, which was created when the three smaller local councils (Penola, Millicent and Beachport) amalgamated. The Wattle Range community includes the two main towns of Millicent and Penola, and the smaller surrounding towns of Beachport, Glencoe, Mount Burr, Tantanoola, Southend, Coonawarra, Kalangadoo, Nangwarry and Glenroy. Wattle Range is a large rural community covering an area of almost 4,000 square kilometres (see Table 12), from the coast to the Victorian border. According to the 2011 census, there were 11,632 people living in the area and 7.5% of the population (*n* = 872) were aged 0 to 5 years. It is the most socioeconomically advantaged of the four 'thriving' communities with a SEIFA score of 951.47.

Table 12. Background information for all eight communities

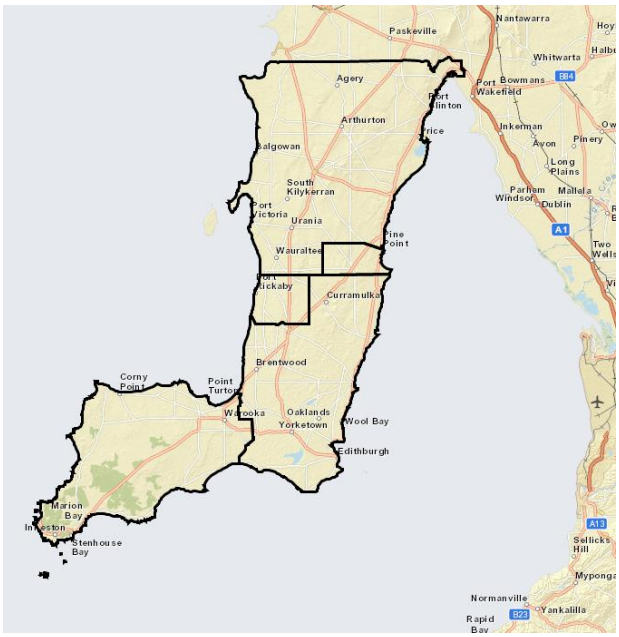
	Thriving in Adversity				As Expected			
	Wattle Range	**Yorke Peninsula**	**Mount Gambier**	**Port Adelaide Enfield**	**Renmark Paringa**	**Port Augusta**	**Salisbury**	**Playford**
Area (km^2)	3,925	5,891	27	92	916	1,153	117	410
Population	11,632	11,046	24,861	113,518	9,231	13,978	134,297	79,800
Population Density (population per km^2)	3	2	921	1234	10	12	1148	195
Children (0-5 years)	872 (7.5%)	597 (5.4%)	2,061 (8.3%)	8,300 (7.3%)	653 (7.1%)	1,178 (8.4%)	11,307 (8.4%)	7,916 (10.0%)
SEIFA score	951.47	944.01	944.58	914.77	937.00	854.53	946.87	885.37

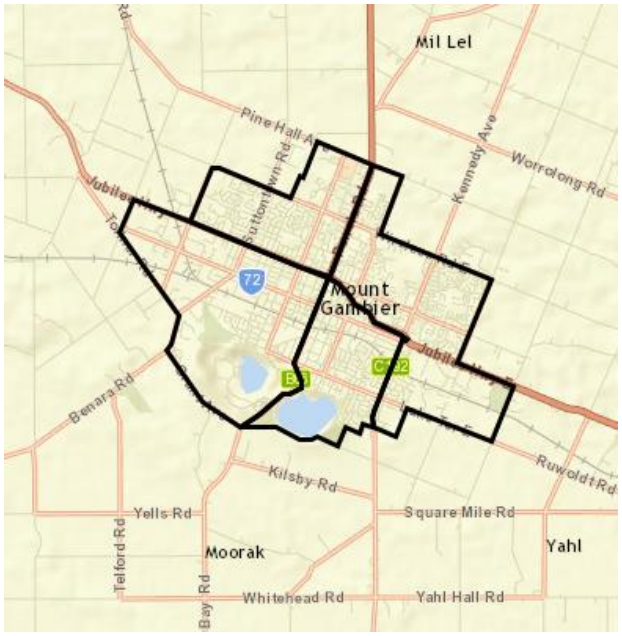
Notes. Area and residential population figures were sourced from the AEDC Community Profiles for each of the eight communities.

The SEIFA score is based on the 2006 SEIFA Index of Relative Disadvantage assigned to each AEDC Community.

2. Yorke Peninsula

The Yorke Peninsula local government area is situated in the southern part of the Yorke Peninsula, below Kadina and Moonta, approximately 90 kilometres from Adelaide's Central Business District. It includes the main towns, Maitland, Minlaton, Yorketown, and Ardrossan, and surrounding towns of Point Pearce, Port Victoria, and Stansbury. Yorke Peninsula is also a large rural area covering almost 6,000 square kilometres (see Table 12). According to the 2011 census, there were 11,046 people living in the local government area, with 5.4% (*n* = 597) of the population aged 0 to 5 years. This community has the lowest proportion of children aged 0 to 5 years of all 'thriving' communities.



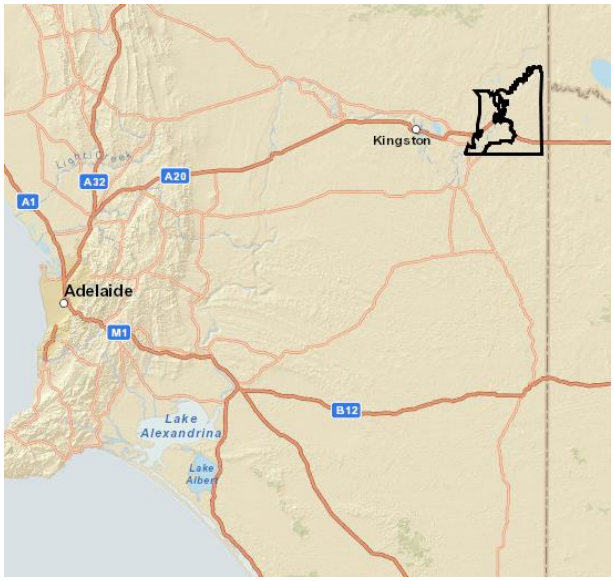


3. Mount Gambier

Located close to Wattle Range in the South East, Limestone Coast region of the state, Mount Gambier is the second largest city in South Australia, approximately 400 kilometres South of Adelaide. According to the 2011 census, the population of Mount Gambier was 24,861, including 2,061 children (8.3%). This is the highest proportion of children aged 0 to 5 years of all 'thriving' communities. With a much smaller land area and a much larger population, the population density of Mount Gambier is much higher than in the nearby Wattle Range community, and is similar to the Port Adelaide Enfield and Salisbury communities in urban Adelaide.

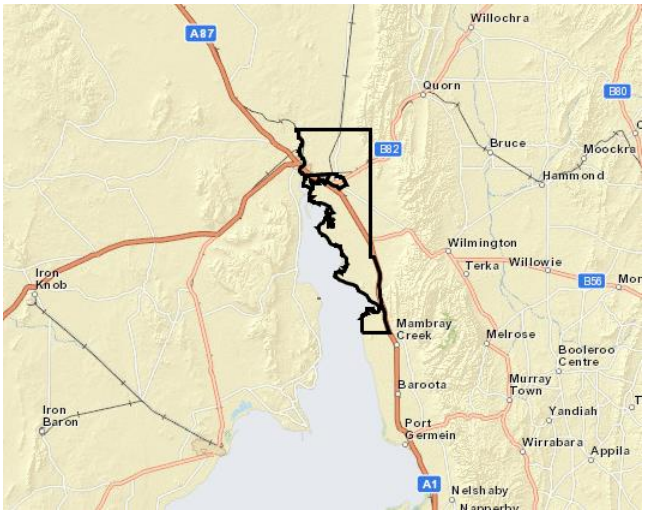
4. Port Adelaide Enfield

Port Adelaide Enfield is a large local government area in the western suburbs of Adelaide. It ranges from Windsor Gardens and Gilles Plains in the east to Semaphore and Largs Bay on the west coast. It includes the beachside suburbs of Outer Harbour (the northern most point of Port Adelaide Enfield), North Haven, Taperoo/Osborne, Largs North and Largs Bay, as well as the inner city suburbs of Croydon Park, Devon Park, Dudley Park, Broadview, Manningham and Sefton Park. Port Adelaide Enfield has the lowest level of socioeconomic advantage of all the 'thriving' communities, with a SEIFA score of 914.77. However, there is a lot of variation in SEIFA between suburbs in Port Adelaide Enfield, ranging from 1081.17 in the eastern suburb of Northgate to 767.08 in the more central suburb of Woodville Gardens. According to the 2011 census, the population of Port Adelaide Enfield was 113,518 including 8,300 children aged 0 to 5 years (7.3%).



5. Renmark Paringa

Located on the Murray River, on the South Australia-Victoria border, Renmark Paringa is a local government area formed in 1996 by the amalgamation of the District Council of Paringa and the town of Renmark. It is located approximately 250 kilometres from Adelaide's CBD and includes the AEDC local communities of Renmark, Outer Renmark (Cooltong, Lyrup, Renmark North, Renmark South, Renmark West), Paringa and Pike River. According to the 2011 census, the area had a population of 9,231 of which 7.1% (*n* = 653) were children aged 0 to 5 years. The population density here is the lowest of all the 'as expected' communities but it is more populated than the 'thriving in adversity' regional communities of Wattle Range of Yorke Peninsula.

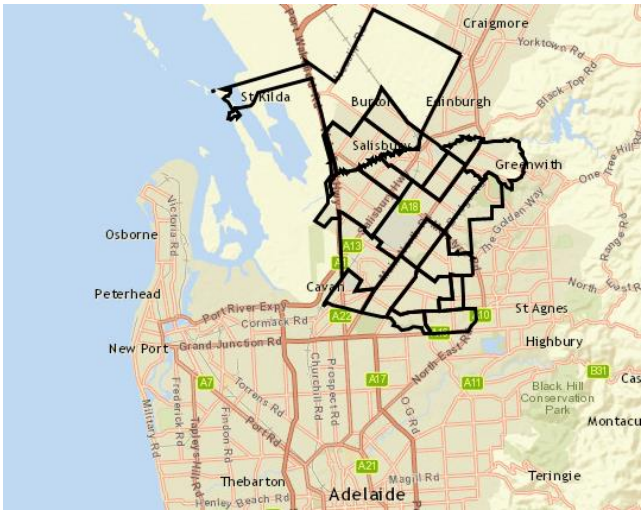


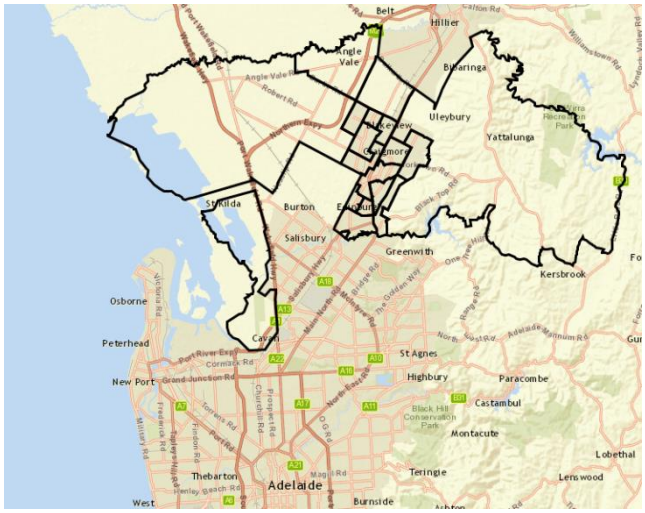
6. Port Augusta

Port Augusta is located on the east coast of the Eyre Peninsula at the head of the Spencer Gulf approximately 300 kilometres from Adelaide's CBD. The City of Port Augusta local government area includes the AEDC local communities of Port Augusta, Port Augusta West, Stirling North and Willsden. Port Augusta has a high proportion of children aged 0 to 5 years (8.4%) and is the most disadvantaged of all eight communities discussed in this section.

7. Salisbury

The City of Salisbury is located in the northern suburbs of Adelaide, approximately 20 kilometres from the CBD. It ranges from the suburb of Burton in the north, to Walkley Heights and Valley View. Similar to Port Adelaide Enfield, there are substantial differences in SEIFA scores between different suburbs in the City of Salisbury, ranging from 822.12 in Salisbury North to 1076.87 in Mawson Lakes. The population was 134,297 according to the 2011 census, of which 8.4% (*n* = 11,307) were children aged 0 to 5 years.





8. Playford

The City of Playford is large metropolitan area in the north of Adelaide. It includes a mix of large, relatively unpopulated areas such as Virginia and One Tree Hill and smaller, more populated suburbs such as Elizabeth South, and Davoren Park. The population density of this area is much lower than Salisbury and Port Adelaide Enfield but there is significant variation between the different suburbs. Playford has the highest proportion of children aged 0 to 5 (10.0%), which represents almost 8,000 children under six years of age needing access to services and supports.

Table 13. Characteristics of children from the 2012 AEDC data

	Thriving in Adversity				As Expected			
	Wattle Range (*n* = 163)	**Yorke Peninsula** (*n* = 89)	**Mount Gambier** (*n* = 306)	**Port Adelaide Enfield** (*n* = 1,313)	**Renmark Paringa** (*n* = 123)	**Port Augusta** (*n* = 194)	**Salisbury** (*n* = 1,749)	**Playford** (*n* = 1,345)
Demographics								
Indigenous	5 (3.1%)	8 (9.0%)	17 (5.6%)	81 (6.2%)	80 (5.9%)	74 (38.1%)	56 (3.2%)	80 (5.9%)
Born outside Australia	<=3	<=3	13 (4.2%)	184 (14.0%)	68 (5.1%)	4 (2.1%)	141 (8.1%)	68 (5.1%)
Speak a non-English language at home	4 (2.5%)	6 (6.7%)	16 (5.2%)	429 (32.7%)	30 (24.4%)	38 (19.6%)	482 (27.6%)	173 (12.9%)
Attended preschool	155 (96.9%)	83 (96.5%)	296 (99.3%)	1083 (93.6%)	111 (99.1%)	165 (97.1%)	1370 (94.2%)	1036 (92.7%)
Further assessment needed (not special needs)	14 (9.2%)	9 (10.8%)	21 (7.6%)	108 (9.2%)	15 (15.0%)	16 (10.1%)	157 (10.1%)	174 (15.7%)
Transition to school[1]								
Children making good progress in adapting to the structure and learning environment of the school	125 (77.2%)	72 (82.8%)	236 (77.4%)	882 (67.9%)	90 (74.4%)	118 (61.8%)	1,191 (68.4%)	760 (58.1%)
Children whose parent(s)/caregiver(s) are actively engaged with the school in supporting their child's learning	121 (74.7%)	62 (71.3%)	210 (68.9%)	844 (65.0%)	90 (74.4%)	103 (53.9%)	1,130 (64.9%)	667 (51.0%)
Children who are regularly read to/encouraged in their reading at home	120 (74.1%)	60 (69.0%)	221 (72.5%)	876 (67.4%)	90 (74.4%)	98 (51.3%)	1,142 (65.6%)	695 (53.1%)

Notes. [1]Teachers answer "often or very true", "sometimes or somewhat true", "never or not true" or "don't know" to the transition to school items. The number and percentage presented in this represent those children for whom the statement was "often or very true".

6.2. Characteristics of children in the communities

Table 13 presents the characteristics of the children living in each community from the 2012 AEDC data. This includes demographic information, proportion of children who attended preschool in the year prior to beginning school, and the proportion of children who do not have a formal special needs status but were identified by teachers as requiring further assessment, and information on the transition to school for children living in each community. The 2012 AEDC data are presented here as the most up to date information. However, it is important to note that these child level characteristics will vary over time and will vary between children attending government and non-government schools.

6.2.1. Demographic characteristics

As with many health and educational outcomes, there are certain demographic characteristics that are commonly associated with poorer results. This is the same for the AEDC. In general, we find that children of Aboriginal background and children born in other countries are more likely to have poorer AEDC results. As such it was important to review the demographic characteristics of these communities. We found that, there was no notable difference between the proportion of Indigenous children living in 'as expected' communities compared to those that were 'thriving in adversity'. There was a much higher proportion of Indigenous children in Port Augusta than in any other community, but this was not the case on other 'as expected' communities where less than 6% of children were Indigenous. Generally, the 'as expected' communities had a higher proportion of children born in a country other than Australia. However, Port Adelaide Enfield (a thriving community) had the highest percentage. As such, these demographic characteristics do not "explain" the AEDC results, indeed they add to the finding that there is something supporting the children in these communities despite the demographic make-up in the community.

We did however find that there was a distinct difference between the two groups of communities in the proportion of children who spoke a language other than English at home. Mount Gambier, Yorke Peninsula and Wattle Range had a much lower percentage of these children than any of the 'as expected' communities. This is a possible explanation for why there were fewer developmentally vulnerable children here, particularly on the language and communication domains of the AEDC. However, although identified as 'thriving', the proportion of children who spoke a language other than English at home, Port Adelaide Enfield was the highest of all communities.

6.2.2. Preschool attendance

Attending preschool has been shown to strongly relate to children's language, social and emotional development, and generally improves development. Therefore even small differences in preschool attendance between communities could have made a difference to AEDC results. The proportion of children who attended preschool in the year before starting school was high in all communities, with at least 92% of children attending pre-school. As shown in Table 13, preschool attendance seems to be higher in the regional communities than in the metropolitan areas (Port Adelaide Enfield,

Salisbury and Playford). Despite some variation between communities, there is not a distinct difference in preschool attendance between 'as expected' and 'thriving' communities.

6.2.3. Additional needs

Children formally identified as having special needs are not included in the AEDC results. Of interest however is the proportion of children who do not have an official special needs status, but who were identified by teachers as requiring some form of further assessment (e.g. medical and physical, behaviour management, emotional and cognitive development). These children are likely to have needs that are not being met and may consequently be more likely to be developmentally vulnerable. Generally, the proportion of children with additional needs was slightly lower in the thriving communities (7-11%) than in the as expected communities (10-15%). These findings further add to the consistency of identifying these communities as "thriving" and "as expected".

6.2.4. Transition to school

The proportion of children making good progress in adapting to the structure and learning environment of the school was highest in the thriving communities; Mount Gambier, Yorke Peninsula and Wattle Range. The proportion of children adapting well in Port Adelaide Enfield however, was lower than the other thriving communities, and more comparable to those communities performing as expected.

Generally the proportion of children with parent(s) or caregiver(s) actively engaged with the school in supporting their child's learning was also higher in the thriving communities, but there was a less distinct difference. Port Augusta and Playford were notably lower with only 50 to 54% of children having parents who were actively engaged with the school.

There tended to be a higher proportion of children in the "thriving" communities who were regularly read to and encouraged in their reading at home (67-74%) than in the "as expected" communities. In most of the "as expected" communities between 50 and 66% of children were read to regularly, however Renmark Paringa was a clear exception with 74% of children being read to regularly.

6.2.5. Summary

Although the considerations discussed above go some way toward explaining why Mount Gambier, Yorke Peninsula and Wattle Range had better child development outcomes than would be expected given their level of socioeconomic disadvantage, the same cannot be said for Port Adelaide Enfield. Out of all eight communities, Port Adelaide Enfield had the highest percentage of children born outside Australia and the highest percentage of children who spoke a language other than English at home. There was also a lower percentage of children who attended preschool the year before starting school, and the proportion of children transitioning successfully into the school environment was more comparable to the proportions in the "as expected" communities. Despite this, Port Adelaide Enfield emerged as a community that was "thriving in adversity". It is, therefore, likely that other factors were contributing to the resilience of children in these 'thriving in adversity' communities.

7. Desktop Analysis & Community Consultation

In this section, the programs and services available in each of the "thriving in adversity" and "as expected" communities for children aged 0 to 5 years and their families/caregivers are explored. The main goal was to see what we can learn from the 'thriving' communities that may be transferable to other communities. We focused on five key services:

- Libraries
- Children's Centres and Early Childhood Services
- Playgroups
- Playgrounds
- Health Services

These services were selected as the focus due to the important role they play in promoting positive child development and education, especially considering what is measured by the AEDC domains. We also investigated the availability and accessibility of public transport in each community.

7.1. Method

Desktop analysis included thorough online investigation into the services available in each of the eight communities. Particularly insightful were council websites, yellow pages, whereis.com, mychild.gov.au and SA Health. Community consultations involved emails and phone calls to library staff and directors, early childhood educators at preschool and childcare facilities and council members. Consultations took the form of a semi-structured interview. Questions were asked concerning the types of services and programs offered for children aged 0 to 5 years, the numbers of children making use of them, how people access the service, collaborations with other service providers, any changes implemented in recent years and some demographic information of the children attending. It is important to note that the information collected is current, whereas the two cohorts of children for whom we have AEDC data were 5 years old in 2009 or 2012.

An overview of the different services and programs available is provided below before presenting the community specific findings.

7.1.1. Libraries

Libraries provide early literacy programs, access to books and educational resources for children and their caregivers, as well as providing a community-based location for mothers and babies groups, and connecting families to other services. Libraries were investigated in terms of how many are present in each community, the programs offered for children aged 0 to 5 years, their level of outreach, and associations with other services. All early childhood programs offered through libraries focus on literacy development, but some also incorporate a musical or physical activity component. A brief description of the main programs offered in libraries in SA communities is provided below.

The *Little Big Book Club* is a state-wide, not-for-profit collaboration between local newspapers, public libraries and the state government, aimed at developing early literacy development. It offers a number of early childhood programs and resources through SA libraries. For more information: http://www.thelittlebigbookclub.com.au/

One program under the *Little Big Book Club* initiative is ***Baby Bounce***; an early literacy session for children aged 0 to 2 years. It involves singing, dancing, rhyming, stories and finger-play. Through engaging children in a language-rich play session, *Baby Bounce* has shown to benefit phonemic awareness, vocabulary development and comprehension, as well as later reading abilities (Hill, 2006). Sessions are run by library staff who have attended a training program entitled *Building Literacy before School Training and Development,* which covers subjects such as child and brain development research, vocabulary, phonemic awareness, book selection for different age-groups, storytelling, reading aloud and connecting with communities. With a funding commitment from the state government from 2006, the *Little Big Book Club* also provides free reading packs to children who attend the libraries, containing a reading book, a story time DVD and information for parents, including suggestions of appropriate books and tips for effectively reading to their child.

Bounce & Rhyme, ***Giggle Time*** **and** ***Lapsit*** are also early literacy programs aimed at children aged 0 to 2 years, involving books, rhyming, singing, dancing and finger-play. ***Books R4 Babies*** is also targeted at this age-group, and involves reading books and playing literacy-based games. The key difference between these programs and Baby Bounce is that they are run by library staff or volunteers who have no specific training or qualifications, although many are working or studying in a related field.

Rhyme Time is similar to the programs already mentioned, but is aimed at older toddlers from age two and above. ***Preschool Storytelling, Story Time*** **and** ***Kids Time*** are all storytelling and craft sessions for children under five years, generally considered more appropriate for and attended by children aged 3 to 5 years. These programs are also run by library staff/volunteers who may or may not have any early childhood education training.

Move and Groove has a particular focus on music and is intended for children aged 3 to 5 years who have progressed beyond *Baby Bounce.* ***Gym Jams*** focuses on physical activity for all preschool-aged children. This program involves story telling, physical group activities and access to a range of play equipment at the local school. In addition, some communities have a volunteer-run ***Toy Library*** aimed at children aged 0 to 6 years. These offer a range of toys for loan that are matched to each child's stage of development and are designed to facilitate particular skill development. For example, threading beads are available to assist fine motor skills. Toy libraries help educate caregivers about the types of toys that are most advantageous for their child's development.

7.1.2. Children's Centres and Early Childhood Services

We explored the Children's Centres, preschool and childcare services in each community, and examined the degree of collaboration they have with one other and other relevant services.

Children's Centres were specifically established in areas of high need and/or areas with high numbers of children, providing a universal, integrated setting for parents/caregivers and their young children to access care, education, health services and community development activities (Department for Education and Child Development, 2011). Services offered by each centre are tailored to meet the needs of the particular community, and therefore vary. Generally, Children's Centres provide support services such as speech pathology, occupational therapy, child psychology, behaviour management and social workers, as well as child education and care in the form of preschool, long day care and occasional care, playgroups and school transition programs. Centres also offer parent support and information, and can refer families on to other necessary services, working closely with a range or organisations including Child and Family Health Services (CaFHS), Novita Children's Services, Autism SA, Disability SA, the Department for Education and Child Development (DECD) and the Department for Communities and Social Inclusion (DCSI). With the exception of Wattle Range and Yorke Peninsula, Children's Centres are located within all communities under consideration.

Preschools (also referred to as kindergartens in South Australia) are structured, play-based educational programs run by a university-qualified teacher. Preschool programs may operate independently or in association with a childcare service or primary school. Children most commonly participate in preschool from age four, the year before commencing formal schooling, although in some circumstances they may start from age three (e.g. Aboriginal and Torres Strait Islander children and children under the guardianship of the minister). As a result of the Early Years Learning Framework (EYLF) and Universal Access initiative, as of 2013, children in SA are now eligible to attend up to 15 hours of subsidised preschool per week in comparison to 11 hours previously. Both of the cohorts of children we are considering (aged 5 in 2009 and 2012) would have attended childcare and preschool before the implementation of Universal Access and been eligible for 11 hours of subsidised preschool per week.

There are a number of different types of ***childcare*** services within each community including:

- Family Day Care (care is given in the provider's own home)
- Long Day Care (centre-based)
- Occasional Care
- Outside School Hours Care (OSHC)

We considered the types of childcare that are available and being utilised by families in each community.

7.1.3. Playgroups

In each community, the involvement in playgroup was also explored. In South Australia, there are three different types of playgroups available to families: Community Playgroups, Supported Playgroups (also known as Facilitated Playgroups) and Intensive Supported Playgroups (FaHCSIA, 2011). These services differ in the level of support they provide to parents and children, as well as in how they are organised and facilitated.

Community Playgroups are organised and led by parents and caregivers, and can be thought of as a community activity. Community Playgroups in SA are often run in affiliation with Playgroup SA who provide playgroup leaders with support in running playgroup, insurance coverage, as well as benefits for members in the form of events for children, parenting workshops, etc. Other Community Playgroups not affiliated with Playgroup SA are often organised by parents themselves and are run in a community space. It is important to note that the information provided below in regards to the Community Playgroups in each community is not inclusive of those not affiliated with Playgroup SA. Where possible however, information regarding independently-run playgroups has been included, such as when integrated with a Children's Centre, or run but another community organisation.

Supported Playgroups and ***Intensive Supported Playgroups*** are facilitated programs or services run by trained staff and, as such are significantly more costly programs to deliver. One such example is the *PlayConnect Playgroup Program* which focuses on connecting families who have a child with Autism Spectrum Disorder (ASD).

Of the above, some playgroups target specific types of families – such as Indigenous, new immigrants, or young mothers, while others are open to all families. Playgroups also vary in their focus, with some playgroups aiming to develop specific skills for children such as language and communication skills, or co-ordination and fine motor skills, while others focus more on helping parents to improve their parenting skills and build support networks with other families in their community.

7.1.4. Playgrounds

Playgrounds offer a range of benefits for both children and parents alike. Play equipment can help to encourage children's physical development (i.e., fine and gross motor skills), as well as present opportunities for children to work co-operatively with one another and learn to take turns. Further, playgrounds allow for both parents and children to meet with and socialise with other families, as well as run around and exercise in an open space. We explored existing playgrounds in each community, and Table 15 presents the number of playgrounds in relation to the size of each community.[9] [10]

7.1.5. Health Services

We focused on Child and Family Health Services (CaFHS) and Child and Adolescent Mental Health Services (CAMHS), due to the particular relevance they have for the health and wellbeing of children aged 0 to 5 years. We acknowledge that there are other health services in each of the communities such as GPs that provide services across all age groups.

[9] Playgrounds in Wattle Range, Yorke Peninsula, Mount Gambier and Renmark Paringa were located using 'where is' and 'playground finder' online. Information about Port Adelaide Enfield, Port Augusta, Salisbury and Playford playgrounds was obtained from their council websites or by contacting the council directly

[10] Playgrounds located within schools and preschools were not included

Child and Family Health Services (CaFHS) provide a number of services including routine health checks at six and 18 months, new parent groups and a Neonatal Hearing Screening Program. The Universal Contact Visit is also provided by CaFHS, which involves a Child and Family Health nurse visiting parents in their home after the birth of a new baby. This allows any child development or health issues to be recognised early and therefore early access to relevant services. The nurses also provide parenting information and guidance about the kinds of community services available to suit the family's individual needs. Eligible families have access to the Family Home Visiting Program, with ongoing visits by nurses for a two year period. An Early Childhood Intervention Consultant is also available for parents who have concerns regarding their child's development. CaFHS nurses visit preschools across the state to conduct four-year-old health and development checks. At some centres, Aboriginal Cultural Consultants are available to provide a more culturally appropriate means to assist Indigenous families in gaining access to services. They also assist to non-Aboriginal staff in developing positive relationships with Aboriginal families and educating them to be culturally sensitive in their communication and service delivery.

Child and Adolescent Mental Health Services (CAMHS) provide free mental health services to young people from 0 to 18 years. CAMHS acknowledge the cost benefit of early intervention compared to later treatment, as well as its potential to improve of ongoing cognitive, social, moral and emotional development. CAMHS therefore they provide a number of services for children aged 0 to 5 years, for example, CAMHS may provide assistance in temperament and behavioural problems, improving a child's attachment relationship with their parent or caregiver, as well as providing group programs and education for parents, such as *The Incredible Years* for parents of children with developmental disorders, *Circle of Security*, an attachment focused parent group, and *Bringing up Great Kids*, which presents a mindfulness-based parenting approach (Health, 2013).

7.1.6. Transport and Access to Services

In addition to exploring the quantity and quality of services in these communities, it is also important to consider the ease or difficulty with which families are able to access them. Barriers to accessing services are a major contributing factor that may explain why some families do not access the services that are provided in their area. Families living in more socioeconomically disadvantaged areas are less likely to own a car than families in more affluent areas, and for these families, accessible and affordable public transport is essential for them to access services for their children. In regional areas where public transport is not always available, if families without a car do not live within walking distance to preschools, libraries and Child and Family Health Services, then they often have no way to access these services. As such, the availability, accessibility and proximity of services and transport were considered.

7.2. Wattle Range

Libraries: There are two libraries in the Wattle Range area: Millicent Public Library and Penola School Community Library. These two libraries offer four early childhood literacy programs for children aged 0 to 5 years.

- Baby Bounce (0-2 years, trained facilitator)
- Rhyme Time, Preschool Storytelling and Kids Time (0- 5 years)

Baby Bounce is run for 30 minutes once a week at Millicent Public Library and once a month at Penola School Community Library. In Millicent, there are approximately 15 children attending these sessions each week (approximately 4% of children aged 0-2 residing in the Wattle Range community), usually accompanied by one parent each. The librarian indicated that the number of children attending had been increasing over the three to four years the program has been offered. The Baby Bounce program has only been offered in Wattle Range since 2010 so would not have made an impact on the AEDC and NAPLAN cohorts of children considered in this report, as the youngest – the 2012 AEDC cohort – would have been 3 to 4 years of age when the program started and it targets 0 to 2 year olds. Nonetheless, this program should support the development outcomes for the next cohort of children who will be assessed in the 2015 AEDC.

Rhyme Time and Preschool Storytelling are also held weekly in Millicent and monthly in Penola, and Kids Time is run monthly in Penola only. Both libraries have regular visits from informal, parent-run 'Mothers and Babies' groups, where parents are introduced to the benefits of the library. Millicent Public Library also has depots based in the local primary schools at Kalangadoo and Nangwarry, and in the Beachport Council/Information Centre. These depots are open for 2 hours twice a week. There is currently no mobile library.

Children's Centres and Early Childhood Services: Although there is not a Children's Centre in the Wattle Range community, there appears to be a high degree of collaboration between preschool, childcare and playgroup services, with many sites offering them from one location. For example, in Millicent, there are two main sites operated by DECD: Millicent North Kindergarten and McArthur Park Kindergarten. As well as a preschool program, both of these offer a weekly playgroup session for younger children. The Gladys Smith Early Learning Centre offers full and part day childcare, and despite not offering any other services on site, maintains a close relationship with the kindergartens. Similarly, the McKay Children's Centre in Penola provides childcare, preschool and a playgroup.

There are also kindergartens in the smaller towns of Glencoe and Kalangadoo, both of which additionally offer a weekly playgroup session and occasional care. A number of surrounding areas offer preschool services within their primary schools, known as Child Parent Centres (CPC): Beachport, Mount Burr, Nangwarry, Tantanoola and Kangaroo Inn (in Millicent). All CPCs and Preschools provide transition programs into local primary schools. For example, in Mount Burr, approximately 12 kilometres from Millicent, preschool children make weekly visits to the reception and year one class, as well as participating in school assemblies and special events. Some of these CPCs also run playgroups on site. There is no Outside School Hours Care (OSHC) in Millicent, which

was raised as an issue for working families living in the town. Other than some occasional care provided by preschools or primary schools, there is limited childcare available in the smaller towns, including Nangwarry and Kalangadoo, so many families must travel to Millicent or Penola to access this service.

Playgroups: As demonstrated below in Table 14, there are eight playgroups run by Playgroup SA in Wattle Range. These are all community playgroups – two of which are in Millicent, three in Penola, and one in each Beachport, Glencoe and Rendelsham. Data is available on seven of these eight playgroups: a total of 134 children attend these seven groups, which is approximately 15% of children aged 0-5 living in Wattle Range. Wattle Range has the highest amount of playgroups per 100 children out of all eight communities examined.

Table 14. Number of Playgroups in 'Thriving in adversity' and 'As Expected' communities

	Thriving in Adversity				As Expected			
Community	**Wattle Range**	**Yorke Peninsula**	**Mount Gambier**	**Port Adelaide Enfield**	**Renmark Paringa**	**Port Augusta**	**Salisbury**	**Playford**
Approximate no. of playgroups	**8**	**5**	**6**	**8**	**0**	**1**	**23**	**7**
Approximate no. of children attending playgroups [a]	134	90	471	133	0	22	283	45
***N* children aged 0-5 years**	872	597	2,061	8,300	653	1,178	11,307	7,916
Playgroups/100 children	0.9	0.8	0.3	0.1	0	0.1	0.2	0.1
% of 0-5 year olds attending playgroups	15%	15%	23%	2%	0%	2%	3%	1%

Notes. [a] The number of children attending playgroups was only available for a subset of playgroups (see text for details), so these numbers are under-estimates of the number of kids attending playgroups.

Playgrounds: As shown in Table 15, there are a total of 27 playgrounds in the Wattle Range community: 14 of these are in the main town of Millicent, nine are in Penola, and a further four in Beachport. When considering the number of playgrounds per square kilometre, it seems like a small number, however when considering the number of playgrounds per 100 children, Wattle Range has more playgrounds than all 'as expected' communities and the 'thriving' communities of Mount Gambier and Port Adelaide Enfield.

Table 15. Number of Playgrounds in 'Thriving in Adversity' and 'As Expected' Communities

	Thriving in Adversity				As Expected			
Community	**Wattle Range**	**Yorke Peninsula**	**Mount Gambier**	**Port Adelaide Enfield**	**Renmark Paringa**	**Port Augusta**	**Salisbury**	**Playford**
Area (km^2)	3,925	5,891	27	92	916	1,153	117	410
***N* children aged 0-5 years**	872	597	2,061	8,300	653	1,178	11,307	7,916
Approximate no. of playgrounds	27	25	45	122	16	16	140	60
Playgrounds/100 children	3.1	4.2	2.2	1.5	2.5	1.4	1.2	0.7
Playgrounds/km^2	6.9^{-03}	4.2^{-03}	1.7	1.3	.02	.01	1.2	0.1

Health Services: There are two CaFHS centres in Wattle Range, located in the most populated towns of Millicent and Penola. There is also a South East Regional Community Health Service (SERCHS) office located in Millicent (provided by Country Health SA), which provides a number of community-based health services for young children including social work, speech pathology, occupational therapy, physiotherapy and dietetics across the Wattle Range. One concern of the community is that Obstetrics is no longer provided at the Millicent hospital, meaning mothers now have to travel approximately 50 kilometres to Mount Gambier to access this service. CAMHS services are not provided in Wattle Range, with the closest service being in Mount Gambier, approximately 50 kilometres from both Millicent and Penola.

Transport and Access: Wattle Range is a large area comprised of a number of small towns. Access to services seems to be relatively easily for families living within the larger towns, of Millicent and Penola, whose residents can easily walk or drive, but far more challenging for families living in the smaller towns. Some services offer out-reach programs to the smaller towns such as library depots in Kalangadoo, Nangwarry and Beachport but most of the early childhood programs and health services are only offered in the larger towns of Millicent and Penola. Therefore, while access to programs and services may be easily achievable for those who live in Millicent and Penola (just over half of the total population) who can walk or drive to their local branch, families living in the smaller towns need to travel considerable distances to reach them. With the absence of any public transport, it is likely that access to early childhood programs is challenging for many families in Wattle Range.

Preschools in Millicent are serviced by a community bus for children who live outside of the town, however places on the bus are limited.

Staff highlighted that the number of places available, especially for childcare in the region is insufficient, with the majority of centres being at capacity. For example, McKay Children's Centre currently has a long waiting list, and Millicent North Kindergarten reported that they are at capacity. The cost of childcare was also considered to be an issue for some families, with anecdotal evidence

suggesting they are choosing to use more informal methods of support due to the cost of formal childcare.

7.3. Yorke Peninsula

Libraries: There are four main library branches in Yorke Peninsula: Minlaton Community Library, Yorketown Community Library, Maitland School Community Library and Ardrossan Area School Library. There are also depots in Warooka, Stansbury, Port Vincent, Port Victoria, Marion Bay, Edithburgh, Carramulka and Corny Point. Again there is no mobile library, but the depots are thought to serve a similar purpose.

Programs for 0 to 5 year-olds in the main library branches include:

- Bounce and Rhyme
- Kinder Gym
- Gym Jams

Bounce and Rhyme is run weekly at the Yorketown Community Library and fortnightly at the Minlaton Community Library. Although not facilitated by staff with specific training, as is the case with the Baby Bounce program, it is run by volunteers who have early childhood qualifications and are working as either a primary school teacher or childcare worker. Approximately eight to ten children attend the sessions (approximately 1-2% of children aged 0-5 living in the Yorke Peninsula area), although librarians stated that the program could easily accommodate 20 or more children with their parents. Yorketown Community Library offers a kinder gym program for preschool children for one hour a week, and the Ardrossan Area school library offers a weekly, one hour session of Gym Jams, attended by approximately 20 children with their caregivers (approximately 3% of children aged 0-5 living in the Yorke Peninsula area).

The Maitland School Community Library offers an activities day in the school holidays, with story-telling, craft, singing and dancing, as well as occasional clown visits and other community events aimed at young children – but does not offer any regular programs for preschool-aged children. Activity days are usually attended by over 50 children and their families (approximately 8% of the children aged 0-5 living in Yorke Peninsula) and are reported to be well-received by the community, with caregivers very keen to be involved. This could indicate a demand for regular early childhood programs within the library.

The libraries in the Yorke Peninsula identified close connections with other local services, with regular visits from playgroups, childcare centres, kindergartens and schools and a strong sense of community involvement.

Children's Centre's, Playgroups and Early Childhood Services: There are no Children's Centres in Yorke Peninsula but several sites provide multiple services from one location. For example, the Minlaton District Early Learning Centre operates a kindergarten, occasional care and a playgroup, as

does the Ardrossan and Districts Community Kindergarten and the Edithburgh Preschool Centre. Similarly, Maitland Children's Centres and the Yorketown Community Children's Centre provide preschool, playgroups and full day childcare.

Point Pearce Aboriginal School, located near Maitland, offers a playgroup, occasional care, a preschool that children are eligible to attend from age 3, and a reception to Year 2 class. It was reported that the availability ofa range of different services and programs for children from birth to age eight in one central location helps to foster strong relationships between families and staff, and build community connectedness.

Preschool services in Yorke Peninsula have close connections with local schools and provide transition programs when children move into junior primary. For example, the Minlaton District Early Learning Centre has visits to and from Minlaton District School in the five weeks prior to a child starting school, with the time spent visiting gradually increasing. The kindergarten and school also cooperate throughout the year for certain activities. All kindergartens in the area provide similar support for children transitioning into nearby primary schools. As well as routine visits by CaFHS, preschool centres in Yorke Peninsula have visits from Speech Pathologists. Some staff suggested that input from Occupational Therapists would also be beneficial.

Community consultation revealed that childcare services are limited in Yorke Peninsula, with many families having to rely on informal supports from relatives or friends in caring for their children before they reach preschool age. In contrast, community consultation also revealed that parents have ample opportunity to be involved in playgroups, either organised by Playgroups SA or by parents themselves. It was thought that most families are enthusiastic about participating in a playgroup.

Playgroups: As Table 14 shows, there are five Playgroup SA affiliated playgroups in the Yorke Peninsula; three of which are community playgroups, one in Maitland and two in Yorketown, and two of which are facilitated playgroups (i.e., led by a paid facilitator), one in each Corny Point and Curramulka. Data is available on four of these five groups: a total of 90 children attend these four groups, which is approximately 15% of children aged 0-5 living in the Yorke Peninsula region. The Yorke Peninsula has the second highest amount of playgroups per 100 children out of all communities examined, after Wattle Range.

Playgrounds: There are 25 playgrounds in the Yorke Peninsula area (see Table 15). These are fairly evenly spread between the towns of Edithburgh, Maitland, Ardrossan, Port Victoria, Stansbury, Minlaton, Port Vincent and Yorketown. This number is small when considering the large area size of this community, however when considering the number of playgrounds per 100 children, the Yorke Peninsula has the highest number of playgrounds out of all 'thriving' and 'as expected' communities.

Health Services: There are four CaFHS centres in the Yorke Peninsula Community, located in the Ardrossan Health Centre, Maitland Community Health Centre, Minlaton Community Health Centre

and Yorketown Hospital Education Centre. Despite a substantial Indigenous population, there are no Aboriginal consultants available at any of these centres. There is also a CAMHS team based at the Minlaton Community Health Centre that makes regular visits to Maitland and Yorketown.

The Yorke Peninsula Community Health Service is the result of the 2005 amalgamation of Southern Yorke Peninsula Health and Central Yorke Peninsula Hospital. Services are provided in the Minlaton Community Health Centre alongside CaFHS, and include antenatal and postnatal care, bed wetting programs, family counselling, health information, home nursing care and immunisation and visiting services.

Transport and Access: Similar to Wattle Range, Yorke Peninsula is a large area consisting of a number of small and medium sized towns. The large number of library depots means even those living in very small towns (e.g. Warooka population = 198 people, Marion Bay = 241 people) have access to some library services. However, these depots are only open for two hours twice a week, and do not offer the early childhood programs that are offered in the main branches.

Families living in the larger towns can access education, health and playgrounds by car or foot. There are school buses available to transport preschool children living in outer farming or coastal areas into town, but places are limited and some families are still required to drive substantial distances. Interestingly, some community members did not consider lack of transport to be a significant barrier to accessing services, perhaps due to the fact that the majority of families living outside larger towns would already be accustomed to regularly driving considerable distances. Other consultations revealed that adequate transport is a significant issue limiting many families' access to services.

While many of the Wattle Range preschools were at capacity, some preschools in the York Peninsula area provide services to fewer children than they have the capacity to do so. For example, Yorketown Community Children's Centre provides preschool education for 14 children (approximately 2% of the children aged 0-5 residing in the Yorke Peninsula area), but has the capacity for 42, and Maitland's Children's Centre, with a capacity for 43 children currently has 22 children attending the kindergarten (approximately 4% of the children aged 0-5 living in the Yorke Peninsula) . In contrast, the strain on childcare was mentioned many times. Places in Family Day Care and OSHC are also limited.

7.4. Mount Gambier

Libraries: The main library branch in Mount Gambier is the Mount Gambier Public Library, which offers three programs for children under 5 years:

- Baby Bounce
- Move and Groove
- Story Time

Baby Bounce is run once a week for 30 minutes, as is the program Move and Groove, whereas Story Time is run twice a week. As well as running these programs in the library, an outreach program has

been developed over the last five years with sessions now being run at a number of locations in Mount Gambier, including childcare centres, playgroups, kindergartens and schools upon request, meaning programs reach children that otherwise would not or could not participate.

The librarian at the Mount Gambier Public Library discussed a close connection with local kindergartens and schools. Additionally, the library collaborates with Anglican Community Care, Families SA and the South Australian Police Department. The library is also located close to the town's Child and Youth Heath Centre, which encourages new mothers to attend Baby Bounce once their parenting programs within Child and Youth Health end, and many parents groups choose to use the library as a weekly meeting place. Mount Gambier also has a volunteer-run Toy Library aimed at children aged 0-6 years, accessed by approximately 25 families (approximately 1% of the children aged 0-5 living in Mount Gambier)

Children's Centres and Early Childhood Services: Given the much larger population of Mount Gambier, it is not surprising that there are more childcare and preschool services available here than in Wattle Range and Yorke Peninsula. Many preschools e.g. Acacia Kindergarten, Akuna Kindergarten, Gladigau Park Kindergarten, Melaleuca Park Kindergarten and Saint Martin's Kindergarten, are also the site of parent-run playgroups. There are also playgroups run by other organisations, including the Salvation Army, and a young parent's playgroup offered by Anglicare. Additionally, in Mount Gambier there is a Travelling Nunga Playgroup, suitable for children from all backgrounds, focusing on Aboriginal culture and allowing children to participate in traditionally Indigenous activities, such as dot painting.

Children are again supported in their transition into primary school, facilitated by close connections between early education providers. For example, children attending Saint Martin's Kindergarten, make four visits to the associated school, accompanied by kindergarten staff, with the duration of the visit gradually increasing each time. Primary school teachers also visit the kindergarten.

Unlike in Wattle Range and Yorke Peninsula, Mount Gambier also has a number of additional childcare centres that operate independently of preschools and primary schools.

In 2010, a Children's Centre was established in Mount Gambier, offering preschool, occasional care for children under four years and a number of playgroups. Playgroups provided by the Children's Centre are usually attended by an early childhood professional, who gives educated information about child health, learning and development. Through the Children's Centre, parents can access playgroups specifically for young parents, and for children with special needs. The Children's Centre is closely linked to CaFHS.

Additionally, early education centres in Mount Gambier are offered assistance by Inclusive Directions, a not-for-profit organisation dedicated to promoting inclusion for children with disabilities, developmental delays, and those from culturally diverse backgrounds. Inclusive Directions provide support to childcare services, OSHC and family day care services in the form of training staff, assistance with programming, provision of equipment, resources and extra funding, as well as providing individual assistance to children and supporting families in building their networks

and links with other community services. For example, at Carma Playhouse, Inclusive Directions provide bilingual support to children for whom English is their second language.

Community consultation revealed that childcare and preschool services in Mount Gambier are very supportive of each other, continuously sharing information and resources. Support from local businesses was also highlighted. For example, a local bakery provides dough for children to make their own hot cross buns, and Bunnings provide assistance with facilities.

Playgroups: There are six playgroups in Mount Gambier that are affiliated with Playgroup SA (see Table 14): two of these are community playgroups, three are facilitated and one is a supported playgroup. Data is available on three of these six groups: a total of 471 children attend these three groups, approximately 23% of children aged 0-5 living in Mount Gambier. Compared to Wattle Range and Yorke Peninsula, Mount Gambier has a lower amount of playgroups per 100 children; however this amount is still higher than all 'as expected' communities.

Playgrounds: Mount Gambier has a total of 45 playgrounds (see Table 15), a much larger amount per square kilometre than Wattle Range and Yorke Peninsula, but less considering the population of children.

Health Services: There is one CaFHS centre in Mount Gambier. Located in the region of the Limestone Coast, close to the Wattle Range, Mount Gambier also receives similar services from South East Regional Community Health Services (SERCHS) at the Mount Gambier Community Health Centre. CAMHS provides mental health services to the area.

Obstetrics, including antenatal and postnatal care, as well as paediatrics services are provided at both the Mount Gambier and Districts Health Service and the Village Medical Centre. These services are accessed by families and children in the immediate Mount Gambier area but also service families in the Wattle Range community.

Transport and Access: Mount Gambier is a smaller area with a relatively larger population than Wattle Range and Yorke Peninsula. Therefore services here are in much higher concentration, and issues regarding transport and travelling distances are much less prominent here. To access services, the majority of residents can easily drive or walk. There is also a public bus in Mount Gambier, and although it's services are limited, transport overall was not identified as a major issue by the community.

The extensive outreach of the library, with early childhood programs being delivered at a number of different sites, including childcare and preschools, means that many more children are exposed to their benefits than just those who attend the library.

Services in Mount Gambier are also accessed by families from surrounding towns. For example, approximately 10-20% of children attending St. Martin's Lutheran Kindergarten are thought to be living outside of Mount Gambier. Most of these families drive and often car-pool with others.

In regards to availability of childcare, one early childhood educational professional expressed that there may in fact be too many childcare services in Mount Gambier, with many unable to fill the number of places available. This has become increasingly evident in recent years – as local businesses are struggling and people are losing their jobs, this means that in many cases, there is now one parent home to look after the children or that families are no longer able to afford childcare. With the exception of cost being identified as an issue for some families, most childcare and preschool staff in Mount Gambier could not identify any barriers that could be preventing children from gaining access to their services.

7.5. Port Adelaide Enfield

Libraries: There are four libraries in the Port Adelaide Enfield council area, including Enfield Library, Greenacres Library, Port Adelaide Library and Semaphore Library. There is also a Home Library service that does monthly deliveries to people who are otherwise unable to access a library.

There are two key programs for children aged 0 to 5 years:

- Baby Bounce
- Preschool Story Time

Baby Bounce is offered once a week at Semaphore and Greenacres, and is attended on average by 27 children at each site (in total approximately 1% of children aged 0-5 living in the Port Adelaide Enfield area). Baby Bounce has been running for approximately 4 years at Semaphore, and 2 years at Greenacres, and therefore would not have been attended by our cohorts of children. Preschool Story Time is offered at each library for 30 minutes, once a week, with the exception of Greenacres, where the session runs twice a week. Numbers attending vary between libraries and from week to week. At Enfield and Greenacres, an average of 25 children attend each session, and at Port Adelaide and Semaphore Libraries, 12-15 children attend each week (both less than 1% of children aged 0-5 living in the Port Adelaide Enfield area).

As well as these regular programs, there are also school holiday programs and occasional night time story sessions, which both involve craft and storytelling and are appropriate for 0 to 5 year olds. Additionally, a librarian from the Enfield library runs a program called Baby Bugs at the Saint Joseph's Education Centre within Our Lady of the Sacred Heart College (OLSH) located in Enfield. The centre is designed for young women who are expecting or already have a child and wish to continue their secondary education. Baby Bugs includes a Baby Bounce session for children and their mothers, as well as education for parents about how to bond with, read to and encourage literacy development in their children. Approximately 10-15 children attend the *Baby Bounce* session here (less than half a percent of children aged 0-5 living in the Port Adelaide Enfield area), with up to 118 attending the adult education component.

As well as provision to the children who attend the libraries, Port Adelaide Enfield provides Little Big Book Club reading packs to local Child and Family Health Services (CaFHS) to give out to their clients. All libraries collaborate with OPAL (Obesity Prevention and Lifestyle), a program established in the state in 2009 that works with local communities to increase opportunities for children and families to eat well and be active. There is also cooperation with other council libraries, and visits to local childcare centres, kindergarten and schools. Enfield Library also visits TAFE English language classes to encourage participants to make use of the library.

Children's Centres and Early Childhood Services: Being a major metropolitan area in Adelaide, there is an extensive range of childcare and preschool services available across Port Adelaide Enfield. There are a large number of childcare centres and preschools that operate independently of each other, as well as a number of centres who provide services in the same location.

Providing universal access to a broad range of services, the six Children's Centres in Port Adelaide Enfield are situated in the following locations:

- Blair Athol North School
- Gilles Plains
- Ocean View College – Taperoo
- Park's Children's Centre – Angle Park
- Café Enfield
- Woodville Gardens

The Parks Children's Centre and Café Enfield are the most established centres, both opened in 2005, possibly influencing both of our AEDC cohorts of children. The Parks Children's Centre offers preschool and occasional care, as well as an inclusive preschool program for children with special needs and a number of support services. They also provide school transition program. Similarly, Café Enfield provides an array of services, including childcare, a kindy room that integrates childcare and preschool, as well as family day care and a crèche for parents engaged in the adult education and community learning also provided on site. The centres provide a number of playgroups, including specific groups for Indigenous families, new arrivals and for babies who have just started to crawl. Blair Athol North Children's Centre, opened in 2011, offers preschool, occasional care and playgroups divided according to whether children are walking or not yet walking. Taperoo, Woodville Gardens and Gilles Plains also offer preschool and childcare services, and Gilles Plains additionally runs a Baby Bounce session twice a week, and organises playgroups, including a Nunga playgroup that focuses on Aboriginal culture.

Staff at childcare centres and preschools stated that collaborations with other services are sought only when necessary, such as when a child requires bilingual support or input from a disability specialist. Staff mentioned that effort is made to incorporate Aboriginal culture in the children's learning.

Preschools do not seem to offer transition programs as comprehensively here as in the other 'thriving in adversity' communities. However, families in Port Adelaide Enfield now have access to HIPPY (Home Interaction Program for Parents and Youngsters), a program that started in 2010 in areas considered to be disadvantaged. The program assists children and parents in preparing for school, beginning the year before the child starts and continuing for their first year. Parents are required to work with their children for 10-15 minutes a day for five days a week, with fortnightly visits by a home tutor. There are also regular group meetings for families to support each other through the process.

Playgroups: As demonstrated in Table 14, there are eight Playgroup SA run playgroups in the Port Adelaide Enfield area; five of which are community playgroups (one in each Blair Athol, Croydon Park, Largs Bay, Northgate and Osborne) and three are facilitated playgroups (one in each Queenstown, Enfield and Greenacres). Data is available on seven of these eight groups: a total of 133 children attend these seven groups; approximately 2% of children aged 0-5 living in the Port

Adelaide Enfield area. Of all 'thriving' communities, Port Adelaide Enfield has the least playgroups per 100 children. When compared to the 'as expected' communities, Port Adelaide Enfield has more playgroups per 100 children than Renmark Paringa, less than Salisbury, and the same amount as Port Augusta and Playford.

Playgrounds: There are approximately 122 playgrounds located in Port Adelaide Enfield (see Table 15). The aim of the council is for all residents to be within approximately 500 metres or 15 minutes walking distance from a playground. Many of these are 'All Access' playgrounds especially designed to be appropriate for children with disabilities (City of Port Adelaide Enfield, 2014). There are a high number of playgrounds per km (1.7) but given the large number of children aged 0 to 5 in the community, the number of playgrounds per 100 children is lower than all other 'thriving' communities'.

Health Services: CaFHS is offered at four sites across the Port Adelaide Enfield community: Enfield Primary School, Hillcrest GP Plus Super Clinic, Port Adelaide and The Parks Community Centre in Angle Park. As well as services already discussed, the Enfield location provides Aboriginal Cultural Consultants. There is also a CAMHS service in Port Adelaide.

The Parks Community Centre also provides a program called Early Child Parenting Services Central, for families in Port Adelaide Enfield and surrounding suburbs who are expecting a child or have a child aged 0 to 3 years and have been assessed to be socially, emotionally or physically vulnerable. The program provides information about a range of health issues, and offers support and referral to appropriate local services. As well as individual support, the program offers group activities including social groups, Indigenous groups and a baby attachment group, as well as a number of health workshops (Park's Children's Centre, 2014).

Transport and Access: Being a large metropolitan area of Adelaide, located close to the CBD, families in Port Adelaide Enfield have access to a variety of services and generally do not have to travel very far to access them. Additionally, there are a range of public transport options, including frequent buses and trains. The council also has a community bus to provide transport to the libraries for people who are unable to drive or catch public transport due to income or mobility circumstances.

A number of early childhood education providers indicated that most people live close by to the services they attend and can easily drive or walk, although many families do make use of bus, train and taxi services. Staff at centres in the suburbs closer to the city mentioned that children come from a broad range of areas, including those outside Port Adelaide Enfield, as it is convenient for parents to drop children there on their way to work in the CBD. Transport was not identified as an issue in this community, and many staff could not think of any reasons children would have inadequate access to services. Again it was highlighted that the cost of childcare is likely to be an issue for many families, and a librarian expressed concern that many people are not aware of the early childhood programs being offered at the libraries, especially with such a large proportion of new arrivals and those who have English as a second language.

7.6. Renmark Paringa

Libraries: The Renmark Paringa Public Library is the only library in this community and it offers the Preschool Storytelling program. The program has been running for more than 10 years with attendance fluctuating each week between 10 to 20 children accompanied by a parent or caregiver (approximately 2-3% of the children aged 0-5 living in Renmark Paringa). Unlike all communities identified as 'thriving in adversity', there are no early literacy programs for young children (0 to 2 years) offered in Renmark Paringa. Although younger children are invited to attend Preschool Storytelling, it is considered to be more appropriate for children aged 3 to 5 years, likely to be too advanced to benefit early literacy development in babies. Library staff highlighted that with extra funding and staffing availability, they would like to be able to offer Baby Bounce.

In association with Child and Youth Health, the library provides information sessions to new mothers about the importance of books and reading for the development of their child's early literacy skills, at the conclusion of which, all babies are signed up to the library, encouraging families to continue to make use of its services. There is no mobile library in Renmark Paringa, and library services are not provided at any other locations.

Children's Centres and Early Childhood Services: Renmark Children's Centre was established in 2008, providing universal access to services such as speech pathology, occupational therapy, psychology, behaviour management, physiotherapy, dietetics and family support. The centre provides preschool, full time, part time and occasional care for children from 3 months to 5 years, as well as a weekly playgroup for children under 4 years. There is also a book library on site that aims to promote the value of reading in children's development. Bilingual and Aboriginal support staff are also available.

There are two other preschools in Renmark Paringa: Renmark Kinder Resort and Renmark West Preschool. Renmark Kinder Resort, established in 2006, is privately owned and offers an early learning preschool program, as well as long day care. The centre is currently utilized by approximately 40 children per day, between the ages of 6 weeks and 6 years (approximately 6% of children aged 0-5 years living in Renmark Paringa). Renmark West Preschool, currently attended by 15 children (approximately 2% of children aged 0-5 living in Renmark Paringa), also offers a fortnightly playgroup, which is run by volunteers, as does Renmark North Primary School. Located within the grounds of Renmark West Primary School, the preschool assists in children's transition into this school, as well as providing information about and communicating with other schools in the area. Renmark West preschool also has access to speech pathologists and occupational therapists via Riverland Community Health Services (RCHS), as well as extra support for children with special needs, and collaboration with the School Dental Clinic located at the nearby Renmark Junior Primary School.

Preschool and childcare centres do not seem to have functional working relationships with each other. A childcare provider mentioned that they used to have occasional meetings, but these were discontinued, as they were not effective, and providers were reluctant to participate. A staff member at the Renmark Kinder Resort expressed frustration about the Children's Centre opening nearby, attracting many of their previous clients.

Playgroups: Unlike the other communities of focus, there are no Playgroup SA affiliated playgroups in the Renmark Paringa region.

Playgrounds: There are 16 playgrounds in the Renmark Paringa community – 11 of the 16 are located within the town of Renmark, and the remaining five are in Paringa. This is the highest amount per kilometre, as well as per 100 children of all 'as expected' communities.

Health Services: There is one CaFHS centre in Renmark Paringa. Families in Renmark Paringa also have access to Riverland Community Health Service, which offers a Child Development Unit, speech pathology, social work, occupational therapy and dietetics, as well as Aboriginal health programs, and various support groups. The nearest CAMHS, as well as the nearest Obstetrics service are located in Berri, approximately 20 kilometres away from Renmark.

Transport and Access: Similar to the other regional 'thriving in adversity' communities, access to services is relatively easy for those families who live within the town of Renmark itself. The Renmark Paringa community occupies a much smaller land area than Wattle Range and Yorke Peninsula so travel distances are less of an issue, and transport was not identified as a significant barrier by members of the community. Many families living in Renmark Paringa also access services in surrounding towns, particularly Berri, which is approximately a 15 minute drive away.

Early education providers described going through a 'quiet period', particularly regarding childcare. This was attributed mainly to the cost of childcare. With a decline in employment opportunities in the area, many mothers are not returning to work and are therefore available to care for their children themselves, and cannot afford formal childcare services.

7.7. Port Augusta

Libraries: The main library in Port Augusta is the Port Augusta Public Library. The library offers the Story Time program which is run weekly and usually attended by 12 to 18 children (approximately 1-2% of children aged 0-5 living in Port Augusta). The Port Augusta Public Library does not have any programs specifically for children age 0 to 2 years. Library staff mentioned that they endeavour to structure Story Time to have broad appeal to all children aged 0 to 5 years.

There is a mobile outreach service that delivers library materials to various locations in the community, but it does not provide early childhood programs. The library does maintain close ties to local primary schools, kindergartens and childcare centres, as well as government services such as OPAL and Port Augusta Early Learning Centre.

As in Mount Gambier, Port Augusta also has a toy library, from which parents can borrow toys matched to their child's developmental needs. Additionally, Port Augusta is the base location for the Remote and Isolated Children's Exercise (RICE), which provides a range of support services to families in remote areas of the state, including another toy library and a parent library with a number of resources aimed to encourage positive parenting.

Children's Centres and Early Childhood Services: There is a Children's Centre in Port Augusta, which opened in 2009. This is unlikely to have influenced our 2009 cohort of children, but is likely to have provided services to the 2012 cohort. The preschool at this centre opened recently in 2013, and now also offers a school transition program. Prior to this, services included a number of playgroups provided at different locations, including one specific for Indigenous families. There are also craft groups and family learning opportunities, such as 'Cooking with your Child', and a number of health and wellbeing programs, information sessions and community development activities and events. Additionally the centre provides parent learning opportunities for those interested in SACE or TAFE studies. The Port Augusta Children's Centre also offers a Learning Together @ Home program that assists parents in identifying learning opportunities for their child, models to parents and caregivers how to best interact with their child and links families to relevant services.

There are three other preschool sites in Port Augusta, which also provide some other services. For example, the Augusta Park Childhood Services Centre provides occasional care alongside their preschool program. However this program is not funded and is only available in negotiation with the director. Port Augusta West Childhood Services Centre also offers a weekly playgroup for younger children.

The Tji Tji Wiltja Aboriginal Preschool and Flinders Children's Centre provides an Aboriginal program for children aged 3 years, as well as a preschool class for children aged 4 years. Teaching styles at the preschool are designed to suit Indigenous culture, with learning aimed to be multisensory and linked to prior knowledge. Indigenous culture is also promoted through language, stories and music. Additionally, children with English as their second language have access to three hours of bilingual support per week through the Preschool Bilingual Program. This Bilingual Support Program is also offered at Augusta Park Childhood Services Centre.

There are also a number of childcare centres in Port Augusta. It was mentioned that although outside services make visits to preschools, childcare seems to be forgotten. Although dental clinics make visits when requested, and some assistance is provided by Novita for children with language difficulties, relationships with other agencies is minimal and was identified as an area that needs improvement. It was also mentioned that although there are a number of Indigenous support services in the community, it has been difficult to engage them in any kind of cooperation with early education providers.

Playgroups: There is one community playgroup in Port Augusta that is run by Playgroup SA (see Table 14). The playgroup is held in the suburb of Stirling North and 22 children attend (approximately 2% of children aged 0-5 living in Port Augusta). After Renmark Paringa, Port Augusta has the lowest number of playgroups per 100 children, equal to that of Playford and Port Adelaide Enfield.

Playgrounds: There are 16 playgrounds located in the Port Augusta community (see Table 15). Eight playgrounds are within the town itself, five are in Stirling North and the remaining three are in Port Augusta West.

Health Services: Families in Port Augusta have access to CaFHS, with extra support provided by Aboriginal Cultural Consultants, and specific Aboriginal health programs. Services are also provided by CAMHS, and Obstetrics services are available at the local hospital.

RICE, based in Port Augusta, provides a range of health services to families living in remote outback South Australia, including Universal Contact Visits for new babies, health and development checks, child and family health counselling, antenatal and postnatal support, as well as providing health information and resources and referrals. RICE also provides a monthly phone linkup for mothers with other mothers with young children to support each other and exchange information.

Transport and Access: Port Augusta is quite a large regional area (although it is much smaller than Wattle Range and Yorke Peninsula), and travel distances were not identified as a major issue. The city has a public bus service that connects outer residential areas to the Port Augusta CBD. Staff at the library and early education centres however, mentioned that the bus is generally not a popular choice for parents and caregivers of young children. Transport overall was not identified as an issue, with the majority of people driving, or living in the town, able to walk to necessary services.

Similar to Renmark Paringa, childcare centres have not been reaching capacity. This was thought to primarily be due to the cost of childcare being impractical for many families, and also due to the fact that the community has a lot of parents who work part-time, or on a casual or contract basis, and are therefore able to stay home to care for their children.

7.8. Salisbury

Libraries: There are five main library branches in the city of Salisbury: Ingle Farm Library, Len Beadell Library in the suburb of Salisbury, Mawson Lakes Library, Para Hills Library and Salisbury West Library. There are three early childhood programs run weekly at each of the libraries:

- Giggle Time
- Story Time
- Lapsit

All of these programs are well-established and have been running for a number of years. Library staff mentioned that they have begun to focus increasingly on literacy programs for children aged 0 to 2 years. Attendance at these programs has grown dramatically over recent years, which may be due to increasing numbers of young couples and families moving to the area as more housing developments are created.

The City of Salisbury runs quite an extensive library outreach program, which has expanded greatly in recent years. Programs and services are now provided in many locations including schools, preschools, childcare centres and playgroups. Most of these visits are to children aged 0 to 5 years. The libraries have a close relationship with early education providers and aim to tailor outreach sessions to meet their curriculum requirements. There is also an early literacy program called ABC 30&3, which is delivered to playgroups and family centres within the community. The program is run for a period of five weeks, promoting the importance of reading, singing and playing with children for the development of early literacy skills and later reading and writing abilities. The program also provides families with a number of resources. Playgroups or parent groups may contact the library to arrange for the program to be delivered within their normal sessions.

There are no health services that collaborate with the libraries on a consistent basis, but there have been a number of one-off opportunities to engage with them. For example, recently a dental organisation attended Story Time to educate children and parents about dental hygiene and care. There is a networking committee with children's programming staff from other libraries in Northern Adelaide, where ideas, information and resources are shared and programs and projects for children are worked on collaboratively. The libraries also work closely with The Smith Family, The University of South Australia and OPAL.

Children's Centres and Early Childhood Services: There are three Children's Centres within the Salisbury city council, located in Lake Windemere in Salisbury North, Parafield Gardens and Ingle Farm.

Lake Windemere and Parafield Gardens were both opened in 2010, and therefore would not have influenced our 2009 cohort of children. Lake Windemere Children's Centre is located within the Lake Windemere Primary School, and provides preschool, occasional care and a community playgroup for children aged 0 to 5 years. Parafield Gardens Children's Centre offers additional services including

adult education, for example 'English for Everyday Living' for parents with English as their second language, as well as parent workshops such as 'Child Accident Prevention' and 'Bringing up Great Kids', as well as holding a number of community events throughout the year. Ingle Farm was opened in 2013 so would not have influenced either cohort. The centre now provides preschool, occasional care and emergency care with negotiation, as well as a transition program, where possible, in collaboration with local schools. At all Children's Centres in Salisbury, extra assistance is available when necessary, from bilingual assistants, speech pathologists or disability specialists for example.

Being a large metropolitan area of Adelaide, families living in Salisbury have many options for childcare and preschools. School transition programs are offered when possible, but seem to be somewhat less comprehensive than those offered in the regional centres of Wattle Range, Mount Gambier and Yorke Peninsula.

Playgroups: As Table 14 demonstrates, there are 23 playgroups in the Salisbury area that are affiliated with Playgroup SA: 13 of these are community playgroups (two in Para Hills and one in each Edinburgh, Ingle Farm, Mawson Lakes, Para Vista, Parafield Gardens, Paralowie, Salisbury, Salisbury Downs, Salisbury East, Salisbury Park and Valley View), nine are facilitated playgroups (two of which are in Para Hills West, and one in each Burton, Ingle Farm, Para Hills, Para Vista, Paralowie, Salisbury Downs and Salisbury East) and one is a supported playgroup in Parafield Gardens. Data is available on 16 of these 23 groups: a total of 283 children attend these 16 playgroups, approximately 3% of children aged 0-5 living in the Salisbury area. Of the four 'as expected' communities, Salisbury has the highest amount of playgroups per 100 children, as well as the 'thriving' community Port Adelaide Enfield.

Playgrounds: As shown in Table 15, there are 140 playgrounds in Salisbury, comparable to the number of playgrounds per square kilometre in the 'thriving' communities of Port Adelaide Enfield and Mount Gambier. Playgrounds are spread fairly evenly across the suburbs of Salisbury. Compared to the 'thriving' metropolitan community, Port Adelaide Enfield, there are considerably less playgrounds in Salisbury considering the number of children.

Health Services: There are three CaFHS centres in Salisbury, located in Ingle Farm, alongside the Children's Centre, Salisbury and Setter's Farm in Paralowie. Aboriginal Cultural Consultants are available at the Salisbury centre. CAMHS services are also available in Salisbury.

Transport and Access: Families living in Salisbury have access to a broad range of services both within and outside of their local government area. There is also ample public transport, including frequent buses and trains. However, general consensus was that people live close by to the services they attend, and most families would drive, as public transport was not thought to be popular or convenient for caregivers with young children. Transport was not identified as a major issue in this community. Cost of childcare was the only barrier that was raised that may be preventing families accessing services.

7.9. Playford

Libraries: There are two public libraries in the Playford community; the Playford Civic Centre Library and Munno Para Library. There are two programs for children aged 0 to 5 years:

- Books R4 Babies
- Story Time
-

Books R4 Babies is run twice a week at the Munno Para branch only, and Story Time is offered once a week at each branch. Occasionally these programs are run at kindergartens within the Playford area. There is also a mobile library service that provides resources to areas on the outer of Playford, including Angle Vale, Virginia and One Tree Hill, as well as visiting preschools to help foster early literacy development and establish a link between young children and the library.

Children's Centres and Early Childhood Services: There are four Children's Centres in Playford, located in Elizabeth Grove, at John Hartley School in Smithfield Plains, Kaurna Plains in Elizabeth and Mark Oliphant College in Munno Para. The Children's Centres in Munno Para and Smithfield plains both opened in 2011, so would not have influenced our 2009 cohort of children. Kaurna Plains was opened in 2009, so again is unlikely to have influence the 2009 cohort. Elizabeth Grove Children's Centre was opened in 2007 so may have had some influence on children in both cohorts.

As in the other metropolitan areas we're considering (Salisbury and Port Adelaide Enfield), there are many options for childcare and preschool in the City of Playford, and the cost of childcare was identified as the main barrier to accessing early childhood services.

Playgroups: There are seven playgroups in Playford that are affiliated with Playgroup SA: two are community playgroups (one in Munno Para and one in One Tree Hill), and five are facilitated playgroups (one in each Angle Vale, Craigmore, Elizabeth Downs, Elizabeth Grove and Elizabeth Park). Data is available on only two of these seven groups – 45 children attend these two groups, which is approximately 1% of children aged 0-5 living in the Playford area. After Renmark Paringa, Playford has the lowest number of playgroups per 100 children, equal to that of Port Adelaide Enfield and Port Augusta.

Playgrounds: Playford has 60 playgrounds, the lowest per square kilometre and per child of any metropolitan communities. However most of these are located in the smaller area in the middle, where the majority of the population resides.

Health Services: There are six CaFHS centres located within Playford, at Munno Para, Elizabeth, Elizabeth Grove, Kaurna Plains, Elizabeth Vale and in Smithfield Plains, alongside the Children's Centre in John Hartley Primary School. Aboriginal Cultural Consultants are available at the Elizabeth centre. CAMHS services are also available in Playford.

Transport and Access: Being another metropolitan region of Adelaide, the City of Playford has a large number of services available for children aged 0 to 5 years and their families. The exception of this is libraries, with only two in quite a large area. This is a small amount considering both the size of the area, and the large population of children. However, excluding the large, outer, relatively unpopulated areas of Virginia and One Tree Hill, the area occupied by the remaining suburbs of Playford, where the majority of the population resides, is actually quite small.

Generally, families do not have to travel very far to access health and education services or playgrounds and have a substantial number of options. Although further away from the CBD than Port Adelaide Enfield and Salisbury (approximately 35 kilometres), Playford is also serviced by public transport including frequent buses and trains to the CBD, and overall, transport was not identified as an issue in this community.

7.10. Comparison between 'Thriving in Adversity' and 'As Expected' Communities

Libraries: There was quite a clear distinction between library services and programs between 'thriving in adversity' and 'as expected' communities. All 'thriving' communities deliver early literacy programs specifically designed for children aged 0 to 2 years. This is only the case in the metropolitan 'as expected' communities of Salisbury and Playford. Although the librarian in Renmark Paringa mentioned that younger children are invited to attend their weekly session of Preschool Storytelling, it is considered to be more appropriate for children aged 3 to 5 years, likely to be too advanced to benefit literacy development in babies. Similarly, the librarian in Port Augusta mentioned that although effort is made to structure Story Time to have broad appeal to all children aged 0 to 5 years, it is likely that children would benefit more from programs specifically tailored to their development level, as in the 'thriving' communities.

Additionally, with the exception of Yorke Peninsula, the program for children aged 0 to 2 years in the 'thriving' communities, is Baby Bounce. Facilitators of this program have been specifically trained in its delivery, whereas staff running programs for 0 to 2 year olds in the 'as expected' communities have not. Further, overall, there are more early childhood programs on offer in the 'thriving' communities.

Children's Centres, Playgroups and Early Childhood Services: Perhaps the greatest distinction in early education services between 'thriving' and 'as expected' communities, was that those in 'thriving' communities seemed to maintain closer working relationships with each other, sharing information and resources, and working towards the common goal of improving child development outcomes. In contrast, relationships between early education services in 'as expected' communities appeared to be more competitive in nature. There seemed to be increased focus on sustaining the business, perhaps at a detriment to the attention given to improving child development.

In the 'as expected' communities, the cost of childcare was identified as the primary barrier preventing people from accessing the services, with many families relying on informal supports. As a result, in Renmark Paringa and Port Augusta, childcare centres have not been reaching capacity. This lack of business is likely to have increased the competitive nature of the relationship between different providers. In Salisbury and Playford, as well as the 'thriving' metropolitan community, Port Adelaide Enfield, competitiveness between services is likely to be due to families having many options to choose from. In contrast, in the remote 'thriving' communities, Wattle Range and Yorke Peninsula, cost was identified as a secondary issue to transport and lack of services. Hence, early education providers do not have to be competitive, as there are few similar services nearby, they generally reach capacity easily and are therefore more successful businesses. Interestingly, community members in the 'thriving' community of Mount Gambier were especially pleased with the supportive and collaborative nature between early education providers, even though there was thought to be 'too many' services, many not at capacity.

It is also possible that transition programs are more effective in the 'thriving in adversity' communities. Within the small towns that make up Wattle Range and Yorke Peninsula, and in Mount

Gambier, families have fewer options for where to send their children to school. As a result, it seems that preschools are able to provide transition programs more comprehensively and thoroughly than those in the more metropolitan regions, where children attending one preschool are likely to go on to attend a range of different primary schools. This is fitting with AEDC data that shows generally, children in 'thriving in adversity' communities transition more effectively into the school environment.

Playgroups: There is a clear distinction in both playgroup availability and participation between the 'thriving in adversity' and the 'as expected' communities. With the exception of Port Adelaide Enfield, all thriving communities had a relatively higher number of playgroups available to families than the 'as expected communities'. Further, a greater proportion of children aged 0-5 years living in the 'thriving' communities attend playgroup (again, with the exception of Port Adelaide Enfield), when compared to that of the 'as expected' communities.

Although identified as a 'thriving' community, Port Adelaide Enfield had a smaller amount of playgroups available to families than the 'as expected' community of Salisbury, and an amount equal to that of both 'as expected' communities Port Augusta and Playford.

Interestingly, there does not seem to be a clear distinction between the two groups of communities in terms of the types of playgroup on offer, i.e., whether or not they have facilitated and/or supported playgroups available to families. However, it is important to note that children may be attending playgroups that are not affiliated with Playgroups SA such as those run by local councils, churches, or offered within Children's Centres, and these playgroups and children were not captured in Table 15.

Playgrounds: Concerning the amount of playgrounds in each community, the distinction seems to be apparent between metropolitan and regional areas, rather than between the 'as expected' and 'thriving' communities. The more metropolitan communities; Mount Gambier, Port Adelaide Enfield ('thriving'), Salisbury and Playford ('as expected') were shown to have more playgrounds available per square kilometre than in the regional communities.

Health Services: There was no clear distinction in health services between 'thriving in adversity' and 'as expected' communities.

Transport and Access: Although identified as 'thriving in adversity' communities, Wattle Range and Yorke Peninsula seemed to have the greatest difficulties in regards to transport and access to services, largely due to a relatively small number of services for a population that is quite spread out over a large area. However, these issues seem to be relevant mainly for families who live outside the major towns in farming or coastal regions. The majority of the families reside within the towns, and have relatively easy access to services by car or foot. In contrast, the regional communities identified as performing 'as expected', cover much smaller land areas, and community consultation confirmed fewer transport issues.

Families living outside the major towns in these communities seem to travel the distances necessary to access the more essential services such as health and education, without too much difficulty. However, it is possible that the larger travel distances mean that more supplementary services, such as playgrounds and libraries, are less frequently utilised by these families due to the relative impracticability of access.

Located closer to Adelaide's CBD, families living in Port Adelaide Enfield seem to have benefits in terms of easier access to a broader range of services, when compared to Salisbury and Playford. The second largest city in South Australia, Mount Gambier, seems to encompass the benefits of both the more remote communities and the metropolitan communities. It has an array of services available, provides relatively easy access to them, with some public transport and a relatively small land size. It also maintains somewhat of a 'small-town' culture of support and collaboration between services and a greater propensity for members to participate in community events and support opportunities such as playgroups and library programs.

7.11. Summary and Conclusions

Through desktop analysis and community consultation, we explored the services and programs offered in each of our eight communities of focus. Four of these communities were found earlier to be 'thriving in adversity' (performing better than we would expect on the NAPLAN and AEDC based on their level of socioeconomic disadvantage), and the remaining four were found to be performing about as we would expect. By uncovering any differences between what is being offered for children aged 0 to 5 years and their families in 'thriving in adversity' compared to 'as expected' communities, we attempted to identify some possible explanations for the resilience of 'thriving' communities. We hoped to learn some lessons that may be transferrable to other communities to promote the same resilience and improve their child development outcomes.

The greatest distinctions between the 'thriving' and the 'as expected' communities' were in regards to library services, early education and playgroup.

It is important to note however, that the library programs are attended by a very small proportion of the children in each community, and therefore conclusions cannot be drawn about their influence on child development outcomes overall. Further, in some communities, the programs commenced when our two cohorts of children would have already been above the appropriate participation age. The effectiveness of these early literacy library programs and the benefits of starting them from age 0 to 2 years could be re-examined in future.

Early education providers in 'thriving in adversity' communities seemed to operate more collaboratively and supportively with each other and other services. In 'as expected' communities, associations were more competitive in nature, and services seemed to operate more independently of each other. Community consultations with the 'thriving' communities revealed consensus that this culture of cooperation is thought to be an important part of their resilience. In contrast, in Port Augusta for example, with such diversity of children, you might expect input from a variety of services to be particularly important, but it was commonly highlighted as an area that needs improvement.

There are more playgroups available to families and a greater proportion of children attending playgroup in 'thriving' vs 'as expected' communities (with the exception of Port Adelaide Enfield). During our consultations with communities, playgroups were consistently highlighted as an important opportunity for families to meet other parents and children in their community, build a support network, share information, as well as providing social benefits for both children and parents, and preparing children for school. In the three regional thriving communities, as many as 15% of the children were attending playgroups and this is likely an underestimate because data was only available for some of the Playgroup SA playgroups and none of the playgroups that were not affiliated with Playgroups SA. When this is compared with the reach of most of the library programs (1-5% of population attending) it is clear that playgroups are one of the key factors that differentiate the 'thriving' and 'as expected' communities.

The distinction between the number of playgrounds offered per square kilometre in communities was based on whether they were in regional or metropolitan areas rather than whether the communities were 'thriving in adversity' or performing 'as expected'. However, the number of playgrounds per 100 children tended to be higher in the 'thriving' communities than in the 'as expected' communities. This suggests that although the more regional areas seem to be lacking playgrounds considering the size of the areas, the number of playgrounds is actually more sufficient in 'thriving' communities when considering the number of children. Playgrounds are generally built and maintained by local governments, and the difference in number of playgrounds in the 'thriving' and 'as expected' areas might reflect differences in priorities between local governments across the state.

Unlike the other services and programs explored, no clear distinction between health services in 'thriving' and 'as expected' communities was found.

To conclude, communities that were 'thriving in adversity' can be characterised as providing early childhood literacy programs to young children (0 to 2 years) by a trained facilitator, achieving playgroup attendance for a large proportion of local children, working collaboratively across different agencies and sectors, having co-location of key early childhood education services (playgroup, preschool, school and child care), pooling input from a range of services and offering a more holistic approach to child development. A culture of community involvement emerged as an important feature of 'thriving in adversity' communities, perhaps contributing to their resilience.

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About the Fraser Mustard Centre

Working together to improve the development, education, health and wellbeing of young Australians, the Telethon Institute for Child Health Research and the South Australian Department for Education and Child Development have joined forces in a unique approach to research translation. The Fraser Mustard Centre collaboration aims to:

- Improve and promote the health and wellbeing of all children and young people in South Australia through the unique application of multidisciplinary research
- Help shift focus from the historical delineation between health and education services to an integrated approach with a focus on child development
- Build capacity amongst public sector staff and academic researchers to design, undertake and use research to improve the environments in which children live and the service systems which support families
- Attract funding for shared priorities for research that leads to improved developmental, education, health and wellbeing outcomes for children

The Fraser Mustard Centre brings forward-thinking policy makers and world class child health researchers. It reflects a shared view of policies and outcomes for children and young people. The Centre is a unique collaboration between two organisations passionate about making a difference.

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