

## The AEDI Indigenous Adaptation Study

AEDI Indigenous Adaptation Study Team:  
Prof Sven Silburn, Sally Brinkman, Sue Ferguson-Hill,  
Bonnie Moss, Anne Hanning-Kangwarre & Adele Austin

A partnership between



An Australian Government Initiative



[www.australianedi.org.au](http://www.australianedi.org.au)



## Aims

1. To establish the **measurement equivalence** of the AEDI for use with Australian Indigenous children
2. To maximize the **cultural inclusiveness** of all of the AEDI implementation processes including:
  - a) Community consultation & engagement
  - b) Data collection processes in schools
  - c) Culturally appropriate dissemination of findings



## Rationale

- Indigenous community concerns about cultural bias of standard psychometric assessment
- Ensuring community benefit for Indigenous end-users of the AEDI data
- International Test Commission's Guidelines for Test Adaptations (ITC, 2006)



## ITC guidelines (2006)

- Consent, test administration and reporting processes must ensure that the context and purposes of the assessment are made explicit to participants, data gatherers, data users and other stakeholders.
- Cultural consultants & specialist technical expertise should be utilised in the process of test development & adaptation.
- Every effort is made to identify and address cultural factors which may influence test administration and participation.
- Documentation is made available to guide the scoring and interpretation of test items and scales
- Realistic balancing of the technical goals of measurement equivalence vs. addressing the pragmatics of maximising participation and cultural and linguistic inclusivity

(Coyne & Bartram, 2006)



## Contextual Challenges

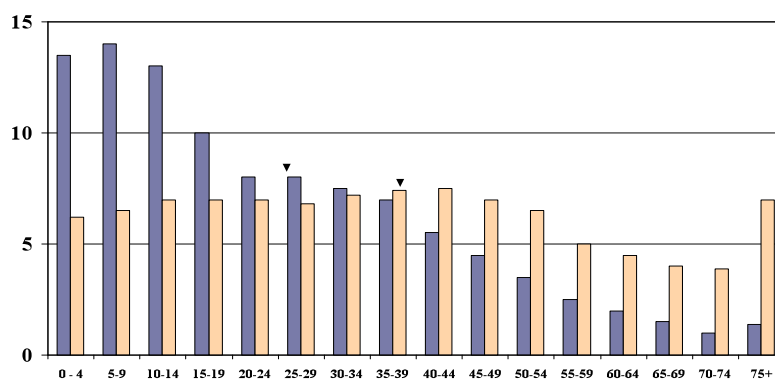
- Diversity of the Australian Indigenous population within and between States and Territories
- Issues of cultural preservation, assimilation and bi-acculturation (i.e. growing up in two worlds)
- Language and cultural translation issues
- Historical origins of Indigenous disadvantage in Australia's past policies of forced removal of children
- The tyranny of distance and geographic isolation



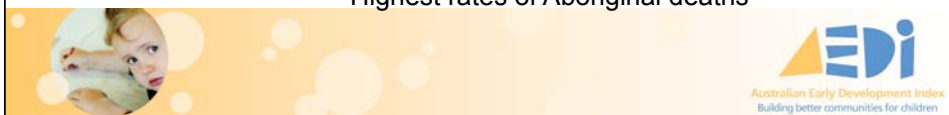
## Age structure of the Indigenous population

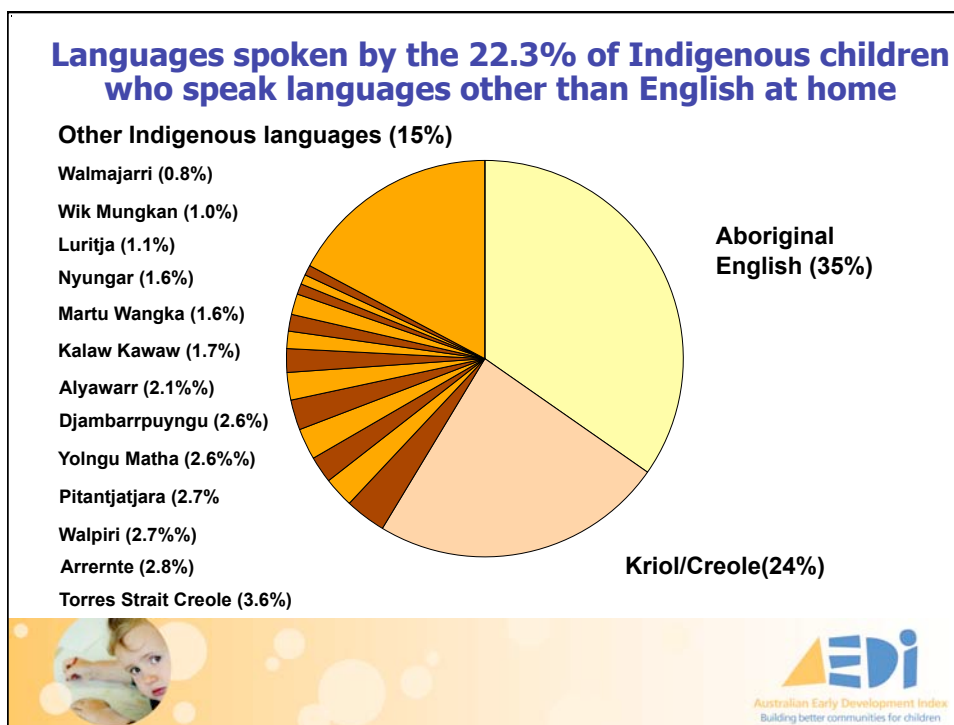
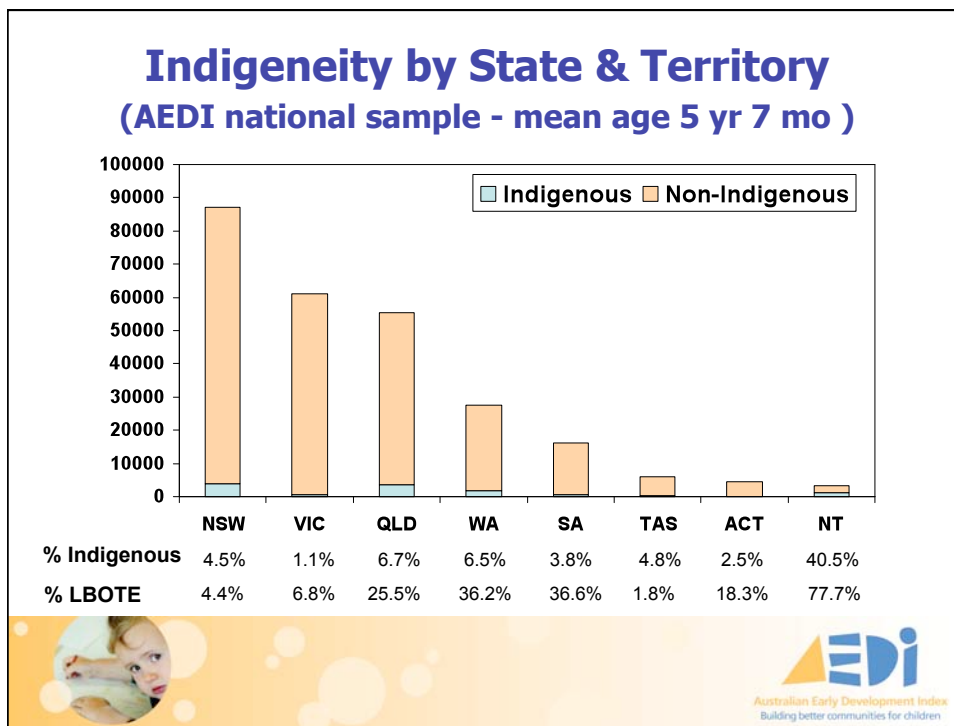
Aboriginal  
Median 20.5 years

Non-Aboriginal  
Median 36 years



Highest rates of Aboriginal deaths





## Current context of Indigenous child-rearing

- Increasing urbanisation & high family mobility
- High proportion of young parents (low adult to child ratio)
- High proportion of parents/carers with limited education
- Increasing proportion of sole parents (especially urban)
- Poor housing and fluidity of household composition
- Inter-generational effects of forced separation (>1/3 of Indigenous families with children)
- High levels of family stress (>20% of families had 7+ major family life-stress events in previous 12 months)

[Source: Silburn et al, (2006) WA Aboriginal Child Health Survey]

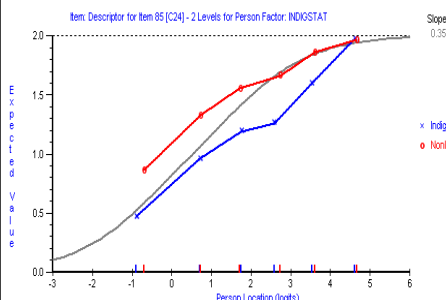


## Methodology

1. Qualitative studies with Indigenous parents, teachers, ATAs to identify other aspects of child development relevant to Indigenous children's readiness for school learning not included in the AEDI as well as elements of the existing instrument needing adaptation
2. Analysis of the psychometric properties of AEDI data on n=31,561 Australian children assessed in the first stage of the National AEDI project with included n=1,474 Indigenous children
3. Trial a preliminary adapted version of the AEDI developed through steps 1 and 2 above, in representative metro, rural and remote sites in WA (2008) and the NT (2009)
4. Formative development & piloting of community engagement and feedback processes to optimise Indigenous participation, and community understanding and use of AEDI local findings

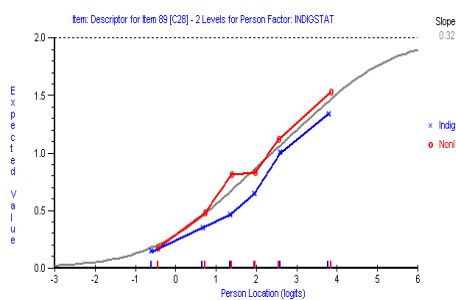


## Differential Item Functioning (DIF) (Indigenous vs. non-Indigenous children)



**'Asks questions showing knowledge about the world' (Social Competence scale item)**

Non-Indigenous children tend to score higher on this item than Indigenous children even though they have the same total SC scale scores.

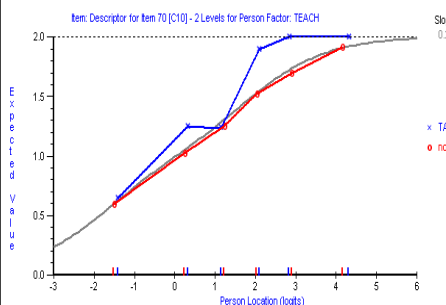


**'If there is a quarrel or dispute will try to stop it' (Emotional Maturity scale item)**

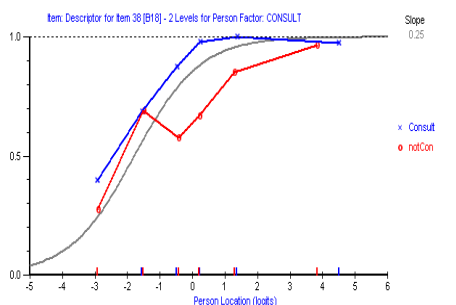
Non-Indigenous children tend to score higher on this item than Indigenous children even though they have the same total EM scale scores.



## Differential Item Functioning (DIF) (Teacher alone vs. teacher & Indigenous consultant)



**Accepts responsibility for actions? (SC scale item)**



**Is experimenting with writing tools? (L&CD scale item)**

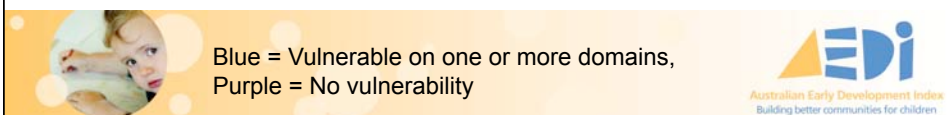
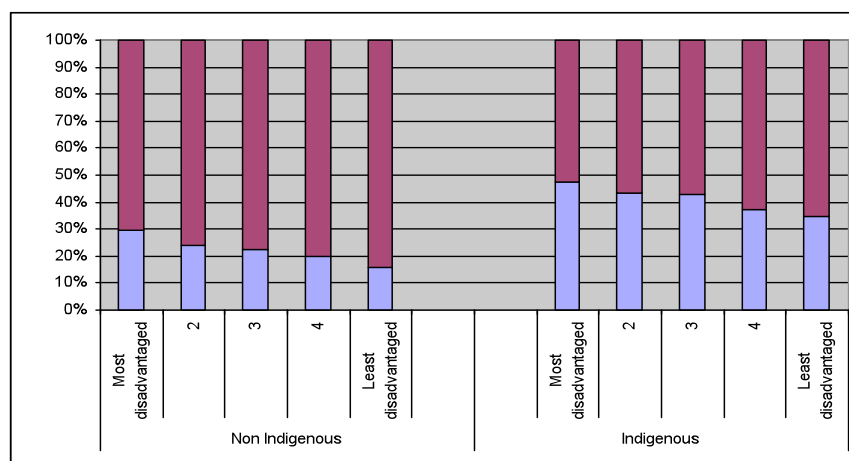


## Modifications made

- Use of Indigenous school personnel as cultural consultants (e.g. AIEOs, ATAs, AEWs) who assist teachers in making joint AEDI checklist ratings
- Additional information in the on-line *Guide for Teachers* to enable cultural considerations being taken into account
- Extra checklist items of relevance to Indigenous children:-
  - reasons for days absent from school
  - proficiency in use of home (Indigenous) language
  - chronic illnesses & disabilities (e.g. otitis media, FASD)
  - difficulty in learning because of tiredness or sickness
  - daily personal physical hygiene



## AEDI vulnerability by Indigeneity & SES



## Key Outputs

- **Publication of final technical report: “Findings from the pilot of the AEDI Indigenous Adaptation Study”** ([http://www.rch.org.au/emplibrary/australianedi/AEDI\\_Indigenous\\_Adaptation\\_Study\\_Report\\_Nov\\_2009.pdf](http://www.rch.org.au/emplibrary/australianedi/AEDI_Indigenous_Adaptation_Study_Report_Nov_2009.pdf))
- **Publication of community dissemination resources**
  - Posters, A3 flip-charts and A4 parent booklets
  - Community Toolkit for using the AEDI data
  - The Cultural Eye Learning Sequence (Elders and remote community stakeholders)
  - Two sets of 5 x TV Community Service Ads for urban and remote Indigenous communities



### Community Toolkit

Following requests for information about using the AEDI data, we have developed and are currently trialing a 'Community Toolkit' which gives communities further information about child development at age 5. The Toolkit suggests steps to take to review and strengthen the services available in the community, or to determine gaps in existing services and develop context specific programs aimed to improve child developmental outcomes.

**Helping children be ready for success at school and schools be ready for success with children**

### Stories of how communities have used their AEDI findings

#### Kartajin Danjoo story

Challis Early Childhood Education Centre is located in Armadale, metropolitan Perth in Western Australia, within a belt of suburbs that are most disadvantaged in terms of their socio-economic profile. The 2005 AEDI results indicated that almost half the children in that belt were vulnerable on one or more domains. Eighteen per cent of the school's population is of Aboriginal or Torres Strait Islander descent. Determined to respond to these demographics, an innovative classroom program was developed through consultation with local Aboriginal Elders, parents and the school.

The Kartajin Danjoo (Noongar for 'Learning Together') initiative incorporates kindergarten, pre-primary and Year 1 Aboriginal students in one class. The children are all siblings and cousins, creating a familiar and culturally-appropriate space for learning. Since its inception in 2007, outcomes of the initiative have been:

- ✓ Attendance has improved from 60% to nearly 90%.
- ✓ Indigenous parents and carers come to school to yarn and interact with the teacher and children. This is demonstrated by increased attendance at school functions.
- ✓ The students pay attention for longer periods as noted by increased interactive class activities.
- ✓ An Aboriginal playgroup for children aged up to four years has been a natural follow-on and has been set up to address early childhood development with over 100 Aboriginal children and carers attending each week.

**PHYSICAL HEALTH AND WELL-BEING**  
A healthy child who is independent, ready each day

Healthy children making the most of time in the classroom

Climbing - helping a child to have good balance

Building blocks preparing fingers for holding a pencil

Healthy food helping concentration so children can learn at school

Having breakfast and wearing comfortable clothes - helping children get ready to learn

Sharing healthy food giving energy for the day

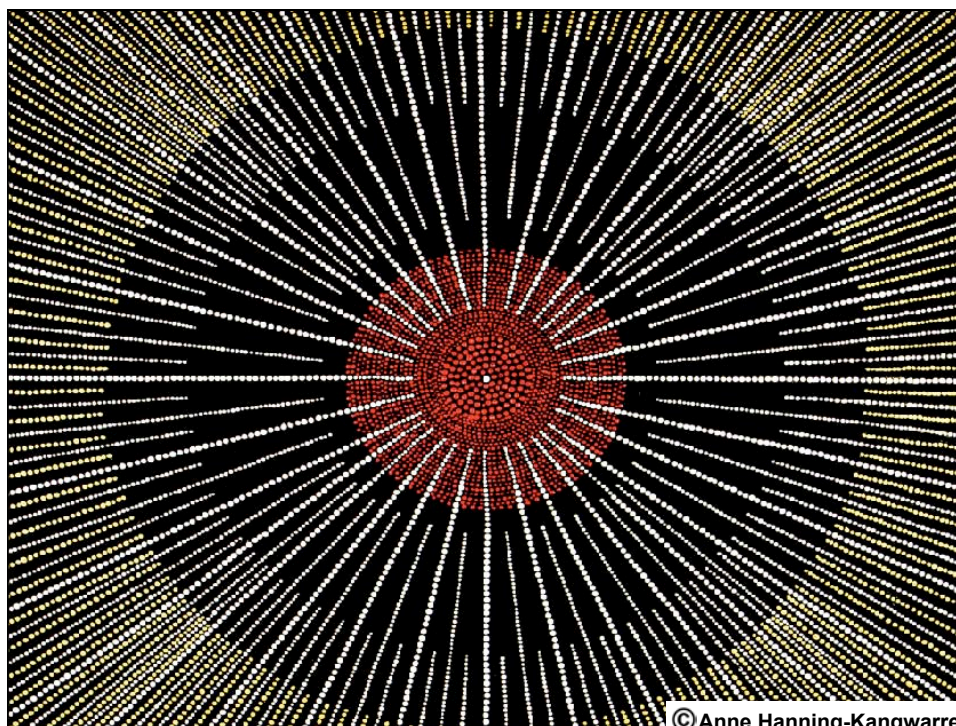
**THINGS YOU CAN DO AT HOME TO HELP CHILDREN GROW STRONG**

**PLAYING GAMES**  
Crawling, running and chasing  
Balancing and hopping on one foot  
Stacking toys and blocks of different sizes

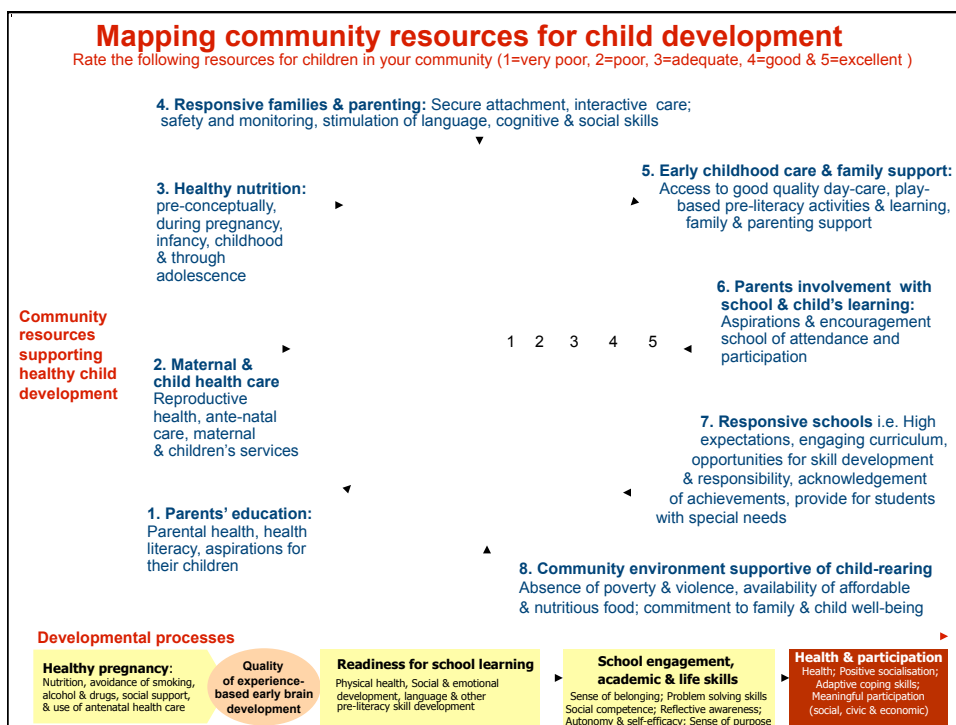
**BEING HEALTHY**  
Washing hands:  
-After playing with animals  
-After using the toilet  
-Before eating  
Washing face morning and night  
Washing whole body daily  
Cleaning teeth morning and night

**EATING HEALTHY FOOD**  
Lots of:  
Cereal  
Fruit  
Vegetables  
Meat  
Fish  
Milk  
Eggs





©Anne Hanning-Kanwarre



## Outcomes

- High level of Indigenous participation in 2009 AEDI census
- Indigenous Education Advisory Councils (State & National) make ECD a priority for advancing Indigenous education
- \$10.5 million corporate sponsorship by BHP-Billiton for Indigenous ECD community development program in WA (*Martu pathways project*)
- NT Government investment to support a territory-wide AEDI community dissemination strategy
- NT Government commits to training of all NT front-line personnel in Health, Childcare, Education & Family Services in the WHO/UNICEF *Counsel the Family on Care for Child Development* program

