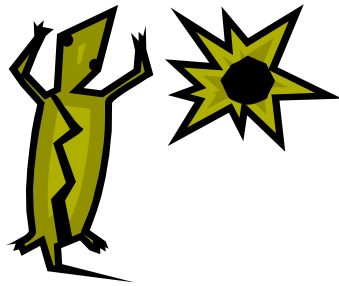


*Kimberley Indigenous  
Cognitive Assessment  
(KICA)*



*Instruction booklet*

## **Background**

The Kimberley Indigenous Cognitive Assessment (KICA) is the only valid dementia assessment tool for older Indigenous Australians.

The KICA was developed and validated in the Kimberley region of Western Australia and further validated in the Northern Territory. The participants were rural and remote Indigenous Australians. A short version (KICA-Screen) has been validated in Far North Queensland.

It was developed with the assistance of Kimberley Indigenous community members and councils, the language resource centre, interpreting service and a range of health professionals.

It is recommended for use with rural and remote Indigenous Australians aged 45 years and above for whom other dementia assessments are not suitable.

## **Tools required**

Objects: 5 common items are required for the tool.

- Comb
- Pannikin / cup
- Box of matches
- Plastic bottle with top.
- Watch/ timer for verbal fluency question.

Pictures: found at [www.iawr.com.au](http://www.iawr.com.au)

- The boomerang, boy, emu, billy/fire, crocodile and bicycle pictures are for the visual naming and free recall questions and should be presented in that order.
- The pictures with 3 options to a page are for the cued recall question.
- If the client is not able to name a crocodile or an emu for their own cultural reasons these pictures can be replaced on an individual basis with the dog and horse pictures found on the website.

## **Interpreter**

Since language skills are being assessed a trained interpreter is recommended. Contact your local Indigenous interpreting service for assistance.

## **KICA-Cog (Cognitive assessment section)**

**Orientation:** Check with interpreter or family member if answers are correct.

**Recognition and naming:** If unable to identify the items, name each item for them before hiding them to assess registration and object recall.

### **Verbal comprehension:**

- Ask question 7 and 8 separately.
- For question 8 ask both commands at once and score one point for each correct response (sky / ground). Don't prompt.

**Verbal fluency:** Tell the client that they will be timed for one minute. An interpreter may be required so animals can be said in language. Can prompt with e.g. 'any more? In the water?'. Note prompts made.

### **Visual naming:**

- Point to the boomerang picture first using it as an example, but don't count it in the score. Tell them that they have to say what the picture is and remember all of the pictures for later on. Once they understand this continue with the rest of the pictures.
- Points are still given when what they say is generally correct.  
eg. 'bird' for emu picture  
'fire, bag or sticks' for billy boiling picture.

**Free recall:** Show the boomerang picture as a prompt, don't count in score.

**Cued recall:**

- If they get all of the free recall questions correct (5/5), automatically give a cued recall score of 5/5.
- Use the 'boomerang/ bush tomahawk/ clapping sticks' page as an example only (don't count in score). Continue when they understand to point to only one object out of the three shown on the page.

**Poor vision**

**Recognition and naming:** Place each object in the persons hand and ask them what it is and what it is used for. Ask them to remember the objects for later on.

**Recall:** Ask them 'tell me those 3 things I showed you'.

**Visual naming:** Name pictures for them to remember.

**Cued recall:** Tell them the 3 options that they can choose from. For example "Which one did I tell you to remember: boomerang... bush tomahawk... clapping sticks."

**Frontal executive function:** Write XOXOXOXO in larger letters for them to copy. If they have significant visual impairment omit the question.

**Interpreting results**

The KICA-Cog is out of 39. A score of 33/39 and below indicates possible dementia. A person scoring 33 or less should be referred to a doctor for dementia medical screens to rule out other causes of cognitive impairment.

The other sections of the tool eg. medical history and activities of daily living are for gathering information to assist with

- identifying risk factors
- diagnosis
- service provision.

Each section can be used independently.

The question under *Family emotional well-being* regarding the onset and progression of the condition is important for diagnosis. With Alzheimer's disease the person has a slow gradual decline in cognition. With delirium and vascular dementia the person tends to have a sudden onset of cognitive impairment.

Individual tasks in the KICA-Cog should also be analysed to assist in determining the type and severity of the dementia.

For example

- A score of 1/5 for free recall followed by a score of 5/5 for cued recall suggests a diagnosis of vascular or frontotemporal dementia (cues help) rather than Alzheimer's type.

The KICA results and dementia checklist is available on [www.iawr.com.au](http://www.iawr.com.au) . It outlines how KICA results may be presented and includes a checklist for health professionals to review prior to dementia diagnosis.

### **KICA-Screen (sKICA)**

The KICA-Screen contains 10 client questions with a total score of 25. It is to be used as a cognitive screen only. The KICA-Screen and the KICA-Carer should be used together. It is recommended that the full KICA is used for the most valid results.

## **KICA Journal articles, reports and abstracts**

Smith, K, Flicker, L, Dwyer, A, Marsh G, Mahajani S, Almeida, O, Lautenschlager, N, Atkinson, D, LoGiudice, D. 'Assessing cognitive impairment in Indigenous Australians - Re-evaluation of the Kimberley Indigenous Cognitive Assessment (KICA) in Western Australia and the Northern Territory', *Australian Psychologist*, *in press*, 2009.

Smith K, LoGiudice D, Dwyer A, Thomas J, Flicker L, Lautenschlager N, Almeida O, Atkinson D. 'Ngana minyarti? What is this?' Development of cognitive questions for the Kimberley Indigenous Cognitive Assessment. *Australasian Journal on Ageing* 26:3, 115-119, 2007.

LoGiudice D, Smith K, Thomas J, Lautenschlager NT, Almeida OP, Atkinson D, Flicker L. Kimberley Indigenous Cognitive Assessment tool (KICA): Development of a cognitive assessment tool for older Indigenous Australians. *International Psychogeriatrics* 18:2, 269-280, 2006.

Marsh G, Inglis M, Smith K & LoGiudice D 2006, 'Validation of the Kimberley Indigenous Cognitive Assessment tool (KICA) in rural and remote Indigenous communities of the Northern Territory.' A joint collaboration between Alzheimer's Australia NT, University of Western Australia and National Ageing Research Institute, Alzheimer's Australia, Canberra.

Smith K, Dwyer A, Flicker L, Lautenschlager N, Almeida O, Atkinson D, LoGiudice D. Investigating cognitive impairment and other health conditions in older Indigenous Australians. *Australasian Journal on Ageing*. 24 (Supplement): A54-A55, November 2005.

LoGiudice D, Smith K, Dwyer A, Thomas J, Lautenschlager N, Almeida O, Atkinson D, Flicker L. Kimberley Indigenous Cognitive Assessment tool: Current status of the validity of the cognitive and informant questions. *Australasian Journal on Ageing*. 24 Supplement:A43, November 2005.

Smith K, Flicker L, Almeida O, Lautenschlager N, Thomas J, Waters S, LoGiudice D.  
The Kimberley Indigenous Cognitive Assessment (KICA): Results of reliability and  
validity testing in an Indigenous population. Internal Medical Journal. 35(50): A48,  
May 2005.

### **Contact Information**

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