

Exploring Language and Culture: Insights from the CogSCAN Online Survey Study

*Zara Page, Dr Karen Croot, Clive Newman,
Connie Pan, L. K., Padmanabhan Karamil,
Sandra Newman & the CogSCAN Community*



About the Study

- This Study was carried out by a team of researchers from the [Centre for Healthy Brain Ageing](#) (CHeBA), based at the University of New South Wales in Sydney
- We also asked a group of nine older adults from culturally and linguistically diverse backgrounds who spoke a language other than English to join the CogSCAN Community Working Group – they too were consulted about the design of the survey, recruiting participants and how best to share our results
- The Study took place between February 2022 and February 2024

What motivated this research?

Dementia is a chronic and progressive condition which is characterised by changes in thinking, behaviour and the ability to complete day-to day tasks. These changes are **different from normal ageing**. In 2024, it is estimated that [421,000 Australians are living with dementia](#). Research about the tests we use to check for these changes is critical to improve the detection, diagnosis and monitoring of dementia and mild cognitive impairment (a condition which may come before dementia, and increases your risk of developing dementia). You can find out more about the different types of dementia, testing and diagnosis, and treatment at [Dementia Australia](#).



What motivated this research? (continued)

Australia is home to some of the most multicultural communities in the world. Older adults from different culture and language backgrounds make up around 30% of the population aged 65 years and above. It is important that research that improves dementia diagnosis includes people from all backgrounds.

What did we want to find out?

We wanted to learn more about how different language and cultural backgrounds influence the suitability of tests to diagnose dementia.

Our study called for volunteers who were born overseas and could speak and/or read a language other than English. The survey results helped to identify which information about how and when people use their languages is most important across many different language and cultural groups that make up Australian society.

How did we do it?

1. We created an online survey version of the *CogSCAN Language Experience and Acculturation Questionnaire* with consultation from the Community Working Group
2. We advertised for volunteers who were born overseas and could speak or read a language other than English. Advertisements were online and at in person-events in the community
3. Participants completed the online survey Australia-wide. The survey was anonymous, in English, and took approximately 15-20 minutes to complete
4. We used statistical techniques to identify the four important aspects of language and cultural background in our survey

What did we find out and what do these results mean?

Over 450 older adults accessed the survey and agreed to participate, of which 256 participants whose native language was a language other than English completed it. Overall, we found that the survey, called the 'CogSCAN Language Experience and Acculturation Questionnaire', provides detailed information about how people use English, their native language and language(s) other than English day-to-day. This information may be useful in a clinical setting – that is, to help doctors and other health professionals to choose the most suitable cognitive tests for older adults from culturally and linguistically diverse backgrounds.

In the following pages, we report a summary of our findings. First, an overview of the group of people who participated in the Study and then what we learnt from the specific questions that we asked.

Who participated in the Study?

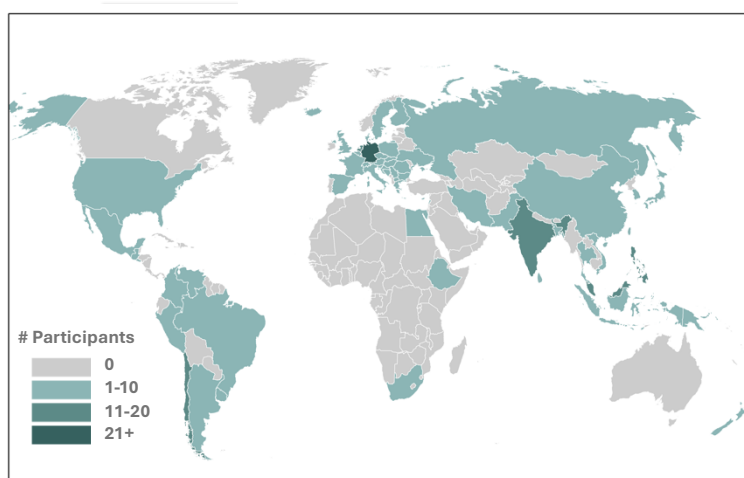


Participants were aged between 60-93 years old, with an **average age of 68.8 years**. Participants came from all states and territories across Australia, with most responses from NSW (57%).

Participants reported speaking or reading in **64 different languages** in total. Most participants were bilingual, some were multilingual – speaking as many as 7 languages!



Countries of birth of CogSCAN survey participants



Participants came from **63 different countries**.

The countries of birth with the greatest number of participants were:

1. Germany (8.2%)
2. People's Republic of China inc. Hong Kong (7.8%)
3. The Netherlands (6.6%)

Who participated in the Study? (continued)



The majority of participants identified as **White/Caucasian (49%)**, **East or Southeast Asian (24%)**, or **Hispanic/Latino (12%)**.

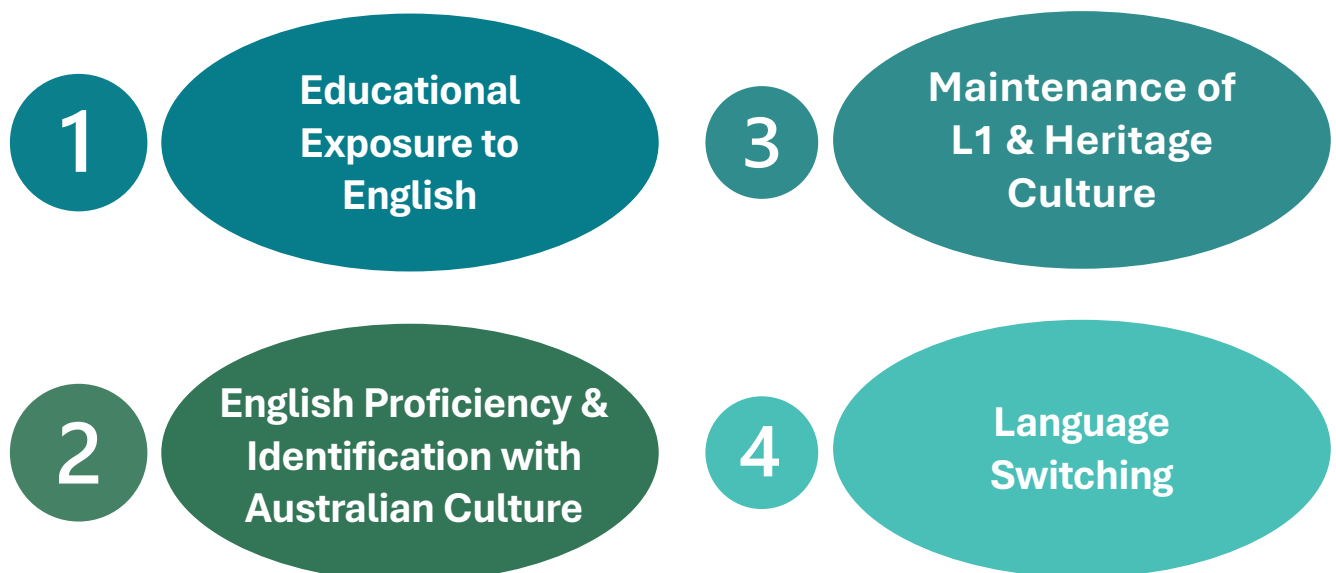
Whilst many participants reported starting to learn English at a younger age, the **majority (57%) did not learn to speak English at a conversational level until high school and early adulthood.**



Results

We collected many characteristics about language and culture that may tell us about which test is most suited to older adults from culturally and linguistically diverse backgrounds, e.g. whether they mix their languages when speaking or how long they have lived in Australia.

We analysed this information using a technique that finds how these characteristics group together, into 'factors'. The analysis found that the 33 characteristics grouped into four factors.



More details over the page...

Results (continued)

- 1** This factor tells us that the age someone started to learn and then became fluent speaking and reading in English is related to how many years of their schooling were completed in English.
- 2** This factor tells us that how much someone identifies with Australian culture is related to how well they can speak, understand, and read in English.
- 3** This factor tells us that someone's language preferences, how often they use their language(s), and whom they spend time with in the community influences how dominant their first language (L1) and their heritage culture is compared to their English-language use and Australian culture.
- 4** This factor tells us that how often someone switches between languages and in what contexts they do this are inter-related.

What's next?

These results are an important foundation for future research.

- We are creating a short version of the survey, to include only the most informative questions and to make it quicker to complete.
- Then, we will also investigate whether these four aspects of language and culture are related to performance on cognitive tests, so that we can improve the accuracy of the tests we use to diagnose dementia with older adults from various culturally and linguistically diverse backgrounds
- And finally, we will also share our methods and results with the scientific community by publishing academic articles and presenting at scientific conferences so that other research teams around the world can build on what we found

Thanks!

We would like to warmly thank all participants who completed the online survey for so generously volunteering their time and sharing about their language and cultural backgrounds – this study would not have been possible without you!



We would also like to thank the CogSCAN Community Working Group Members including LK, LZ, MC and SN for their valuable contributions.

Contact Details

If you have comments, questions, or would like to speak with the research team about this study, please feel free to contact us via the details below:

- **Email:** cogscan@unsw.edu.au
- **Phone:** 02 9385 0186

If you would like to find out more about other research underway at the Centre for Healthy Brain Ageing, you can find out more at the website: <https://cheba.unsw.edu.au>



Research is important to find new ways to improve the health and wellbeing of older Australians. If you would like to learn more about how you can get involved in other studies on ageing and/or dementia, you can also visit these websites:

<https://www.stepupfordementiaresearch.org.au/>

<https://www.stepupforageingresearch.org.au/>



Funding to complete the study came from a National Health and Medical Research Council – Boosting Dementia Research Grant (RG163145) and a UNSW Interlude Grant to enable continuation of the research following COVID-19 related interruptions; this study was also in part supported by a Dementia Centre for Research Collaboration PhD Scholarship, Centre for Healthy Brain Ageing (CHeBA) Josh Woolfson Memorial Scholarship and an Australian Government Research Training Program Fee Offset. Please cite using: <https://doi.org/10.26190/unsworks/31071>.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

Cover image credits:

1: Photo by Yunus Alexander on [Unsplash](#); 2: Photo by Elisheva G on [Unsplash](#); 3: Photo by Photo by Vita Marija Murenaite on [Unsplash](#); 4: Photo by Mae Mu on [Unsplash](#); 5: Photo by Oksana Bürki on [Unsplash](#); 6: Photo by Philippa Rose-Tite on [Unsplash](#); 7: Photo by Lauza Loistl on [Unsplash](#); 8: Photo by Marco Zuppone; 9: Photo by Oksana Bürki on [Unsplash](#); 10: Photo by Yeh Xintong on [Unsplash](#); 11: Photo by angela pham on [Unsplash](#); 12: Photo by Eric Prouzet on [Unsplash](#); 13: Photo by Soheb Zaidi on [Unsplash](#); 14: Photo by Lauza Loistl on [Unsplash](#); 15: Photo by Sonika Agarwal on [Unsplash](#); 16: Image courtesy of Working Group Member; 17: Photo by Tim Wilson on [Unsplash](#); 18: Photo by Anantha Krishnan on [Unsplash](#); 19: Image courtesy of Working Group Member; 20: Photo by Tania Mirón on [Unsplash](#); 21: Photo by Elisheva G on [Unsplash](#); 22: Photo by Yunus Alexander on [Unsplash](#); 23: Photo by Eric Prouzet on [Unsplash](#); 24: Photo by Deb Dowd on [Unsplash](#); 25: Photo by Marco Zuppone on [Unsplash](#); 26: Photo by Sonika Agarwal on [Unsplash](#); 27: Photo by Y.H. Zhou on [Unsplash](#); 28: Photo by Oksana Bürki on [Unsplash](#); 29: Photo by Yeh Xintong on [Unsplash](#); 30: Image courtesy of Working Group Member; 31: Photo by Jolame Chirwa on [Unsplash](#); 32: Photo by Anantha Krishnan on [Unsplash](#)