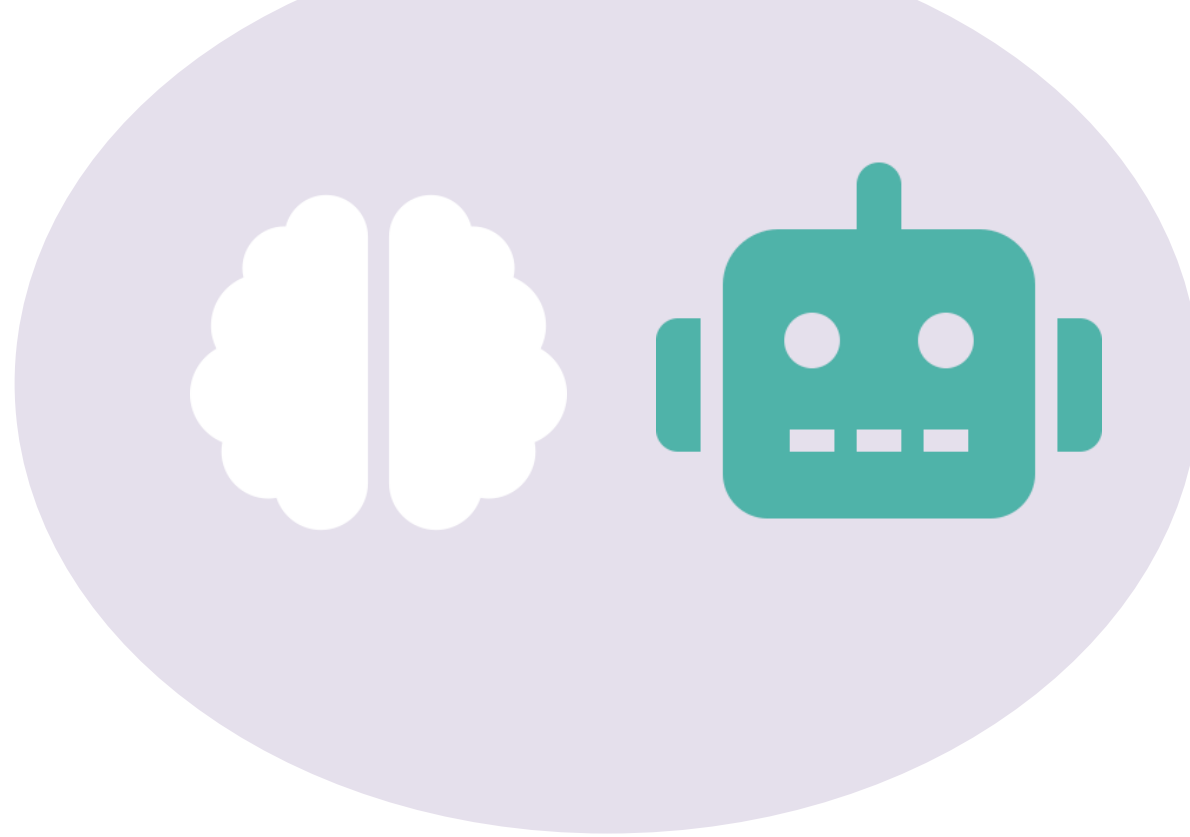


“The machine might want to ask more questions of you” Community perspectives on digital dementia risk assessment and artificial intelligence



Claire V Burley¹, Micaela Riethmuller¹, Serena Sabatini², Andreia F de Paiva³, Katherine Ride¹, Jennifer Dunne¹, Elissa Burton¹, Romola S Bucks⁴, Marc Sim⁵, Blossom CM Stephan¹
¹Curtin University, Perth · ²University of Barcelona · ³University of Surrey · ⁴University of Western Australia · ⁵Edith Cowan University, Perth

Background

- Approximately 45% of dementia is linked to 14 modifiable risk factors (2024 Lancet Commission).
- Digital dementia risk calculators and artificial intelligence (AI) are increasingly used to support prevention and early risk communication.
- Many prediction models exist, though these tools have largely been developed without community input.
- Community views on design, use and ethical acceptability are critical to responsible, equitable implementation.

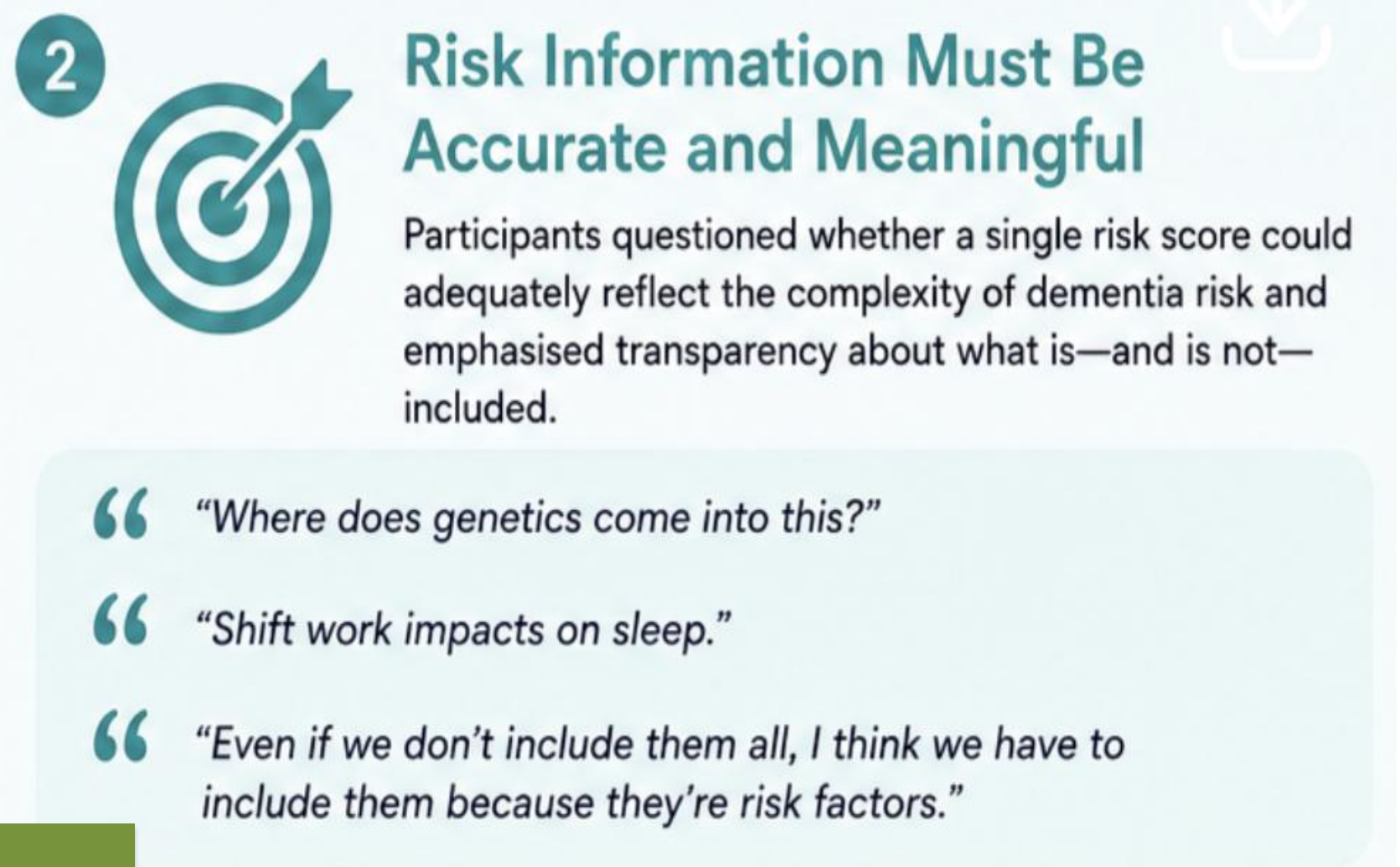
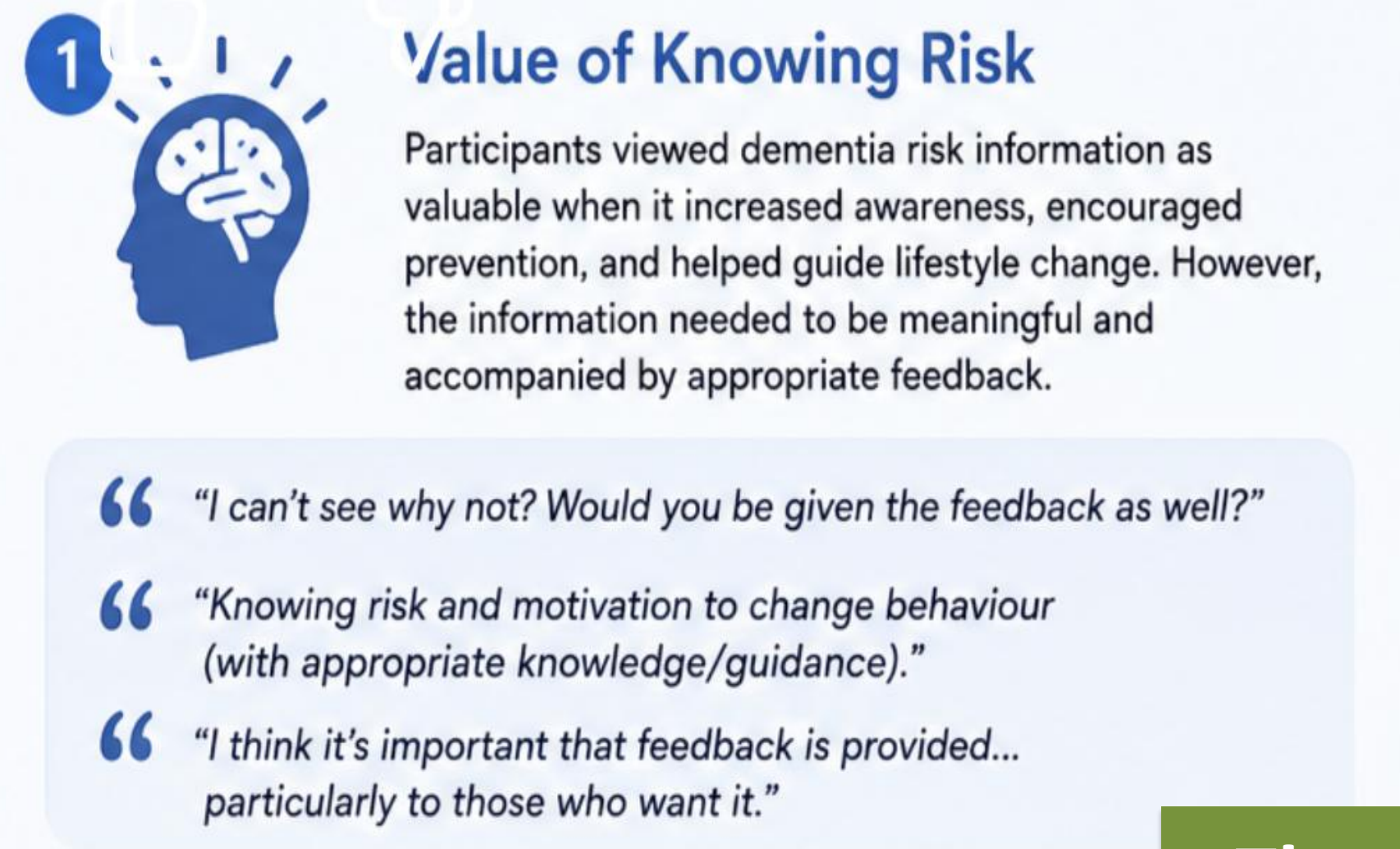
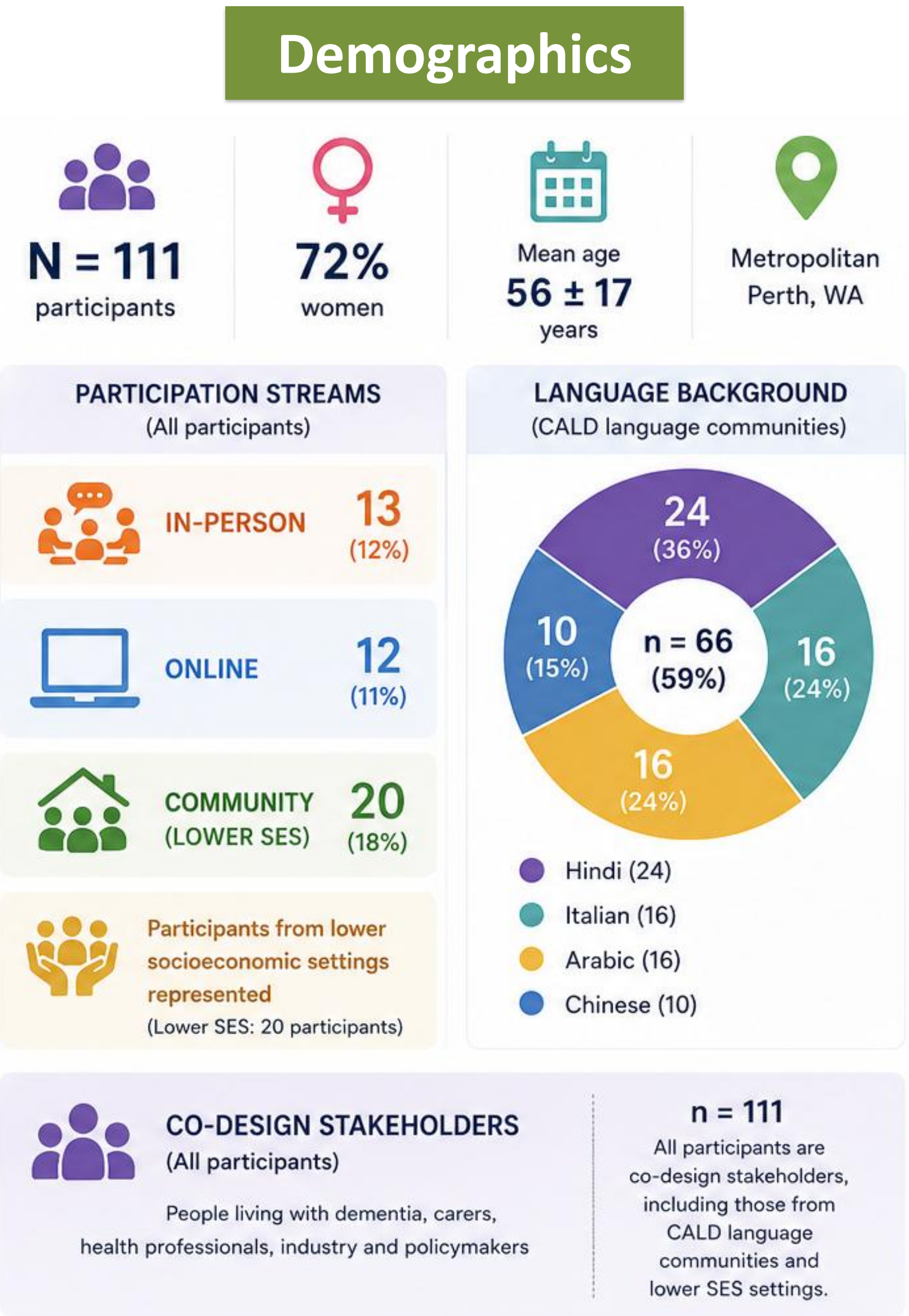
STUDY AIM: Examine community perceptions of digital dementia risk calculators and AI-enabled prediction.

Methods

- Qualitative co-design study with diverse stakeholders across metropolitan Perth, WA.
- Participants were recruited via StepUp for Dementia Research, consumer and community groups (Dementia Australia and Curin Involve) and social media.
- Eleven co-design working groups and two interviews.
- Communities included lower socio-economic settings and four culturally and linguistically diverse (CALD) participants.
- Sessions explored views on digital risk calculators, AI-enabled prediction, data sharing and privacy.
- Audio-recorded and transcribed verbatim.
- Analysed using reflexive thematic analysis.



Results



Themes

Conclusion & Future Directions

Community members expressed **cautious openness** toward digital dementia risk assessment and the use of AI, contingent on trustworthy design, ethical governance and appropriate clinical integration. These findings guide the development of acceptable digital prevention tools aligned with public values and health-system realities.



Acknowledgements: This research was funded by the Future Health Research and Innovation (FHRI) Fund. We would like to thank Dementia Australia Advocates and Curtin Involve community members for kindly contributing their time and providing advice throughout the study.

Contact Details: Dr Claire Burley, Senior Research Fellow, Dementia Centre of Excellence, enAble Institute, Curtin University.
Email: claire.burley@curtin.edu.au