Impact of cultural bias in diagnosing cognitive decline and dementia

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Accurate assessment of cognitive performance is paramount in determining cognitive decline and dementia.

Until now, traditional pencil-and-paper cognitive tests administered by trained clinicians have been considered the 'gold standard' for diagnosing dementia, but researchers from UNSW Sydney's Centre for Healthy Brain Aging (CHeBA) propose that computerized neuropsychological assessments hold promise as culturally appropriate tools for assessing cognition and cognitive decline in older culturally and linguistically diverse Australians.

The findings, published in the *Journal of the International Neuropsychological Society*, demonstrate significant differences in test performance between native English-speaking background and culturally and linguistically diverse older adults on cognitive assessments.

The study investigated 1037 community-dwelling individuals aged 70-90 years without a dementia diagnosis from CHeBA's Sydney Memory and Aging Study. The cognitive performance of culturally and linguistically diverse participants was significantly poorer on both forms of the assessment, but more so on traditional pencil-and-paper than on computerized assessments.

Lead author Zara Page said a key focus of the research was to identify specific characteristics of culturally and linguistically diverse participants that might explain the observed differences in performance when compared to participants from a native English-speaking background.

"Our results confirmed that linguistic and acculturation factors, such as language preference and community associations, influenced cognitive performance on both traditional and computerized assessments above and beyond demographic and health factors common to both groups," says Page.

"This is a very complex relationship that warrants further investigation to

better understand how we can ensure a fair assessment, and ultimately more accurate dementia diagnosis," she said.

According to co-author and leader of CHeBA's Neuropsychology Group and CogSCAN Study, Dr. Nicole Kochan, the study is particularly significant as, to the best of their knowledge, it is the first to investigate cultural bias in both traditional and computerized cognitive tests in a population of culturally diverse older Australians.

"Australia is an incredibly diverse country with a strong migrant history, with 20% of Australians over 65 speaking a language other than English at home," explained Kochan.

"It is important that our healthcare system reflects the needs of our increasingly diverse and aging population, and the first step is through inclusion in research," says Kochan

This research will help to provide a foundation for future studies to further disentangle the complex relationship between culturally and linguistically diverse factors that may impact measures of cognitive performance.

More information: Zara A. Page et al, Comparison of Computerised and Pencil-and-Paper Neuropsychological Assessments in Older Culturally and Linguistically Diverse Australians, *Journal of the International Neuropsychological Society* (2021). DOI: 10.1017/S1355617721001314

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