

**Considering the Influence of Culture and Cognitive Reserve on Clinical Presentations of Behavioural-variant Frontotemporal Dementia: A Single-site Study**

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**State of the Art**

Characterisation of the clinical profile of behavioural-variant frontotemporal dementia (bvFTD) has predominantly been based on Western samples. Some small studies have suggested that the clinical profile may differ in culturally and linguistically diverse (CALD) populations. However, studies directly comparing the profiles of CALD and non-CALD patients from the same clinic are lacking.

**Methodology**

BvFTD patients assessed at the Sydney Frontotemporal Dementia Clinic were classified as Non-English-speaking CALD (n=18) and English-speaking CALD (n=36) or Australian (n = 53). Clinical features, cognitive test performance and cognitive reserve (CR) were compared between groups. Voxel-based morphometry was used to examine the neural correlates of CR.

**Results**

Analysis of clinical features revealed a milder and more disinhibited profile in non-English CALD than Australian patients, who displayed comparatively more apathy. Non-English CALD patients also had higher CR, were diagnosed later, and showed relatively greater verbal than non-verbal cognitive impairment ( $p = 0.001$ ). Neuroimaging analyses revealed that higher CR was associated with lower integrity in the frontal-temporal regions associated with typical disease pathology in bvFTD.

**Conclusion**

This study uncovers opposing factors influencing the clinical and cognitive phenotype of bvFTD. Our findings support the hypothesis that cognitive reserve delays early cognitive decline in patients who are bilingual and highly educated, although these patients may still show poor test performance on verbal tests due to cultural biases. Clinically, these results highlight the need to consider cultural and linguistic background to inform the assessment and diagnosis of frontotemporal dementia.

**Conflicts of interest**

N/A