162 BRISBANE EVIDENCE-BASED LANGUAGE TEST, BRISBANE EBLT: A NEW DIAGNOSTIC TEST FOR THE IDENTIFICATION OF ACUTE POST-STROKE LANGUAGE DISORDERS

Rohde Alexia,[1] Worrall Linda,[1] O'Halloran Robyn,[2] Godecke Erin,[3] Farrell Anna[4].
[1]School of Health and Rehabilitation Sciences, the University of Queensland, Brisbane, Australia; [2]Human Communication Sciences, Faculty of Health Sciences, La Trobe University, Melbourne, Australia; [3]School of Psychology and Social Sciences, Edith Cowan University, Perth, Australia; [4]Speech Pathology Department, Royal Brisbane and Women's Hospital, Brisbane, Australia.

10.1136/bmjopen-2016-015415.162

Background and aims: Stroke clinical guidelines recommend that "*All patients should be screened for communication deficits using a screening tool that is valid and reliable*" (p.90). Current speech pathology practice does not meet this recommendation instead relying on clinical experience or informal language screeners which have not undergone validation by clinical research. This research involves the development of the Brisbane Evidence-Based Language Test (Brisbane EBLT), a reliable, valid diagnostic test for the identification of acute post-stroke language disorders.

Methods: Brisbane EBLT diagnostic accuracy was determined in a prospective blinded cross-sectional study (n=100 patients) comparing acute stroke patient (<2 months post-stroke) performance on the Brisbane EBLT with performance on a gold-standard language reference measure. Intra-rater and inter-rater reliability was concurrently analysed using a repeated measures study design. Acute stroke patient/family and clinician feedback was also obtained on test items.

Results: Diagnostic accuracy analysis revealed test sensitivity of 97.62% (95%CI: 87.4%–99.9%) and specificity of 84% (95% CI: 63.9%–95.5%). Test sensitivity/specificity was determined by calculating Brisbane EBLT total score while controlling for patient age and education level. Patient/family self-report of a new-onset language deficit was also included within the diagnostic accuracy analysis. Data collection was completed at the hospital bedside demonstrating the feasibility of Brisbane EBLT for use in acute contexts. Intra-rater reliability intra-class correlation coefficients (ICC) demonstrated almost perfect agreement (0.994; 95% CI: 0.989–0.997) between two speech pathologists' scores of 35 patients when they re-assessed the same patient video after a 2 week interval. Inter-rater reliability also demonstrated almost perfect agreement (0.995; 95% CI: 0.990 – 0.998) when comparing fifteen speech pathologists' scores of fifteen patients completing the new test, as per a priori sample size requirements.

Conclusion: The Brisbane EBLT is a new reliable, valid, acute post-stroke diagnostic language test. Test development has been guided by EBP principles to ensure it meets sound psychometric standards, meets patient and clinician needs and is suitable for use in the acute hospital environment. This research will directly contribute to the evidence-base of acute stroke care and assist in bringing practice in line with stroke clinical guideline recommendations.