

## Metacognition versus global cognition and executive function determining mood symptoms post stroke

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**Introduction:** The link between metacognition and mood has been well established, particularly in other conditions with psychological comorbidity, however, there is no evidence regarding this association in the area of stroke.

**Aims:** The aim of the study was to examine correlates of mood symptoms after stroke including global, executive function and metacognition in a Middle Eastern cohort.

**Methods:** One hundred and thirty patients were recruited to a prospective stroke study in Bahrain and n=64 were assessed for mood and cognition. A neuropsychological battery of cognitive assessments included measures: the Mini-mental State Examination (MMSE), the Trail Making Test (A+B) and the Meta-cognition Questionnaire-30 (MCQ-30) for meta-cognition. The Hospital Anxiety and Depression Scale assessed mood symptoms and stroke severity was measured using the National Institute of Health Stroke Severity Scale (NIH-SS).

**Results:** Total MCQ-30 scores were significantly associated with both anxiety ( $r = .47, p = .001$ ) and depression ( $r = .54, p < .0001$ ). The MCQ-30 subscales cognitive confidence, cognitive self-consciousness and uncontrollability/danger were the specific factors to be associated with mood symptoms ( $p < .01$ ). Global cognition ( $r = .32, p < .01$ ) but not executive function, was significantly associated with depression only. Metacognition remained a statistically significant correlate with depression ( $\beta = .42, p < .0001$ ) and anxiety ( $\beta = .51, p < .0001$ ) after adjusting for education and global cognition.

**Discussion:** Metacognition is a better determinant of mood symptoms after stroke, especially in regions where illiteracy levels are high in older populations, in comparison to executive function and global cognition.

**Key words:** Stroke, metacognition, global cognition, executive function, depression, anxiety

### Biography:

Dr Claire Donnellan is a Registered Psychologist with the Psychological Society of Ireland, and Assistant Professor and Director of International Initiatives with Trinity College Dublin (TCD), Ireland. She graduated with an honours B.Sc. in Psychology from University of London (2002) and a Ph.D. in Gerontology and Health Psychology from the Department of Clinical Medicine, TCD (2008). Claire's work experience in healthcare as a researcher and educator expands across the health sciences both here in Ireland and Internationally in Australia, United Kingdom and the Middle East. Her research interests include examining the challenges to successful ageing in both healthy ageing and in age-related illness and disease populations; specifically stroke and neurological patient cohorts. She has published widely in neurology, gerontology, psychology and nursing journals and has served as guest editor and reviewer for a large number of International high impact factor journals. Her memberships include the International Federation of Ageing, Irish Gerontological Society, the World Federation for Neuro-Rehabilitation including the Special Interest Group for Neuropsychology, and both the European and World Stroke Organisation.