# AGEING

TIME: 14.30 – 15.15

LOCATION: SWAN ROOM

## A QUALITATIVE STUDY OF GROUP EXPERIENCES IN TANZANIAN COGNITIVE STIMULATION THERAPY GROUPS

**Jasmine Morrish, Institute of Health and Society, Newcastle University**

Background: Cognitive Stimulation Therapy (CST) is a group-based psychological treatment for dementia (PwD), shown to improve cognition and quality of life (QoL). It was adapted for use and piloted in Tanzania, a low-income country in which drug therapy for dementia is largely unavailable. Previous studies have shown the individual format of CST does not achieve the same outcomes as group CST, suggesting processes inherent to the group nature are key to its success. This study sought to gain insight into group mechanisms occurring within Tanzanian CST and understand their impact on CST principles and outcomes.

Methodology: Data collection was undertaken in rural Hai District, Tanzania through qualitative semi-structured interviews. PwD who recently attended CST and facilitators shared their experiences of the groups. Participants were recruited though convenience sampling. Interviews were audio-recorded, translated and transcribed. Transcripts were analysed by thematic analysis.

Results: 16 PwD and 4 facilitators were interviewed. Six main themes emerged, each categorized as either 'Positive group experiences' or 'Negative group experiences'. From this, several group processes were identified. Positive processes supported CST principles and good patient outcomes, whilst negative processes counteracted them. Group facilitators and local cultural factors were influential over group experiences.

Conclusions: The group processes identified by this study impacted CST principles and outcomes. These findings lend support to previous CST studies, helping to explain how CST improves QoL and cognition. Further research into how these group processes could be enhanced or reduced, accounting for cultural interference, could help optimize the efficacy of this treatment.

## REGIONAL SUBCORTICAL VOLUMES PREDICT GAIT DECLINE IN EARLY PARKINSON'S DISEASE

**Joanna Wilson, Institute of Neuroscience, Newcastle University**

Objective: To predict changes in discrete gait characteristics during early Parkinson's disease (PD), using subcortical brain volumes quantified soon after diagnosis.

Background: Gait disturbance is an early and cardinal feature of PD, yet the mechanisms underlying gait and its progression are poorly understood, limiting clinical management. Whilst there is evidence of specificity between quantitative gait measures and regional brain structures in healthy ageing, few assess these associations in PD, nor provide better evidence of causality through longitudinal study designs.

Methods: 92 PD participants completed quantitative gait and MRI assessments through the ICICLE-PD study. From T1-weighted images, subcortical volumes related to motor and cognitive functions were measured with Freesurfer image processing software. Gait was quantitatively assessed at 18 month intervals for up to six years, using an instrumented walkway from which 16 gait characteristics were derived. Linear mixed effects models, age and sex corrected, assessed changes in gait characteristics over time, and predicted gait changes from subcortical volumes.

Results: Gait significantly declined over the first six years of PD; step length shortened and variability of swing time, step time and step length increased.

Step length shortening was predicted by volumes of the cerebellum, thalamus, putamen, pallidum and hippocampus. Step time variability increase was predicted by thalamus, putamen and pallidum volumes.
Conclusions: This is the first demonstration of subcortical volumes predicting gait progression in early PD. Regions related to both motor and cognitive functions predicted decline in selective gait characteristics, highlighting brain regions which may be suitable for future therapeutic targets.

## TRAINING TO IMPROVE MEALTIME CARE FOR PEOPLE WITH DEMENTIA: A SYSTEMATIC SCOPING REVIEW.

**James Faraday, Institute of Health and Society, Newcastle University**

Introduction: Mealtime difficulties are prevalent in people with dementia (PwD), leading to poor health outcomes and reduced quality of life. Improved competence/confidence in providing mealtime care is needed in the dementia workforce. However, currently there is a lack of evidence on how to provide effective training.
Methods: A mixed-methods systematic scoping review was undertaken, to synthesise training needs and interventions for staff providing mealtime care to PwD. Six databases were systematically searched, and a hand-search was performed. Papers were screened independently by two reviewers. Data were extracted using a piloted form, and quality was assessed using a validated appraisal tool. Qualitative data were synthesised using thematic analysis; quantitative data were tabulated and summarised. The data were then integrated using a synthesis matrix.
Results: Twenty-three studies were included in total. Eleven studies investigated staff's training needs in regards to managing mealtime difficulties in PwD. Four themes were identified: (1) person-centred care; (2) dealing with uncertainty; (3) strategies, skills and knowledge; and (4) creating the right environment. Twelve studies reported staff training interventions. Some training needs were addressed by the training interventions (e.g. the need for person-centred care). Other training needs were not (e.g. the need to address uncertainty among staff).
Conclusions: More research is needed on mealtime difficulties in PwD. Future interventions should be more systematically developed and more explicitly reported to facilitate effective implementation. Training should do more to address uncertainty among nurses/care staff.

## RETINAL IMAGING AS A POTENTIAL BIOMARKER OF HIV PROGRESSION IN OLDER HIV POSITIVE ADULTS IN NORTHERN TANZANIA

**Grace George. Faculty of Medical Sciences, Newcastle University**

Introduction: HIV is a major cause of disease burden across sub-Saharan Africa (SSA). Combination antiretroviral therapy has improved life expectancy but increased emergence of chronic complications of HIV, including HIV-associated neurocognitive disorder (HAND) and retinopathy. Biomarkers of HIV progression are lacking. Retinal imaging is a potential low-cost biomarker, which could detect ocular pathology within a low-resource country. Current data are limited.
Aims: To pilot retinal imaging as (1) A potential low-cost biomarker for HIV progression (2) A potential remote screening tool for ocular pathology in a low-resource country
Method: A cross-sectional study of systematically sampled ≥50-years adults under long-term follow-up in a Northern Tanzanian HIV clinic. HIV disease severity data were obtained from clinic records and blood tests ($CD_4$ count and viral load). Assessment for HAND included locally- normed neuropsychological battery and neurological examination. Individuals underwent ophthalmic assessment including retinal imaging that was analysed by remote teams.
Results: In 129 HIV-positive individuals, prevalence of HIV retinopathy was 10.1% (CI=4.88-15.3%) and HAND was 66.6% (CI=58.5-74.8%). We found significant correlation between HAND severity and suspected HIV retinopathy. No significant association between HIV retinopathy and $CD_4$ or

viral load was found. Unexpectedly, prevalence of visual impairment was 69.8% (CI=61.8-77.7%) and 55% self-reported recent visual changes. Prevalence of suspected glaucoma was 14.7% (CI=8.61- 20.8%).
Conclusions: Remote retinal imaging is a novel, exciting method of screening ophthalmic and neurological health. Ocular pathology remains endemic in this area. Results presented here may facilitate improvements in case detection.