

KATIE ANN PETERSON

EDUCATION

2013-2017 Ph.D., Medical Science (Psychiatry), University of Cambridge

Supervisors: Prof Barbara J. Sahakian and Prof John D. Pickard

Thesis: *Cognition and apathy in normal pressure hydrocephalus*

2008-2012 MA (Hons), Psychology, University of Dundee

Degree award: **1st class (Hons)**

Thesis: *The influence of priming, framing and executive function on moral judgements*

Supervisor: Prof Trevor A. Harley

RESEARCH POSITIONS

2020-2021 Research Associate – 7Tesla and Metabolic MR Imaging in Dementia

Dept. Radiology, University of Cambridge, Pls: Dr Tomasz Matys and Prof James B. Rowe

Recruitment of patients with Alzheimer's disease and primary progressive aphasia for 7T and 3T MRI studies of dementia. Conducted neuropsychological and language assessments. Structural brain imaging analysis (FSL, ITK-SNAP) of adult brain tumours.

2017-2020 Research Associate – Development of the Mini Linguistic State Examination

Dept. Clinical Neurosciences, University of Cambridge, Pls: Prof James B. Rowe, Prof Peter Garrard, and Prof Karalyn Patterson

Developed a novel test for the assessment of progressive aphasia. Recruited patients (primary progressive aphasia, progressive supranuclear palsy, corticobasal syndrome) and controls for an MRI study. Conducted neuropsychological and language assessments. Analysed structural brain imaging data (FreeSurfer) to investigate neural correlates of language impairment in dementia.

2013-2017 Ph.D. student – Cognition and apathy in normal pressure hydrocephalus

Dept. Psychiatry, University of Cambridge, Pls: Prof Barbara J. Sahakian and Prof John D. Pickard

Investigated cognitive and neuropsychiatric symptoms in normal pressure hydrocephalus. Recruited people with brain injury for research. Analysed behavioural and structural brain imaging data (FSL, ITK-SNAP). Conducted a meta-analysis. Completed IRAS NHS ethics applications.

2011-2012 Undergraduate Research Assistant

School of Psychology, University of Dundee

Programmed experiments (Cedrus SuperLab). Qualitative and quantitative data collection.

CLINICAL POSITIONS

2013-2016 Research Neuropsychologist, NHS Cerebrospinal Fluid Disorders Clinic, Addenbrooke's Hospital, Cambridge

Assessed cognitive function and mood in patients with suspected or established normal pressure hydrocephalus and benign intracranial hypertension. Assessed cognitive outcome post-shunt surgery/ lumbar drain. Wrote summary reports for the neurosurgical team, supervised by a clinical neuropsychologist.

PEER-REVIEWED PUBLICATIONS

In press:

Peterson, K.A., Jones, P.S., Patel, N., Tsvetanov, K.A., Ingram, R., Cappa, S.F., Lambon Ralph, M.A., Patterson, K., Garrard, P., & Rowe, J.B. Language disorder in progressive supranuclear palsy and corticobasal syndrome: neural correlates and detection by the MLSE screening tool. (*Accepted to Frontiers in Aging Neuroscience*)

Matias-Guiu, J.A., Pytel, V., Hernández-Lorenzo, L., Patel, N., **Peterson, K.A.**, Garrard, P., & Cueto, F. Spanish version of the Mini Linguistic State Examination for the diagnosis of primary progressive aphasia. (*Accepted to Journal of Alzheimer's Disease*)

Published:

Peterson, K.A., Patterson, K., & Rowe, J. B. (2019). Language impairment in progressive supranuclear palsy and corticobasal syndrome. *Journal of Neurology*, 1-14. doi: 10.1007/s00415-019-09463-1

Savulich, G., Thorp, E., Piercy, T., **Peterson, K.A.**, Pickard, J.D., & Sahakian, B.J. (2019). Improvements in attention following cognitive training with the novel "Decoder" game on an iPad. *Frontiers in Behavioural Neuroscience*, doi: 10.3389/fnbeh.2019.00002

Peterson, K.A., Mole, T.B., Keong, N.C.H., DeVito, E.E., Savulich, G., Pickard, J.D., & Sahakian, B.J. (2019). Structural correlates of cognitive impairment in normal pressure hydrocephalus. *Acta Neurologica Scandinavica*, 139(3), 305-312. doi: 10.1111/ane.13052

Peterson, K.A., Savulich, G., Jackson, D., Killikelly, C., Pickard, J.D., & Sahakian, B.J. (2016). The effect of shunt surgery on neuropsychological performance in normal pressure hydrocephalus: a systematic review and meta-analysis. *Journal of Neurology*, 263(8), 1669-1677. doi:10.1007/s00415-016-8097-0

Peterson, K.A., Housden, C.R., Killikelly, C., DeVito, E.E., Keong, N.C., Savulich, G., Czosnyka, Z., Pickard, J.D., & Sahakian, B.J. (2016). Apathy, ventriculomegaly and neurocognitive improvement following shunt surgery in normal pressure hydrocephalus. *British Journal of Neurosurgery*, 30(1), 38-42. doi:10.3109/02688697.2015.1029429

FORTHCOMING PUBLICATIONS

Patel, N., **Peterson, K.A.**, Ingram, R., Storey, I., Cappa, S.F., Catricala, E., Patterson, K.E., Lambon Ralph, M.A., Rowe, J.B., & Garrard, P. The Mini Linguistic State Examination (MLSE): a brief but accurate assessment tool for classifying Primary Progressive Aphasia. (*Under review, preprint: <https://www.medrxiv.org/content/10.1101/2020.06.02.20119974v1>*)

SELECTED PRESENTATIONS

- **Language impairment in progressive supranuclear palsy and corticobasal syndrome: The MLSE screening test and its neural correlates.** The Alzheimer's Association International Conference. Virtual event, 2020. [Poster]
- **Development of the standardised, multilingual Mini Linguistic State Examination (MLSE) to classify and monitor primary progressive aphasia.** The Alzheimer's Association International Conference. Chicago, Illinois, United States, 2018. [Poster]
- **Language impairment in progressive supranuclear palsy and corticobasal syndrome.** The Alzheimer's Association International Conference. Chicago, Illinois, United States, 2018. [Poster]
- **Cognition and apathy in normal pressure hydrocephalus.** Behavioural and Clinical Neuroscience Institute discussion group seminar series. Cambridge, UK, 2016. [Oral presentation]

- **Cognition, motivation, and apathy following brain injury.** The 1st Annual Cambridge Psychiatry Graduate Symposium. Cambridge, UK, 2015. [Oral presentation]
- **Normal pressure hydrocephalus – a reversible dementia? Systematic review and meta-analysis of cognitive outcome following shunt surgery.** Cambridge Neuroscience Seminar. Cambridge, UK, 2015. [Poster]
- **Apathy, ventriculomegaly and neurocognitive improvement following shunt surgery in normal pressure hydrocephalus.** The British Association for Psychopharmacology (BAP) Summer Meeting. Cambridge, UK, 2014. [Poster]
- **Does crime pay or do good deeds lead to heaven? The influence of priming, framing, and executive function on moral judgements.** British Psychological Society (Scotland) Conference for Undergraduate Research Projects. Glasgow, UK, 2012. [Oral presentation]

RELEVANT SKILLS

Clinical experience

Neuropsychological, neuropsychiatric, and language assessment (cerebrospinal fluid disorders, behavioural variant frontotemporal dementia, Alzheimer's disease, primary progressive aphasia, progressive supranuclear palsy, corticobasal syndrome); other clinical research experience (stroke, brain tumour, traumatic brain injury).

Data analysis

Analysis and visualisation (R, SPSS), neuroimaging analysis (FreeSurfer, FSL, SPM, ITK-SNAP).

Research ethics

Good Clinical Practice training.

Completed multiple IRAS NHS/ university ethics applications and amendments.

Programming/coding

Strong skills in R, some experience with HTML, CSS, UNIX command line, Cedrus SuperLab.

Data management

REDCap, Microsoft Excel.

Written communication

Scientific and technical writing; editing and proofreading for non-native speakers; reviewing.

Production of study documentation including protocols, information sheets, and SOPs.

Oral communication

Presentation skills, listening skills, empathy, negotiation.

Considerable experience working with patients with complex communication needs.

AD-HOC REVIEWER

Journal of Neuroscience, Psychological Medicine, Neurobiology of Aging, Parkinsonism & Related Disorders, Journal of Alzheimer's Disease, Journal of the International Neuropsychological Society, Journal of Geriatric Psychiatry and Neurology, SAGE Open Medicine

TEACHING AND MENTORING

- | | |
|------------------|--|
| 2021 | University of Birmingham mentorship scheme
Mentor to an undergraduate student of Biomedical Sciences |
| 2017-2018 | University of Cambridge undergraduate supervision scheme
Co-supervised the final year research project of a Psychology undergraduate |
| 2011-2012 | University of Dundee peer support mentorship scheme
Mentored a first-year psychology student |
| 2005-2007 | Various primary schools, Shetland
Befriender/ mentor/ group teaching experience |

AWARDS

2014 Public Vote Best Poster, Lucy Cavendish College Graduate Research Day

FURTHER ACTIVITIES

Outreach **2020** Member of a focus group to facilitate virtual community centres during the COVID-19 lockdown.
 2019 Produced a research newsletter for patients and carers attending the dementia clinics at Addenbrooke's Hospital.

Volunteering **2015-2016** Green Impact Project, investigated and implemented green initiatives in the Department of Psychiatry, University of Cambridge.
 2006-2007 Befriender/ volunteer at various care homes, Shetland.