

Multisensory hallucinations and cognition in Parkinson's disease

Caitlin Yolland^{1*}, Francesca Beilharz^{1,2}, Susan Rossell^{1,3}, Wei Lin Toh¹

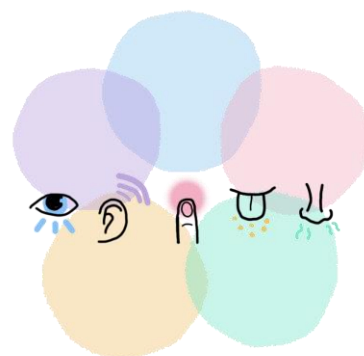
1. Centre for Mental Health, Swinburne University of Technology, Hawthorn VIC

2. Mind, Body, Well, Melbourne VIC

3. Department of Psychiatry, University of Melbourne, Melbourne VIC

BACKGROUND

Hallucinations are common experiences in Parkinson's disease (PD), with ~28% of PD patients experiencing visual hallucinations, and ~9% reporting auditory hallucinations [1]. However, the phenomenology of hallucinations in other sensory domains in PD, and multisensory hallucinations, is not well understood. While PD is often associated with cognitive decline, the potential association between hallucinations in PD and cognitive function requires further research. As such, two studies will be conducted to explore these relationships.



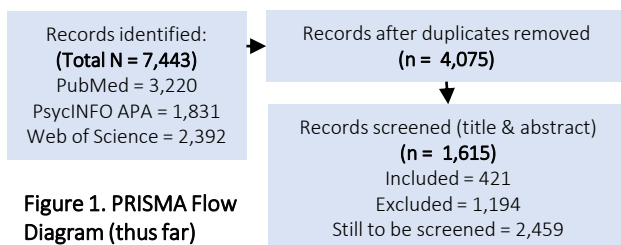
STUDY 1: A systematic review of the phenomenology of multisensory hallucinations in Parkinson's disease: cognitive and delusional correlates

STUDY 2: An empirical investigation of the characteristics, cognitive profiles and mood associations of multisensory hallucinations in Parkinson's Disease

METHODS

A systematic review of the literature was conducted to identify studies which have investigated the presence and characteristics of multisensory hallucinations in PD. Studies which met inclusion criteria were i) empirical studies (case studies were accepted), ii) published from 1970 to present, iii) reported in the English language and iv) included participants diagnosed with PD who experienced hallucinations. APA PsycInfo, PubMed and Web of Science databases were searched, and results were screened in line with PRISMA guidelines.

RESULTS



METHODS

N=50 PD participants experiencing ≥ 1 mode(s) of hallucinations, aged 40-75 years with no known neurological disorder (other than PD) or TBI will be recruited for this cross sectional study. A clinical-phenomenological interview will be conducted, comprising: i) Demographic-clinical questionnaire; ii) Beck Depression Inventory, RBD Screening Questionnaire, PD Sleep Scale; iii) Specialised hallucinations assessment battery; iv) Cognitive assessment, using the Repeatable Battery for the Assessment of Neuropsychological Status

RESULTS

Data analysis will involve: i) Descriptive statistics to demonstrate hallucinations phenomenology and cognitive profiles, ii) Analyses of variance (ANOVAs) to examine differences in cognitive deficits across hallucinatory modes, and iii) Correlation analyses to explore links between hallucinations, cognition and clinical symptoms (e.g. mood and sleep disturbances).

CONCLUSIONS

These studies are still in progress. The outcomes will be relevant for the conceptualisation and understanding of multisensory hallucinations in PD, and potential relationships between psychosis and cognition in the disorder. This further knowledge will deepen insights of PD progression and convey treatment implications.

[1] Eversfield. C. L. & Orton, L. D. (2018). Auditory and visual hallucination prevalence in Parkinson's disease and dementia with Lewy bodies: a systematic review and meta-analysis. *Psychological Medicine*, <https://doi.org/10.1017/S0033291718003161>