Centre for Mental Health

SWINBURNE UNIVERSITY OF TECHNOLOGY

Cognitive Neuropsychiatry

Beyond voices: an inclusive cognitive model of multisensory hallucinations in psychosis

- A PhD Thesis Proposal –

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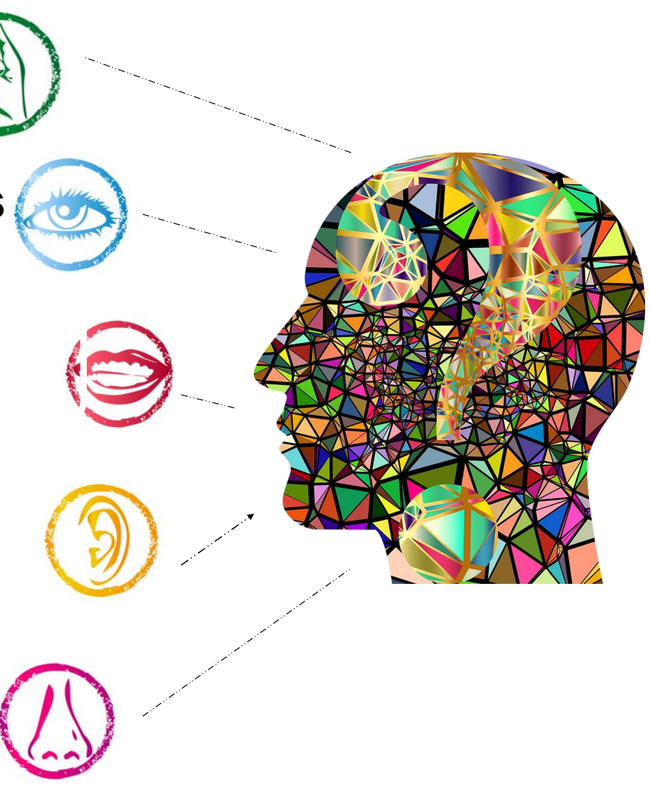
Background

Hallucinations can occur across multiple sensory modalities (**multisensory hallucinations**), however auditory hallucinations have somewhat dominated the literature to date. Our understanding of multisensory hallucinations is limited, and their underlying mechanisms unknown. In particular, the study of **cognitive mechanisms** and proposed **cognitive models** of multisensory experiences has been neglected. Theoretical viewpoints have proposed that **modality-general** and **modality-specific** mechanisms may exist. However, these are yet to be tested empirically. Moreover, nascent research has suggested that a dose-response relationship may exist between childhood **trauma** and multisensory hallucinations, however these findings require replication and the role of trauma in adulthood, or childhood and adulthood combined, is yet to be explored.

Thesis Aims

- **Increase awareness & understanding of multisensory experience**
- **Identify potential cognitive underpinnings of multisensory hallucinations**
- **Identify whether the cognitive factors associated with multisensory hallucinations, differ from unimodal hallucinations**
- **Consider other potential etiological factors: traumatic life experiences in childhood and adulthood**
- **Overarching aim: Develop and empirically test an inclusive cognitive model of multisensory hallucinations**



Methods

Sample:
- 154 participants

Groups:
- Non-clinical control group
- Clinical control group (psychosis but no hallucinations)
- Unimodal hallucinations group
- Multisensory hallucinations group

Core measures of interest:
- **Multisensory hallucinations:** Multimodal Hallucinations Schedule
- **Trauma**: Life Stressor Checklist Revised (modified)
- **Cognition**:
  - General cognition: MATRICS Consensus Cognitive Battery
  - Inhibition:
    - Stroop task
    - Go-NoGo task

Statistical Analyses:
- One-way ANOVAs: group differences across core measures of interest
- Discriminant function analysis: predictive ability of core measures of interest on group membership
- Statistical modelling: testing the cognitive model

Impact

Advance our current understanding of multisensory hallucinations in psychosis

Inform future research: *novel interventions & neurobiological underpinnings*

Increase recognition in clinical settings: *assessment & treatment*

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