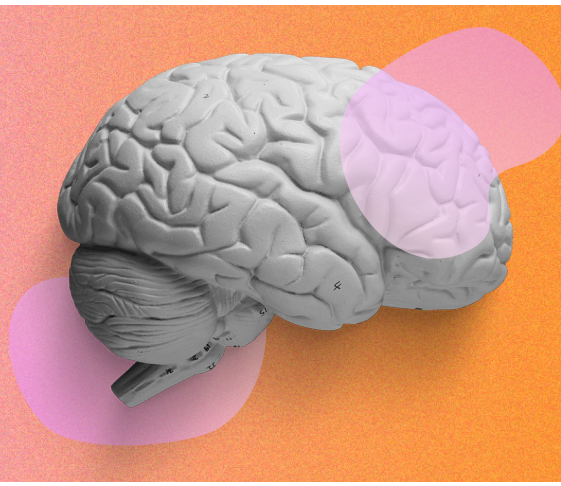
Development of an Online Experiment

to investigate the interplay of language processing and memory function in the formation of hallucinations



Goal:

The goal of this research project is to set up and implement an online experiment to investigate how alterations in language processing and memory functions contribute to the formation of hallucinations in a large sample of individuals on the schizophrenia spectrum.

Background:

Schizophrenia is a severe mental disorder that affects the way a person perceives reality, thinks, acts, and relates to others. This project focuses on cognitive symptoms such as alterations in language processing and memory impairments, as these are some of the most robust symptoms across disease stages and do not respond well to current treatment responses. Critically, recent evidence shows that these cognitive deficits may also give rise to the development of other symptoms, such as hallucinations. The current study aims to investigate this relationship by targeting the interplay of language processing and verbal memory in the formation of auditory verbal hallucinations.

Tasks:

- Set-up of experimental design using common software for online studies (e.g., jsPsych, PsychoPy)
- Implementation and piloting of the experiment on platforms designed for online data collection (e.g., Prolific, Gorilla Experiment Builder)
- Creating a data structure for organizing and processing large amounts of data
- Documentation and logging of the process in the spirit of the open science movement (e.g., set-up of a GitHub repository)

Requirements:

- Fluent in German or English
- Knowledge of programming languages, such as Python or JavaScript
- Interest in neuroscientific methods and research questions

Contact:

If you are interested and would like more details on the project, feel free to contact franziska.knolle@tum.de and elisabeth.sterner@tum.de.