

VIRTUAL REALITY ASSESSMENT & INTERVENTION SYSTEM (VRAIS)

What is VRAIS?

An interdisciplinary project that combines knowledge from psychological and computer sciences to deliver Virtual Reality (VR) tools. These tools will assess and assist people experiencing mental health problems which interfere with their ability to function independently at home, such as Alzheimer's Disease. It now uses a 3-dimensional virtual kitchen that people can explore and interact with.

Alzheimer's disease affects memory for names of people and objects as well as their location, and the ability to plan and link tasks. These memory and thinking problems progress over time eventually interfering with the ability to live independently.

Why VRAIS?

VR tasks have a positive impact on:

- **COGNITION**
- **EMOTION**
- **ACTIVITIES OF DAILY LIVING**
- **PHYSICAL FITNESS**

Adapt to patients' changing needs
Used effectively in the community
More effective than games
Secure environments
Rich sensory stimulation
Comfortable and safe
Promote functional learning and the transfer of learned functions
Cost-effective and flexible
Used for patient-centred care



What does it do?

VRAIS allows for the assessment and training of people's abilities to perform everyday life tasks. It presents a realistic, fully 3-dimensional virtual kitchen full of common objects that can be picked up, moved and put together as they are in real life.

VRAIS tests ability to remember and follow sequences of tasks. It also tests ability to remember the specific objects that need to be used to complete different tasks, their function, and location.

What information does it provide?

VRAIS measures people's abilities to complete tasks in a virtual kitchen. It can compare abilities in a virtual kitchen with those shown in a real kitchen. VRAIS informs about the type of error people make when performing kitchen tasks. For example, it can detect if a specific action was forgotten, if an incorrect object was used, or if people are distracted and lose track of tasks.

What is next?

Personalising interventions by adapting to people's changing needs
Assisting people in daily tasks by providing feedback and cues
Adapting VRAIS to help people regardless of their cultural background
Assessing impact of VRAIS on people's abilities to remain independent

Where is VRAIS? Applied Cognition Lab, Psychology Department, School of Psychological Sciences and Health, University of Strathclyde. Graham Hills Building, 40 George Street, Glasgow, G1 1QE.

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