

Summary of Workshop

Technologies for Brain Health and Dementia Prevention Workshop

The Scottish Dementia Research Consortium (SDRC) and the Digital Health & Care Innovation Centre organised and held a two-day event that brought together keynote speakers and members of the community to interact and discuss strategies to deliver better technologies to support brain health and prevent dementia. Workshop sessions were designed by the Design Innovation team from Glasgow School of Art and focused on four core themes: Adaptive technologies, such as those able to adapt to and meet the changing needs of people affected by neuro-progressive diseases. Technologies to enhance brain health, such as those that can restore lost abilities by promoting new compensatory functions. Assistive technologies, such as those aimed at supporting people with disabilities which can allow them to live safely and independently whether at home or in care facilities. Co-design and co-production for brain health technologies, which in line with the [Scottish Brain Health and Dementia Research Strategy](#), aimed to ensure that the views from all stakeholders are captured and considered when developing new technologies.

Keynote speakers set the context in day one via a series of lectures addressing issues around touch points for technology in the brain health movement, socially assistive robots, approaches to bring healthcare technologies from the lab to the real world, artificial intelligence to support adaptive technologies, virtual reality for everyday assessments and strategies to enhance coproduction of brain health technologies. Day two started with a keynote on Design, Technology, Design Thinking and was followed by an engaging workshop during which participants were guided through a series of exercises. These started by unlocking their creativity and ended with ideas generation and project proposals.

Early Career Researchers shared progress via poster presentations. They showcased research that aims to develop new frameworks for continuous assessment of users' cognitive abilities based on observed performance of everyday tasks using non-intrusive sensing, robotic and AI technology. A new project will apply user-centred design to create an embodied agent with a novel human-like autobiographical memory, performing a carer-assisted intervention for personalised reminiscence, telling stories and bringing to the surface memories residing in the still viable regions of the brain. Factors influencing acceptance of technology across age and the impact of the COVID-19 pandemic on attitudes and stigmas towards healthcare technologies were also presented. We also learned about a new system that can help people with mild dementia in early stages who are experiencing agitation to reduce such symptoms via personalised music triggered by wearable sensors.

The feedback received is very encouraging indicating that attendees were either satisfied (40%) or very satisfied (60%) with this event and would like to participate in similar events in the future (94%).

We are now following the strategies discussed during the workshop. Participants agreed that a Special Interest Group (SIG) on Technologies for Brain Health and Dementia Prevention Workshop would help pave the way towards future collaborations.