

# POSTER PRESENTATION 3: PHYSICAL AND MENTAL HEALTH

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## **A comparative usability testing between a web-based and non-immersive VR reminiscence therapy for persons with dementia**

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**Purpose** Reminiscence Therapy (RT) is a multi-sensory treatment that uses a combination of sight, touch, taste, smell, and sound to help persons with dementia (PWD) remember events, people, and places from their past lives [1]. This non-pharmacological treatment allows for improving the quality of life, cognitive function, and mental health of PWD. This paper presents the perspectives of healthcare providers using a comparative study between a web-based RT application and non-immersive virtual reality (VR) counterpart to understand the limitations and opportunities of both platforms for facilitating increased engaging experiences for PWD towards recalling memories while easing the therapy process for the healthcare providers. **Method** Due to the COVID-19 pandemic, the study was conducted in two stages. The first stage focused on a qualitative descriptive study using focus group to explore the perspectives of healthcare providers' utilization of web-based and non-immersive RT as an intervention to support PWD's emotional health during the COVID-19 pandemic. The second stage focuses on capturing healthcare providers (HCPs) perceptions when interacting with the web-based and non-immersive RT tools as interventions during RT. Web-based reminiscence therapy (WBRT) is a digital reminiscence therapy application, with features to allow the users to create an individualized profile and upload media contents such as pictures, audio, and videos to facilitate reminiscence therapy. The non-immersive RT (NIRT) therapy digital platform takes place within a virtual living room environment. A living room was chosen as an appropriate environment due to its welcoming nature, ubiquity, and high understandability for PWD of all capacities, and its ability to support all types of interaction during the therapy, such as presenting pictures, viewing videos through the television, or travelling to another place of interest through a window, etc.). A total of ten HCPs were recruited from both GTU (Geriatric Transitional Unit) and GDU (Geriatric Dementia Unit) of Ontario Shores Center for Mental Health Sciences in Ontario, Canada for this research study. HCPs consisted of occupational therapist (n=2), behavioral therapist (n=2), recreational therapist(n=2), social worker(n=2), and nurse(n=2). **Results and Discussion** HCPs agree that both web-based and non-immersive RT provided a platform to upload customized content (photo, video, music, etc.) tailored to individual's needs. These approaches add value to their care and increases engagement, where PWD may connect more with the content than traditional RT methods. HCPs also agreed that digitalization provides an opportunity to store more personalized information and content to support reminiscence experiences. They believed that the digitalization of RT would reduce their need for paper copies or collection of tangible artifacts to promote efficiency, accessibility and continuity of care. HCPs indicated that digital RT via web-app or non-immersive platform could be implemented in combination with traditional RT as it could complement each other to facilitate dementia care. Our preliminary findings suggested that digital approaches could help advance reminiscence experiences for PWD. Our next step will focus on expanding the application for immersive VR supporting head-mounted displays, hand tracking, and physiological measures and we will conduct a usability study with PWD to expand our understanding of using RT digital tools with various levels of immersion.

### **References**

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