INTEGRATING VIRTUAL REALITY REMINISCENCE THERAPY (VRRT) INTO DEMENTIA CARE: AN EXPLORATORY STUDY

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OBJECTIVES

1 To assess the usability, feasibility, and effectiveness of VRRT in dementia care

2 To Integrate VRRT into the Alzheimer's Society's Behavioral Support Lending Program and gather empirical data

3 To reduce caregiver burden and improve PWD's quality of life through non-pharmacological methods.

BACKGROUND

Dementia: A public health problem

- Dementia affects 55 million people worldwide, with a projected increase of approx. 10 million people annually

- Increased need for non-pharmacological therapies to improve the quality of life for PWD as they age in place in their homes and communities

- Reminsince Therapy was introduced as a multi-sensory treatment to help PWD to remember events, people and places from the past

- Time consuming for care providers to gather and collect physical artifacts for reminiscence therapy

METHODOLOGY

Equipment
Meta Quest 3 Headsets

- Participants explored different VR nature scenes along with memories; engaged in stimulating activities such as 3D painting and interactive Zumba

Session Timings
Four weekly 15 min sessions

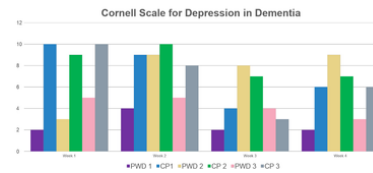**Qualitative Data**
- Focus group interview session (20-50 min)

Quantitative Data
- Zarit Burden Interview[2]
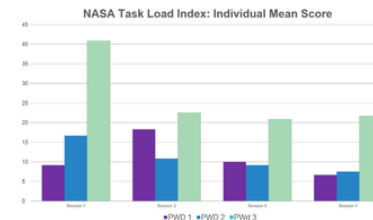- System Usability Scale[3]
- VHIL Presence Scale

RESULTS SUMMARY

- Severity of depressive symptoms in PWD and CP's decreased after the four sessions (Cornell Scale)

Cornell Scale for Depression in Dementia

- Participant's felt the sessions improved their overall performance in everyday tasks (NASA Task Load Index)

NASA Task Load Index: Individual Mean Score

- Spatial perception and awareness of participants whilst inside the VR increased after completing the sessions

CONCLUSION

The study underscores the need for ongoing support and training for PWD and caregivers to adopt VR technology effectively in use for Reminiscence Therapy.

Future Work : The next phase will focus on refining the VR prototype and conducting assessment to measure the impact on cognitive decline, mental health, and caregiver burden; using this data as base comparison

ACKNOWLEDGMENTS

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[2] M. Bédard, D. W. Molloy, L. Squire, S. Dubois, J. A. Lever, and M. O'Donnell, "The Zarit Burden Interview," The Gerontologist, vol. 41, no. 5, pp. 652–657, Oct. 2001., doi: https://doi.org/10.1093/geront/41.5.652
[3] J. Brooke, "Sus: a retrospective," Journal of Usability Studies, vol. 8,no. 2, pp. 29–40, 2013.

PRESENTATION

PAPER