Yoga in Nature through Virtual Reality for the Ageing Population: A Pilot Study

Dhanalakshmi Tamatam[1], Prof. Viliam Pichler[1], Dr. Magdalena Pichlerova[1], Lars-Erik Lindberg[2], Gabriella Reuterswärd.

1. Technical University in Zvolen, Slovak Republic; 2. Ericsson AB, Sweden; 3. Norlandia Aldreboenden, Sweden.

Introduction:

The ageing global population presents unique challenges and opportunities for enhancing the well-being of older adults. This pilot study investigates the intersection of technology and well-being, with a focus on the potential of virtual reality (VR) to positively impact the lives of older individuals.

Methodology:

- Developed “Yoga in Nature through Virtual Reality” with a multidisciplinary approach and technical support from Ericsson.
- This pilot study was conducted within an elderly care facility (Norlandia) in Uppsala, Sweden, involving participants aged 70-90 years. 12 older adults participated in this study with VR-based yoga sessions and a bilingual questionnaire.
- Analysed questionnaire responses to assess user experience, well-being impact, and willingness to adopt VR for wellness.

Conclusion:

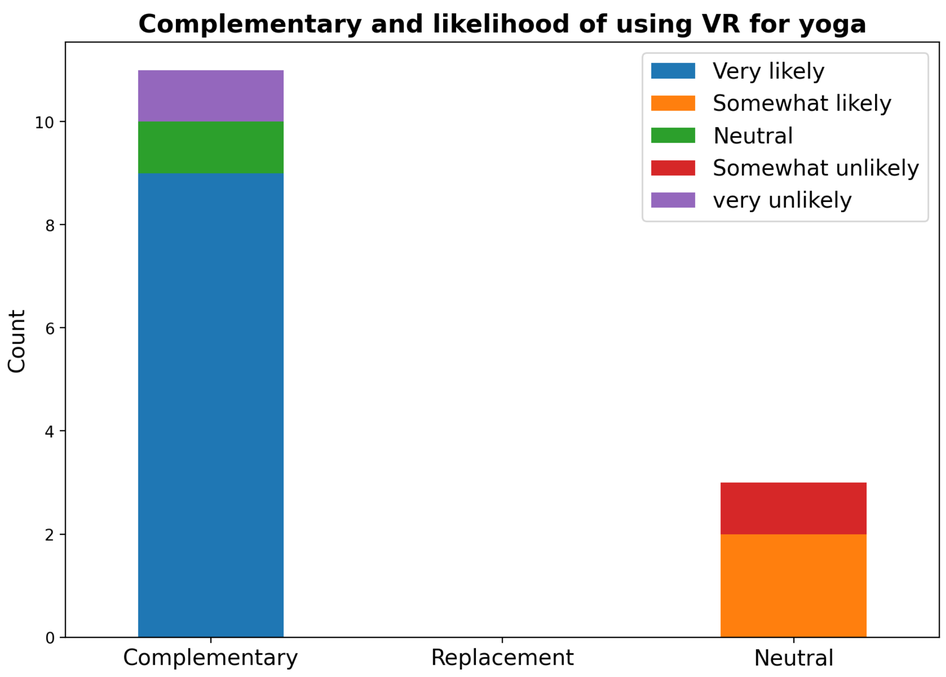
The study provides an essential foundation for further exploration of the potential of technology, particularly VR, in promoting the well-being of older adults. It indicates the need for ongoing research and development in this domain, focusing on tailoring technology solutions to the unique needs and preferences of older populations. As the global population ages, harnessing innovative approaches to enhance the well-being of older adults becomes increasingly essential.

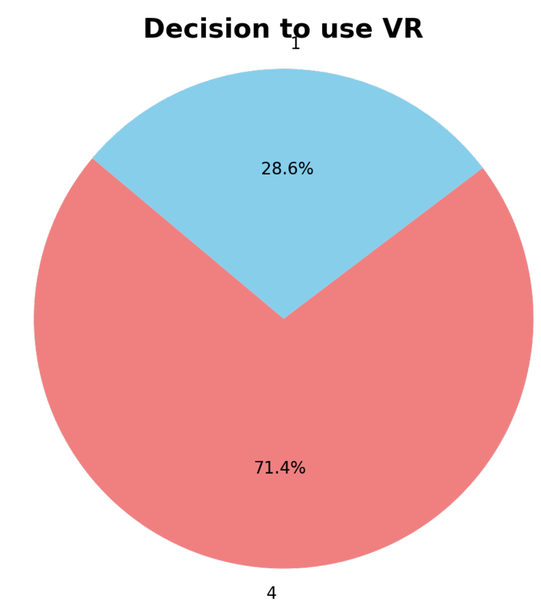
Objectives :

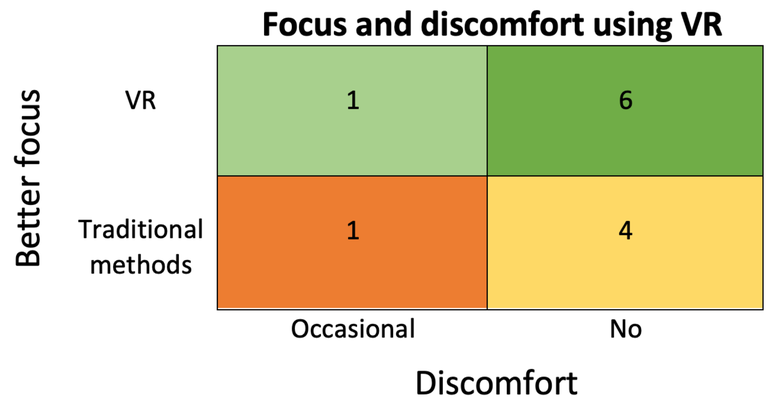
1. Develop and implement "Yoga in Nature through VR" to enhance the well-being of older adults.
2. Evaluate the user experience of older adults in VR-based yoga sessions.
3. Assess the impact of VR-based yoga on physical, mental, and emotional well-being.
4. Determine the willingness of older adults to adopt VR technology for wellness.
5. Contribute to understanding technology's potential in promoting older adults' health and well-being.

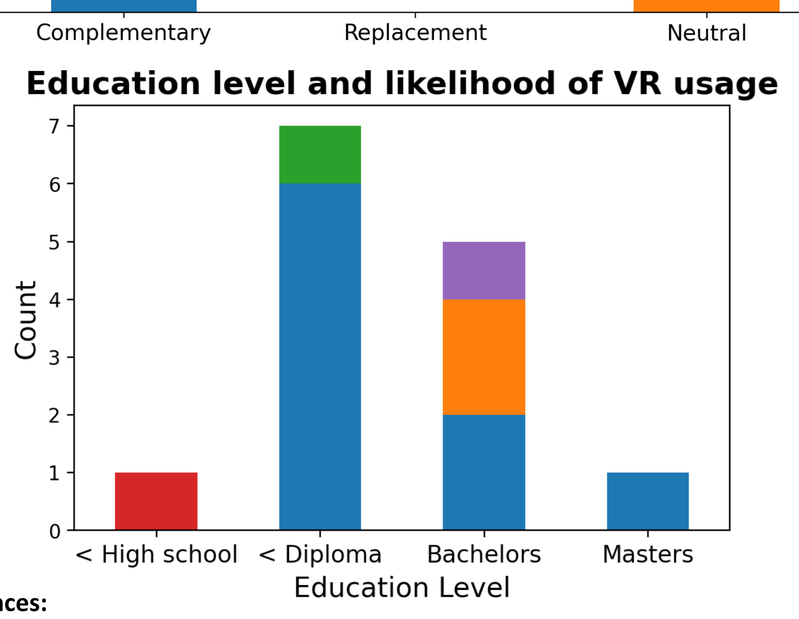
Results and discussion:

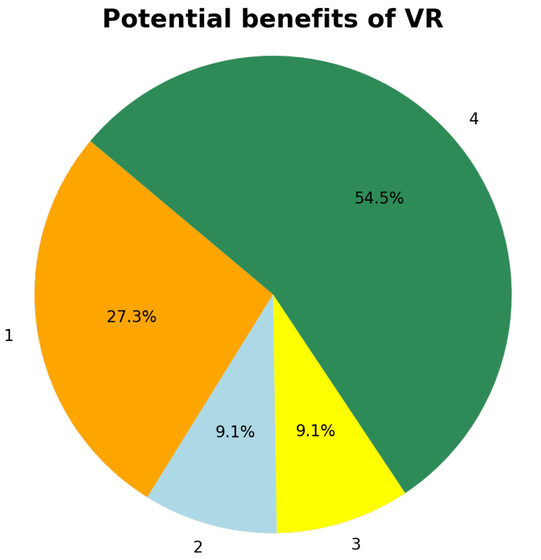
Overall, the participants experienced and expressed a positive outlook towards using VR for the yoga practice. These results align with the literature where they had a similar positive reaction to the use of VR in people with dementia, improving mobility and balance [1,2]. Technology, particularly VR, offers a novel and engaging avenue for enhancing the quality of life for older adults that often face physical limitations and isolation.











References:

[1]. A. W. de Vries, G. Faber, I. Jonkers, J. H. Van Dieen and S. M.P. Verschueren, ”Virtual reality balance training for elderly: Similar skiing games elicit different challenges in balance training,” *Gait & Posture,* vol. 59, pp. 111-116, January 2018. [2]. E.-C. Park, S.-G. Kim and C.-W. Lee, ”The effects of virtual reality game exercise on balance and gait of the elderly,” *Journal of Physical Therapy Science,* vol. 27, nr 4, pp. 1157-1159, April 2015.

Acknowledgements: We would like to thank Carl Kylebäck, Hampus Salomonsson, Johan Nicander, and Naga Vishnu Kanth Irukulapati for being a crucial part of this study.

REIMAGINING AGEING: DIVING INTO AN OCEAN OF POSSIBILITIES

56th AAG CONFERENCE 14 - 17 NOVEMBER 2023