E. DOVE, C. HAWCO, S. YONUS, A.J. ASTELL. Teaching and implementing motion-based technologies for people with dementia. Gerontechnology 2018;17(Suppl):157s; https://doi.org/10.4017/gt.2018.17.s.153.00 **Purpose** Motion-based technology can provide cognitive, physical and social benefits for people with dementia[1]. However, there is a lack of information about the best methods to introduce, teach and support people with dementia to use this type of technology[2]. The purpose of this study was to examine the implementation of motion-based technology (Xbox Kinect) as a group activity for people with dementia. **Method** The study was conducted in a community-based adult day program for people with dementia and other age-related challenges. Participants with dementia (n=11; mean age=77.73 years; mean MoCA=15.36) were invited to play a digital bowling game on an Xbox Kinect twice a week (1 hour per session) for 12 weeks (i.e. 24 sessions). The sessions were led by a member of the research team using evidence-based techniques identified from the literature relating to motion-based technology use for people with dementia, such as task breakdown, gesture modelling, verbal reminders and immediate error correction. Data were collected in the form of video recordings to capture a comprehensive view of the participants, the trainer and the activity. Video recordings were analyzed using behavioral coding software, to isolate and track aspects such as the amount and type(s) of assistance provided to participants by the trainer, the duration of participants' turns, and participants' ability to complete turns independently versus with support. Video recordings were compared pre-post and analyzed using a paired t-test. **Results & Discussion** The findings revealed that people with dementia can learn to play games presented on Xbox Kinect with repeated exposure and appropriate training. This was evident through a reduced need for assistance from the trainer ($p<.01$), shorter duration of turns ($p<0.01$) and greater independent play ($p<.007$). The findings demonstrate that people with dementia can learn new behavior which challenges negative stereotypes about their abilities. Upon completion of the study, the day program purchased an Xbox Kinect which they are now using as a regularly-scheduled group activity. This highlights the potential benefits and feasibility of implementing motion-based technologies such as the Xbox Kinect into community-based adult day programs for people with dementia.

References

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Address: Research and Academics, Ontario Shores Centre for Mental Health Sciences, Whitby ON, Canada;
E: dovee@ontarioshores.ca

Figure 1. Participant independently playing Xbox Kinect bowling