

C. KERSSSENS, J. ZAMER. **Personalized assistive technology for seniors with dementia.** *Gerontechnology* 2012;11(2):252; doi:10.4017/gt.2012.11.02.517.00 **Purpose.** There is an urgent public health need for technologies that facilitate aging in place for persons with dementia (PWD) and their caregivers. The number of PWD is rapidly increasing while their care needs are diverse and extensive.¹ Independence is highly valued by seniors including PWD and a major determinant of quality of life and well-being.² Therefore, technologies that support independence could be beneficial. The purpose of this project was to a) implement a pilot of a pervasive assistive technology in an assisted living environment, and b) document the observed and perceived change in resident behaviour, function, and mood. **Method.** Our assistive technology for PWD supports daily living through personalized audiovisual programs ('shows') that engage and cue for 20 to 30 minutes at a time. Shows combine images, music and voice recordings and are presented via a touch screen computer in a manner that optimizes stimulus perception, processing, and response within the limitations of cognitive dysfunction. Personalization of content and scheduling assures continued engagement and relevance. For the pilot, 11 residents (7 female, mean age 87.7 years, SD= 6.9) in assisted living and memory care who needed help with behaviour, activity participation, sleep, care events (ADL), and mood or motivation were selected by three community staff members to receive the technology intervention. Staff tallied the presence of 47 problems prior to intervention (baseline) and 1- and 2 months into the intervention. They also rated residents as 'better', 'stable' or 'worse'. **Results & Discussion.** Figure 1 shows the percent of problems that reduced in frequency ('better'), remained stable, or increased in frequency ('worse') after 2 months. In the absence of a control group, the 95% confidence interval (CI95) of means was calculated. The lower CI95 limit for symptoms denoted as *better* is 11% to 19% lower than shown here; for symptoms denoted as *worse* the upper CI95 limit is 3% to 14% higher than shown here. These findings suggest the intervention was associated with improvement of many care challenges. Using psychosocial intervention methods in combination with advanced, user-friendly computer technology, we argue that assistive technology can and will play an important role in an aging society where dementia is prevalent and human support finite.

References

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Keywords: housing & daily living; dementia; care support; quality of life; individualization.

Address: SimpleC, LLC. 75 Fifth Street, Suite 205, Atlanta, Georgia 30308-1068, USA;
E: ckerssens@simpleC.com

Full paper: No

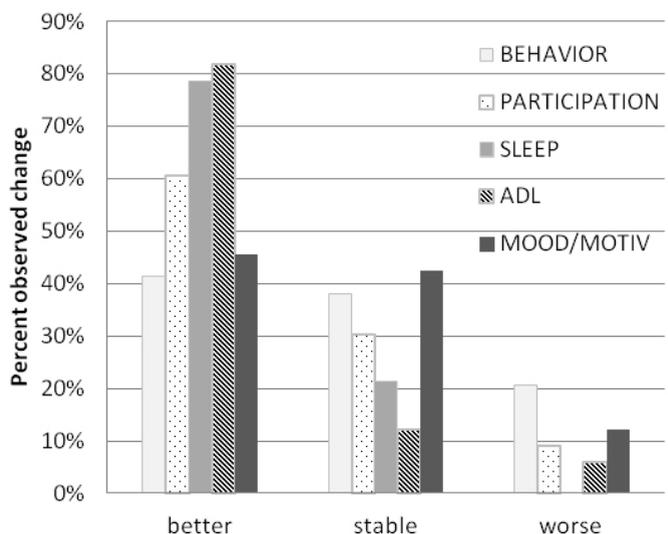


Figure 1. Observed change per outcome domain between baseline (pre-intervention) and 2 month follow-up (intra-intervention).