

S. SUM, R. FLEMING. Review of the empirical studies on the effectiveness of Assistive Technology in people with dementia. *Gerontechnology* 2010;9(2):334; doi:10.4017/gt.2010.09.02.204.00

Purpose An increasing body of evidence suggests that people with dementia can be assisted by the provision of special technology aimed at improving their communication, mobility, manipulation, orientation, cognition and lifestyle. We systematically reviewed research to identify specific examples of proven effectiveness and to lay a foundation for a systematic approach to improving the piecemeal research effort. This review of the literature explored applications of technology beyond helping people with dementia carry out tasks, to how technology may be making a contribution to their wellbeing by reducing their behavioural problems and improving their emotional state. The objective of the review was to assess the empirical support for the use of assistive technology as an intervention to improve independence, safety, communication, wellbeing and carer support. **Method** In order to meet the objective, screening criteria to identify potentially relevant articles, that met minimum methodological standards for acceptance as objective assessments of the impact of assistive technology devices, we used the Forbes' model³. A total of 178 papers, identified as potentially relevant, were assessed for relevance by both researchers, 142 papers were eliminated because they did not meet eligibility criteria. When the remaining 36 papers were subjected to an assessment of their validity using the model provided by Forbes, 8 articles were considered as strong, 9 moderate and 19 weak. The review was organised around the following topics: Independence, prompts and reminders; Safety and security; Communication; Leisure and lifestyle; Carer support and Therapeutic Interventions. **Results & Discussion** The literature exploring the use of assistive technologies for increasing independence, and compensating for memory problems, illustrates the problems of moving from the laboratory to real life. This is reflected in very small samples, high drop out rates, very basic statistical analysis and poor performance of the technology itself. In general, the use of technology reported to date, makes little difference to practical outcomes. The evidence for the effective use of assistive technology to improve the safety and security of people with dementia, and their ability to communicate with others outside of their home, is very weak. There is promise that remote, carer initiated, communication can be used for assessment and simple therapeutic interventions, and there is support for the use of assistive technology to facilitate communication and access to support and information for caregivers of people with dementia. Support for the use of assistive technology in the provision of 'therapies' is mixed. Attempts at using assistive technologies to aid people with dementia are at an early stage of development.

References

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Address: Babol University of Medical Sciences, Babol, Mazandaran, Iran;

E: shima.sum@sydney.edu.au