

Technology for Independence

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Purpose One of the challenges faced in today's society, is the demographic shift which shows that people live longer and healthier lives than in the past. This shift also brings a rise of elderly with cognitive and physiological impairments. The majority of elderly prefers to live at home as long as they can¹. To support the independence of elderly, assistive technologies (AT) and technologies to support ageing in place have started to rise for that challenge². According to WHO, AT is any item, object, device or system that enables disabled people to perform a task that they would otherwise be unable to do so, or increase the ease of use and safety by which certain tasks can be performed³. The purpose of this study is to investigate the functions/tasks provided by ageing in place technologies. **Method** The literature review included articles from six databases (Cinahl, Medline, PsycINFO, PubMed, Science Direct and Scopus) in order to maintain a broad and inclusive perspective. The review includes a total number of 2181 unique articles out of which 31 were included in this review after applying our inclusion criteria. To categorize the functions of the technologies which support ageing in place, we used the six categories for smart home applications provided by Demiris and Hensel⁴. Namely these categories are (1) Physiological monitoring (Phys), (2) Functional monitoring / Emergency detection and response (Fx), (3) Safety monitoring and assistance (Saf), (4) Security monitoring and assistance (Sec), (5) Social interaction monitoring and assistance (Soc), (6) Cognitive and sensory assistance (Cog/Sen). **Results & Discussion** According to the categories provided by Demiris and Hensel, our results showed that out of 31 articles the order of importance of functions in the articles was the following: Fx (18 articles), Soc (16 articles), Cog/Sen (15 articles), Phys (12 articles), Saf (5 articles) and Sec (1 article). It is worth mentioning that most of the technologies for ageing in place, as shown earlier, focus on a persons' health and the communication with their social circles. An interesting point of discussion occurred when we tried to place the technologies of the articles within the Saf and Sec categories. Out of 31 articles, 5 were identified within the Saf category and only 1 within the Sec category. Oddly enough, this does not comply CDC's definition of aging in place⁵: "The ability to live in one's own home and community safely". For this reason, we suggest that additional research needs to be conducted for ageing in place technologies that cover the Saf and Sec categories.

References

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