Older adults as users of conversational agents in health and social care: Designers' and developers' motivations and images of ageing

S. Merkel & S. Schorr

Purpose The term conversational agents (CA) encompasses various other terms and is often used interchangeably with chatbots, virtual assistants (such as Apple's Siri, Microsoft's Cortana, or Amazon's Alexa), smart agents, and more. CA are used in various fields today, including healthcare and social care. While older adults are often considered as late adopters of digital technologies, they have been identified as a central user group of CA in in these fields (Merkel & Schorr, submitted) as CA are believed to offer "more advantages than challenges." (Even et al., 2022). On one hand, the technology offers a seemingly perfect match between the purportedly low digital skills and competencies of older adults and the ease of use provided by natural language processing, which requires no knowledge of graphical interfaces. On the other hand, there is evidence that the CA and AI are seen as a “techno-fix” for ageing societies (Higgs & Gilleard, 2021). The design and the use cases of CA are influenced by images of ageing (e.g. Neven, 2010; Endter, 2017; Merkel, Kucharski & Schorr, 2022). Against this background, this article aims to analyse the motivations of designers and developers of CA. The focus is on two questions: how the development of the devices is framed and what the underlying images of ageing are. **Method** In February and March 2023, a scoping review was conducted on smart speakers as a type of CA. Three databases (PubMed/Medline, Scopus, and Sociological Abstracts) were searched, along with the first 20 pages of Google Scholar. The search was conducted using a combination of multiple keywords, including the technology used, the brand, and the setting. Only publications that met the inclusion criteria were included. Two reviewers screened the title and abstract, and if they matched the criteria, the full text was also screened. To extract information from the publications, we used a data extraction template that includes general information such as the title and year of publication, as well as specific details like the setting and target group. **Results and Discussion** A total of 27 publications were included in the scoping review, of which 11 addressed older adults as a user group, predominantly in the context of their private households. This makes older adults the primary user group identified, whether directly or indirectly (e.g. through their relatives and family members). Our analysis indicates that the ease of use and the distribution of the devices among private households are the primary motivations cited. Users can interact with the technology in a 'natural' way by giving voice commands and receiving immediate feedback, allowing them to use the devices even if they are not used to digital technology. Due to the commercial success of these devices, users might already be familiar with the technology. Smart speakers are not expansive, and can the companies behind them offer an infrastructure, such as frameworks for developers or marketplaces where users can add new functions by downloading software applications. Against this background, our findings suggest that designers and developers draw on stereotypes and negative images of ageing to identify use cases and justify their development. For example, by using the devices to counteract potential effects of ageing, such as forgetfulness or loneliness. This supports the observations of previous research on other technologies such as robots (e.g. Neven, 2010) or Ambient/Active Assisted Living (e.g. Endter, 2017). Digital technology is seen as something, supposed to “fix” the consequences of age and ageing. Within gerontechnology, or gerontology, smart speakers do not seem to receive much attention, yet. Practitioners seem to be further along here, but without sufficient theoretical and empirical knowledge, e.g. about interaction and its consequences.

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Keywords: conversation agents, healthcare, social care, images of ageing
Affiliation: Ruhr-University, Bochum
Email: sebastian.merkel@rub.de