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Ridout, Alicia (2025) Safe with AI at Home: Factors Impacting Older People and Occupational Therapy. In: Studies in Health Technology and Informatics. IOS Press

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Safe with AI at Home: Factors Impacting Older People and Occupational Therapy

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Abstract. Artificial Intelligence is being adopted by older people at home in the form of personal home networks. Occupational therapy services do not have explicit guidance to support their practice, and older people may be in a similar information vacuum as their needs change and the complexity of their personal networks increases. This doctoral research study used a literature informed survey, to surface insights from both cohorts. The findings highlight gaps and potential areas of common ground from which to build a new understanding and co-create the means to support safe deployments at home.

Keywords. Artificial Intelligence. Older people. Occupational therapy

1. Introduction

Older people are at risk of bias and discrimination from Artificial Intelligence (AI) [1] and yet are increasingly significant adopters of smart devices and AI based software products [2]. There is a lack of guidance for occupational therapists assessing older people at home, where there is an existing personal home network of AI products. This study aimed to better understand the factors impacting safe use of AI technology by digitally active older people living at home, entering Adult Social Care services in England.

2. Methods

A search of published literature was conducted focused on AI and professional practice regulation, AI ethical and e-safety factors, and older people's adoption as consumers. Thematic analysis identified gaps and opportunities which informed the content of an online survey designed as an exploratory 'wide-angle' lens providing a flexible qualitative approach to elicit users' experiences and perceptions [3]. Recruitment focused on community-based networks to access participants, using purposive sampling. The survey captured demographic data, opinions, priorities and e-safety concerns. Analysis involved descriptive statistics and thematic analysis for narrative survey responses. The results informed the subsequent participatory research study.

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3. Results

Survey respondents: Older people (58) were aged from 62-84 years old. Key themes were expressed as a series of concerns, including: Companies behaving irresponsibly if the products went wrong or if they would be open about the products risks, discrimination/bias and limitations; Products should have been tested on real world situations that affected their daily lives, vulnerabilities, but also skills and strengths; Sources of support from family and friends would be the first step in getting help with technology, despite friends and family not actually being able to help.

Of the occupational therapists who responded (18) 72% (13) used AI outside of work, but only 33% (6) used it at work. Themes included: low trust in using AI safely with older people at home, poor engagement with published evidence, regulatory guidance/standards or product evaluations relating to AI and low levels of AI embedded in pathways of care, with few capturing potential risks/benefits of AI.

4. Discussion

The surveys highlighted areas of common concern including issues of trust in AI use. Older people wanted companies to be open about potential data biases, risks, and to behave ethically and accountably when the products failed. Poor access to help and use of information to support e-safety was evident in the survey responses. Older people expected professionals, family, and friends, to help them if it failed. Occupational therapists appeared to have little involvement in embedding AI use in workflows, e-safety or interventions. A key limitation was the sample size of occupational therapists; however, it provided valuable insights for the following participatory study.

5. Conclusion

Older people who are already utilising these AI driven products, are entering occupational therapy services which appear ill-prepared to optimise its safe use. These services are under extreme pressure, potentially impacting on their prioritization of evidence-supported practice development. Older people and occupational therapists share common ground in their priorities to prevent harm and facilitate appropriate, safe use of the technology as part of their personal home networks. There is a clear opportunity for collaboration to prepare the ground for its safe use at home.

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