

# TAKING HEALTH INFORMATION BEHAVIOUR INTO ACCOUNT IN USER-CENTERED DESIGN OF E-HEALTH SERVICES - FINDINGS FROM AN ONGOING RESEARCH PROJECT



Enwald Heidi<sup>1,2</sup>, Eriksson-Backa Kristina<sup>1</sup>, Hirvonen Noora<sup>1,2</sup>, Isto Huvila<sup>1</sup>

<sup>1</sup>Information Studies, Åbo Akademi University, Turku, Finland, <sup>2</sup>Information Studies, University of Oulu, Oulu, Finland

May I introduce you to the project HIBA (Taking Health Information Behavior into Account: implications of a neglected element for successful implementation of consumer health technologies on older adults) funded by Academy of Finland.

## TAKE A PEEK INTO OUR FINDINGS

According to the systematic review conducted, e-health research tends to focus on system usability rather than the usefulness, purposes, benefits, or value of eHealth services to their users. Heterogeneous body of research exists on older adults' views on e-health services. Common themes found could be identified: e-health service uses, enablers and barriers, and outcomes. Moreover, there seems to be a positivity bias particularly in quantitative studies.

A focus-group study on views of users of the Finnish patient-accessible electronic health record My Kanta, showed, e.g., that concerns and barriers relating to use were socio-techno-informational and tightly associated with the contents of the system. Improved security, usability and additional information and functions might increase use. Coherent and timely information from health care providers should be available in the e-health services.

Health information literacy and technology use across age groups has been compared with several quantitative surveys. To summarize, older adults tend to value health information but have trouble understanding health terminology. Health information literacy is not necessarily improving or declining by age, but adapting to the challenges of advanced age. Older adults with negative attitudes towards and having less experience with mobile information technology seem to be likely to have poor self-estimated health information literacy skills.

The research group has also taken part in the discussion on how to support interdisciplinary dialogue between information behavior research and systems and service design!

DATA 

Target group: Older adults, 55 +

Both quantitative and qualitative methods, including postal and web surveys and focus group interviews have been utilized, and a systematic literature review has been carried out.

A large population-based survey among older adults has been conducted at June 2019.

## DISCUSSION

The project takes a holistic view on e-health and its use and users and points out that the information behavior of human beings, technology, and the socioeconomic environment are all connected to each other.

The results can inform research within the field of health information behavior and e-health, but also other subjects such as human-computer interaction, medical informatics, public health or computer science.

On the practical level the project provides information on user behavior and practices, as well as the actual utility value of the studied e-health services and the results can be useful for both improving existing services and for the development of new ones.

- Hirvonen N, Käsäkoski H, Enwald H, Eriksson-Backa K, Huhta A-M & Huvila I (2020) Older adults' views on eHealth services: a systematic review of scientific journal articles. *International Journal of Medical Informatics*, 135, 235-248.
- Huvila I, Enwald H, Eriksson-Backa K, Liu Y-H & Hirvonen N (2019) Information behaviour and practises research informing technology and service design. *Proceedings of the Association for Information Science and Technology*, 56(1), 541-545. ASIS&T 2019, Melbourne, Australia, 19-23 October 2019. <https://asistdl.onlinelibrary.wiley.com/doi/full/10.1002/pra2.86?af=R>
- Hirvonen N, Enwald E, Mayer A-K, Korpelainen R, Pyky R, Salonurmi T, Savolainen M J, Nengomasha C, Abankwah R, Uutoni W, Niemelä R, Huotari M-L (early view, 2020) Screening everyday health information literacy among four populations. *Health Information and Libraries Journal*. <https://onlinelibrary.wiley.com/doi/full/10.1111/hir.12304>
- Enwald H, Hirvonen N, Kangas M, Keränen N, Jämsä T, Huvila I & Korpelainen R (2018) Relationship between everyday health information literacy and attitudes towards mobile technology among older people. In: S Kurbanoğlu, et al. (Eds) *Information Literacy in the Workplace: 5th European Conference, ECIL 2017, Saint-Malo, France, 18-21.9.2017. Revised Selected Papers.* (Communications in Computer and Information Science Series Vol. 810, pp. 450-459.) Cham, Switzerland: Springer International Publishing. [https://link.springer.com/content/pdf/10.1007%2F978-3-319-74334-9\\_47.pdf](https://link.springer.com/content/pdf/10.1007%2F978-3-319-74334-9_47.pdf)
- Huvila I, Enwald H, Eriksson-Backa K, Hirvonen N, Nquyen H, Scandurra I (2018) Anticipating aging: Older adults reading their medical records. *Information Processing & Management*, 54(3), 394-407.
- Eriksson-Backa K, Enwald H, Hirvonen N & Huvila I (2018) Health information seeking, efficacy and control beliefs, and health behaviour among Finnish seniors. Special issue: i3 conference 2017. *Journal of Librarianship & Information Science*, 50(3), 284-295. <http://journals.sagepub.com/eprint/XdchAwceXnJ8SdG8gBB4/full>