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eHEALTH TECHNOLOGIES, LEARNING AND DIGITAL COMPETENCES: ELDERLY USERS' AND NON-USERS' EVERYDAY LIVES IN RURAL AREAS

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For the North – For the World

HARVEST — eHealth and Ageing in Rural Areas: Transforming Everyday Life, Digital Competences and Technology

- Aim is to understand the impact of ICTs in the everyday life of older people in rural area and the relationship between technology and the digital competences in relation to older people's use of eHealth in three counties
- Coordinated by the Umeå University, project partners the University of Lapland and the Catholic University of Milan
- Nationally funded by the Academy of Finland (2018-2021), as part of the European Commission's JPI MYBL call: The Joint Programming Initiative (JPI) "More Years, Better Lives – The Potential and Challenges of Demographic Change"



Photo: Marko Junttila

Background

- The demographic transition brings challenges concerning old age people and increased demand of health care services (UN, 2017)
- Living in rural area makes access to health care services more complicated (Malatzky & Bourke, 2016)
- eHealth offers a possibility to cope with these societal challenges (Koch, 2006; Pols, 2012; Kilpeläinen & Seppänen, 2014)
- Digital competences (Vuorikari et al., 2016, the European Commission's in-house science service)
- Finnish care policy: "living at home as long as possible" (Ministry of Social Affairs and Health and the Association of Finnish Local and Regional Authorities 2015)
- The real impact and consequences of eHealth, especially in relation to old age users in rural areas, needs to be further explored
- Key theoretical concepts:
 - Distributed digital competences (Rasi & Kilpeläinen, 2015)
 - Everyday life
 - Domestication of technology

Phone/video conferencing service for social connectedness

Airola, Rasi & Outila

Service

- to alleviate social isolation and loneliness
- volunteer calls the remote client once a week

Previous research

- Social isolation and loneliness are a growing threat for the physical and emotional health of older people (Chipps, Jarvis & Ramlall, 2017; Alpert, 2017; Chen & Schulz, 2016; Petersen et al., 2016; Hagan et al., 2014)
- ICT use was consistently found to affect social support, social connectedness, and social isolation in general positively (Chen and Schulz, 2016)
- Older people's barriers to use internet: perceive no need or benefit, lack the interest or motivation, have a negative attitude toward the Internet... (see Rasi 2018)



Photo: "Virtu" service point

Phone/video conferencing service for social connectedness

Research questions

- What kind of digital competences the use of the services requires?
- How do older people (non)use, reject, learn or not learn to use the video conferencing service in their everyday life?
- What kind of meanings are assigned to the video conferencing service for social connectedness and well-being?

Phone/video conferencing service for social connectedness

Methodology

- Semi structured interviews (duration 00:43-01:10)
 - 1 voluntary service worker
 - 2 volunteers
 - 2 clients (two times each), 88 and 89 years old (Project: A well-functioning home care to Lapland - Diverse forms of support to living at home, 2016-2018)

- Analysis
 - Qualitative thematic analysis
 - NVivo

Phone/video conferencing service for social connectedness

Tentative results

What kind of meanings are assigned to the video conferencing service for social connectedness and well-being?

- Some one listens and cares
- Makes a good feeling
- Way to avoid vacuity
- Distance is not a problem

What kind of digital competences the use of the services requires?

- Technical skills
- Problem-solving skills
- Knowledge where to ask help
- Right attitude

Phone/video conferencing service for social connectedness

Tentative results

How do older people (non)use, reject, learn or not learn to use the video conferencing service in their everyday life?

- Barriers to use and learning
 - Problems with the technology
 - Need for face-to-face contact
 - Cognitive or physical difficulties
 - Attitude
- Supports use and learning
 - Change to see and talk to someone
 - Technology is easy to use
 - Attitude, willingness

Medicine dispensing robots in home care services

Airola & Rasi

Service

- Grow users feeling of independence
- Timing of medication
- Free nurses time

Previous research

- Home-based consumer health technologies support independent living of older adults and ageing in place and don't interfere their ability to get around or leave home (Reeder et al., 2013)
- In a systematic review of older people, assistive technologies, and the barriers to adoption, the top barriers for adoption were concern of privacy, trust and functionality (Ysif et al., 2016)
- In previous survey older users were willing to use a medication delivery unit in the future after using it for 12 months. Not any barriers which would prevent to complete the task successfully was found (Reeder, Demiris & Marek, 2013)



Medicine dispensing robots in home care services

Research questions

- What kind of digital competences the use of the robot requires?
- How do older people (non)use, reject, learn or not learn to use the robot in their everyday life?
- What kind of meanings are assigned to the robot?

Medicine dispensing robots in home care services

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Methodology

- Ethnography
 - Semi-structured interviews: 2 professionals, 6 clients (two times each)
 - Diaries of clients
 - Observation at client's home
 - Photos of the medicine dispensing robots at clients' homes

- Analysis
 - Qualitative thematic analysis
 - Photo analysis



Thank you!

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References

- **Alpert, P. T.** (2017). Self-perception of social isolation and loneliness in older adults. *Home Health Care Management & Practice*, 29(4), 249-252.
- **Chen, Y. R., & Schulz, P. J.** (2016). The effect of information communication technology interventions on reducing social isolation in the elderly: A systematic review. *Journal of Medical Internet Research*, 18(1), e18.
- **Chiggs, J., Jarvis, M.A., & Ramlall, S.** (2017). The effectiveness of e-Interventions on reducing social isolation of older persons: A systematic review of systematic reviews. *Journal of Telemedicine and Telecare*, 23(10), 817-827.
- **Hagan, R., Manktelow, R., Taylor, B., & Mallett, J.** (2014). Reducing loneliness amongst older people: A systematic search and narrative review. *Aging & Mental Health*, 18(6), 683-693.
- **Hasan, H., & Linger, H.** (2016). Enhancing the wellbeing of the elderly: Social use of digital technologies in aged care. *Educational Gerontology*, 42(11) 749-757.
- **Kilpeläinen, A. & Seppänen, M.** (2014). Information technology and everyday life in ageing rural villages. *Journal of Rural Studies*, 33, 1–8.
- **Koch, S.** (2006). Home telehealth – Current state and future trends. *International Journal of Medical Informatics*, 75, 565–576.
- **Malatzky, C. & Bourke, L.** (2016). Re-producing rural health: Challenging dominant discourses and the manifestation of power. *Journal of Rural Studies*, 45, 157–164.
- **Ministry of Social Affairs and Health and the Association of Finnish Local and Regional Authorities** (2015). *Information Strategy for Social and Health Care 2020*.
- **Petersen, J., Thielke, S., Austin, D., & Kaye, J.** (2016). Phone behaviour and its relationship to loneliness in older adults. *Aging & Mental Health*, 20(10), 1084-1091.

References

- **Pols, A. J.** (2012). *Care at distance: on the closeness of technology*. Amsterdam: Amsterdam University Press.
- **Rasi, Päivi** (2018). Internet nonusers. In B. Warf (Ed.), *The SAGE Encyclopedia of the Internet* (vol 2, pp. 532-539). Thousand Oaks, CA: Sage Publications Ltd.)
- **Rasi, P., & Kilpeläinen, A.** (2015). The digital competences and agency of older people living in rural villages in Finnish Lapland. *Seminar.net. International Journal of Media, Technology & Lifelong Learning*, 11(2), 149-160.
- **Reeder, B., Meyer, E., Lazar, A., Chaudhuri, S., Thompson, H.J. & Demiris, G.** (2013). Framing the evidence for health smart homes and home-based consumer health technologies as a public health intervention for independent aging: A systematic review. *International Journal of Medical Informatics*, 82(7), 565–579.
- **Reeder, B., Demiris, G. & Marek, K.D.** (2013). Older Adults' Satisfaction with a Medication Dispensing Device in Home Care. *Inform Health Soc Care*, 38(3), 211–222.
- **Tsai, H.-H., Tsai, Y.-F., Wang, H.-H., Chang, Y.C., & Chu, H.H.** (2010). Videoconference program enhances social support, loneliness, and depressive status of elderly nursing home residents. *Aging and Mental Health*, 14(8), 947-954.
- **United Nations** (2017). *World Population Ageing*. New York: Department of Economic and Social Affairs.
- **Vuorikari, R., Punoe, Y., Carretero, S & Van den Brande, L.** (2016). *DigComp 2.0: The Digital Competence Framework for Citizens. Update Phase 1: The Conceptual Reference Model*. Luxembourg Publication Office of the European Union. EUR 27948 EN. doi: 10.2791/11517
- **Yusif S., Soar, J. & Hafeez-Baig, A.** (2016). Older people, assistive technologies, and the barriers to adoption: A systematic review. *International Journal of Medical Informatics*, 94, 112–116.