



Introduction

As with all age cohorts, 'older people' (which is variously defined by studies as over 50 years, over 60 or 70 plus) use a variety of different ICT and digital technologies for a variety of purposes. Having reviewed some of the associated literature there is no typical 'type' of technology that older people prefer or that works better than others in maintaining social connections. However, some broad trends can be identified.

What technologies are being used and why?

General ICT intervention

Research broadly agrees that general ICT's or computer and internet use have provided new ways of communication that are widely engaged with by older people and in many circumstances help in overcoming the obstacles to social interaction and connection. Digital inequalities in access still exist however, as do huge differences in attitudes towards new technologies amongst older people. Studies repeatedly show that a significant period of learning, adaptation and integration is needed for older people to use new ICT in their everyday lives.¹ Many studies only look at the impact of interventions over a short study period and therefore more work is needed to look at the longer-term take-up of these technologies.

Case study:

Researchers in Canada conducted a study with 11 'frail' older people living in a Canadian retirement home.² They co-designed an accessible iPad-based communications app that supported the older persons communication with friends and family. The interface was designed with large non-textual touch icons and through the app the participants could send and receive photos, audio and video. They could also send text messages, either ones they had written themselves or pre-written ones pre-uploaded into the app. Their contacts could respond via any one of these mediums using their own emails and devices.

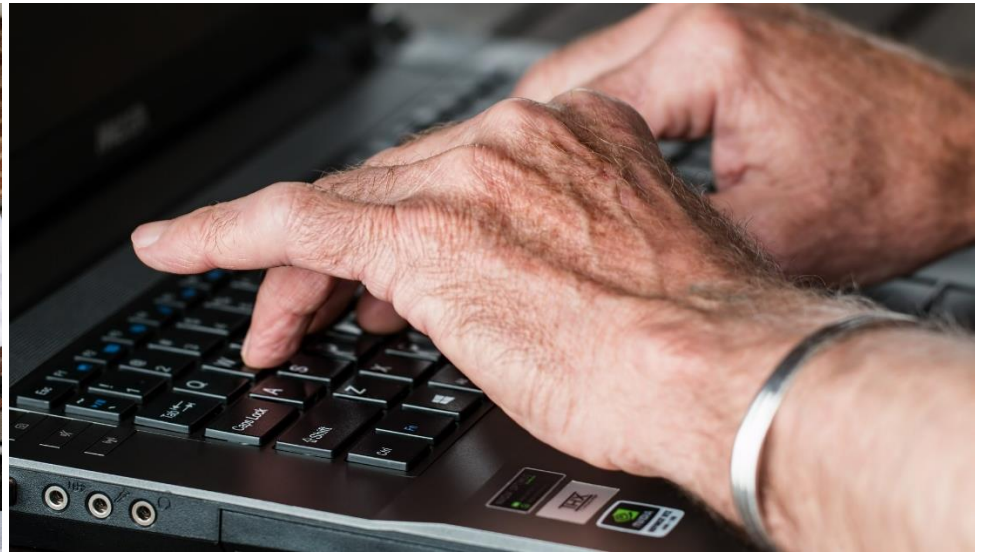
The researchers found that the most used function of the app was the audio messages, followed by photos, video and then text messages. Although some participants used the pre-written messages when first getting used to the app they tended to quickly move on to writing their own, claiming the pre-written ones were too generic. The app and technology were generally well received but not all participants reached the point of integrating it into their everyday lives after the study period. However, participants did report higher levels of social connectedness during the study period.

Learning from this research;

- Those who did continue to use it after the study period tended to be those who had family who lived a long distance away and therefore they felt more in touch with distant relatives.
- Tapping was found to be preferable to swiping.
- Participants needed consistent encouragement to continue using the app during the initial stages of the research.

¹ Marston, H.R., Genoe, R., Freeman, S., Kulcycki, C., and Musselwhite, C. (2019) 'Older adults' perceptions of ICT: Main findings from the Technology in Later life (TILL) Study'. Healthcare 86 doi:10.3390/healthcare7030086

² Neves, B.B., Franz, R., Judges, R., Beermann, C., Baecker, R. (2019) 'Can digital technology enhance social connectedness among older adults? A feasibility study'. Journal of Applied Gerontology 38 (1) 49-72



Social media

In their systematic review of studies looking at older adults' use of social media Khosravi et al. concluded that there were inconclusive results regarding the impact of using social media for older people's social connectiveness.³ However individual studies have found that online communities are suitable for providing and receiving social support when confronted with a difficult life situation. Their use can help overcome loneliness, relieve stress, and raise feelings of control and self-efficacy. The main motivation for older adults to use social media are enjoyment, engaging in social contact and to provide and receive social support.⁴

This is an important point to note with regards to the reciprocal nature of support that can be offered through social media and other online mediums. There can often be an assumption that older people are only ever on the receiving end of help when it comes to online support however research findings do emphasise the self-efficacy and empowerment dimension to using these technologies challenge this. Social media can provide older adults with empowerment, a sense of global connectivity, and a sense of increased control and self-efficacy. Barak et al note that feelings of empowerment result from five factors involved in the participation in online support groups, which are 1) psychological impact of writing, 2) expression of and connecting too emotions, 3) gaining information and knowledge, 4) effects of interpersonal relationships and social processes, and 5) influences of decision making and resulting action.⁵ Older people are able to provide their own advice and support to others, either in the form of peer support or with an intergenerational dimension.

Robotics interventions

Examples include pet robots, 'which provide the same advantages that have been found in animal-assisted therapy, such as reduced loneliness and social isolation without the risk of infection' and conversational agents, 'which provides different approaches to reduce loneliness or social isolation, including companionship through social interaction, enabling seniors to connect with family members and friend and offering 'talk therapy'. Khosravi et al. found that six out of seven studies looking at robotic interventions reported a decrease in social isolation and loneliness.³

Videogame interventions

One study reviewed showed that playing Wii leads to better social interaction and less loneliness among seniors.⁶

³ Khosravi, P., Rezvani, A., and Wiewiora, A. (2016) 'The impact of technology of older adults' social isolation' *Computers in Human Behaviour* 63 594-603.

⁴ Leist, A.K. (2013) 'Social Media use of older adults: a mini review' *Gerontology* 59 378-384.

⁵ Barak A, Boniel-Nissim M, Suler J: Fostering empowerment in online support groups. *Comput Hum Behav* 2008; 24: 1867–1883.

⁶ Kahlbaugh, P. E., Sperandio, A. J., Carlson, A. L., & Hauselt, J. (2011). Effects of playing Wii on well-being in the elderly: physical activity, loneliness, and mood. *Activities, Adaptation & Aging*, 35(4), 331e344.

To what extent ICT & digital technologies support social connections?

There are several systematic reviews of the engagement of online and digital technologies for older people. Many of the studies covered by these reviews have very small samples and pay little or no attention to differences in age, gender, cultural background or disability. In their systematic review, Morris et al. stated that no studies assessed the overarching effect of technology on social connectivity using the Social Connectedness Scale.⁷ Instead chose to focus on 'sub-dimensions' of the variable which can include;

- Social support
- Empowerment
- Self-efficacy
- Loneliness
- Social networks

The overall conclusion of many of the systematic reviews is that ICT and digital technologies can improve social connectedness for older people, but their usage requires a period of adaptation and to overcome certain barriers of access, learning and attitude and that this period of adaptation requires support, both practical and emotional.

Supporting the use of digital technologies- what works?

There is little clear guidance on 'best practice' when it comes to the use of technological interventions aimed as social connectedness for older people. Part of this is due to the often case study design of studies that tend to focus on one technological intervention and often with a small, non-representative sample. However, best practice is also difficult to identify due to the diversity of technological needs and preferences within the older age cohort.

Several systematic reviews of the engagement of online and digital technologies for older people are often inconclusive based on the quality and rigour of the studies they have reviewed. The overall message is that older people as a cohort are using a diversity of ICT and digital technologies for a diversity of purposes but that many barriers exist to wider and more sustained adoption.

A lot is already known about the barriers to engaging with particularly online technologies for older people⁸ however some are worth mentioning here in respect of ways to encourage engagement in the context of the COVID-19 pandemic. Therefore, this report concludes by offering some guiding principles of engaging older people in using digital technologies based on a review of the existing literature with some points highlighted that seem particularly salient given the current pandemic situation.

Learning from Good Things Foundation⁹ advises that particularly when it comes to online technologies and social media, it is important to take a needs-based approach to learning. This means making sure the technologies offered have a clear purpose and benefit to people in their current circumstance and not overwhelming people with what they could use it for in the future. Research has found older people are more receptive to engaging with different technologies when they are motivated by certain events in their lives. Many older people wear their disengagement with online technologies (especially social media) as a badge of honour. Therefore, it is important to demonstrate how these forms of online connections may be of benefit to people during self-isolation.

Peer support has been found to be a very important factor for older people when learning how to use digital technologies and in sustaining their use. Recognising that many older people are already confident online, more could be made of peer-to-peer support either online or via telephone communication.

⁷ Morris, M.E. et al., (2014) 'Review article: smart technologies to enhance social connectedness in older people who live at home' Australian Journal of Aging 33 (3) September 142-15

⁸ Marston, H.R., Genoe, R., Freeman, S., Kulcycki, C., and Musselwhite, C. (2019) 'Older adults' perceptions of ICT: Main findings from the Technology in Later life (TILL) Study'. Healthcare 86 doi:10.3390/healthcare7030086

⁹ Piercy, L. (2019) Designing digital skills interventions for older people. Good Things Foundation.

Recommendations

- Researchers and industry need to demonstrate to individuals how apps can enhance a persons life, rather than taking a deficit approach.
- Avoid talking about 'the internet' or 'social media' in general terms to avoid disengagement. Instead highlight specific functions such as 'Facebook Live' for online yoga classes for example
- There is a need to experiment with different equipment, tools and devices to meet the needs of a diversity of users especially those with visual and audio impairments as well as different learning and cognitive disabilities.
- Learning should be accompanied by online support including both practical and emotional support by peers to include different terminologies, needs and requirements.
- Utilise peer support for learning to use new technologies where possible.
- Opportunities to enhance self-efficacy should be capitalised on. Many older people want to use new technologies so they can contribute themselves and not always be seen as being on the receiving end of support networks.
- Opportunities for intergenerational dimension her as older people can use social media and online platforms to provide advice and support to younger generations which, in turn, will contribute to their own sense of social connectedness.

Opportunities for further research

There is a clear need for further research on;

- Use and experience of technology for a diversity of older people including different age cohorts, educational backgrounds, gender, ethnicity and a range of disabilities and impairments.
- Longitudinal studies that look at technology usage beyond short intervention periods.
- The co-design of app based technologies
- The opportunities for intergenerational learning as a way to potentially enhance the self-efficacy experienced by older people using social media and to provide connections to wider society.
- How peer support for learning and using new technologies can be further facilitated and supported.

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