

Factors to Consider when Introducing Digital Social Activities to Older Persons with Home Care

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Abstract. Social isolation and loneliness have become everyday concerns for populations all over the world as these factors are affecting both physical and mental health in a negative way. Feelings of isolation and loneliness are increasingly acknowledged as a health risk among older persons. ICTs have been recognized as effective tools to combat social isolation among older people. The aim of this study was to explore factors of significance when introducing a tablet-based system providing digital social activities for older persons with home care. Participants were 17 persons, age 70 and older, who lived alone and had assistance from home care. This exploratory study used cross-sectional qualitative data analyzed through thematic analysis. Three themes were generated: 1) lacking vocabulary related to the context, 2) intuitive user interface may replace extensive instructions and 3) unwillingness to commit to a pre-defined measure of performance.

Keywords. Social isolation, social activity, older persons, home care, tablet, digital

1. Introduction

Social isolation and loneliness have become everyday concerns for populations all over the world [1]. These factors are affecting both physical and mental health in a negative way [2,3] and are acknowledged as a health risk among older persons [4]. Participation in activities and social contexts generally decrease in correlation with higher age, often a result of physical limitations preventing individuals from leaving home to participate in social life [5]. In many countries home care is the most common form of care provided for older persons [6]. Home care includes a mix of services provided in the individual's home [7,8]. Social support is one of those services, however decreasing resources have contributed to limiting home care workers' capacity to fulfil social needs for their clients [8,9]. Both quantitative and qualitative evidence have been presented to support that Information and communication technologies, ICTs have been recognized as effective tools that may assist older people to combat social isolation [10]. In a previous research project in northern Sweden a model for enabling online participation in individualized

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meaningful social activities, IMSA, was developed and evaluated [11]. Through an iterative co-creation process, involving persons aged 70+ years and a multi-disciplinary team of researchers from nursing, occupational therapy and computer science, a variety of online-accessible social activities were tested and implemented in a tablet.

At the time when results from the IMSA study were reported, home care service providers in northern Sweden had identified loneliness and social isolation as major health challenges among care recipients. Innovative solutions to meet the need for social interaction were desired. IMSA had been developed in the same geographic region, for persons of similar age, however participants in the IMSA co-creation process had been living independently in their own homes and home care recipients had not been represented. The aim of this study was to explore factors of significance when introducing a tablet-based system providing digital social activities for older persons with home care.

2. Methods

This exploratory study used cross-sectional qualitative data. Data analysis were guided by the six-phase approach to thematic analysis as described by Braun and Clarke [12] applying a mainly inductive data coding at semantic level.

2.1. Setting and Participants

The study took place in a municipality located in northern Sweden. Purposive sampling was used to recruit and consecutively include participants. Inclusion criteria: 70+ years old, home care recipient, living in their own home. Exclusion criteria: cognitive- or language impairment, living in a nursing home or care facility. Home care staff identified 17 care recipients who had expressed feelings of loneliness and/or desire for more social activity. The introduction procedure consisted of three steps, each step was carefully planned to be smooth and safe for the participant, Table 1. All visits were in each participants home.

Table 1. The three steps of the introduction process.

Step	How/what	Purpose
1	Visit by home care staff. Oral information that a researcher will come to visit them and show the social activities they desired to learn more about and try.	Information from a person familiar to the participant. Provide name and photo of the researchers to gain knowledge about who will come and knock on their door, safety precaution because local police had advised older citizens to not open doors to strangers. Information about the system.
2	Visit by researcher. Oral information and demonstration of the demo social activities implemented in the tablet.	Describe and show the tablet and the activities. Information about the system. Becoming familiar with the tablet and the social activities of choice. Hold and touch the tablet. Trying the demo activities (open, participate in and exit the activity). Allowing the participant to explore activities without pressure.
3	Visit by researcher	Independently open and participate in activity of choice, with researcher by their side as support.

2.2. Design and Data Collection

Cross-sectional data was collected during observations of, and dialogues with, participants during introduction of the IMSA-model, described above, with social activities implemented in a tablet with user interface designed to be intuitive. Two types of field notes were collected: a) during visits notes were written on paper and b) immediately after leaving the participant's home, the researcher audio-recorded a verbal description of the session, including what the participant had said and done, and what the researcher's observations.

2.3. Ethical considerations

All persons invited to participate in the study were given written and oral information according to ethical guidelines for research. Informed consent was obtained from all participants prior to introduction. Ethical approval for the study was granted by the Regional Ethical Review Board in Umeå, Sweden (Dnr 2017/50-31).

3. Results

During analyses three themes were generated. Among the 17 participants were 15 (88%) women and two (12%) men. All participants had a mobile phone kept within reach throughout the visit, 14 (82%) used a touchscreen smartphone, five (30%) had a computer. All participants were in frail health conditions with multiple diseases. Four of them (24%) used a wheelchair for mobility. Three participants (18%) were able to leave their home without assistance, the other 14 (82%) needed help from another person in order to leave their home.

3.1. Theme 1. Lacking vocabulary related to the context.

A challenge encountered during the first steps of the introduction procedure was that participants did not understand the meaning of words related to the context of digital technology or internet. These words were used for giving information and answering curious questions from participants about the system. Despite daily use of smartphone they did not realize that those were connected to the internet. Neither did they understand terms like wi-fi, broadband, tablet, router, connection, touchscreen etc. Provision of "correct" information was mainly left out and focus was on practical demonstrations, putting the tablet in the hands of the user and applying learning-by-doing strategies.

3.2. Theme 2. Intuitive user interface may replace extensive instructions

Due to participants lack of vocabulary related to the context they received very little of the planned information about the technology. Despite the minimal spoken and written information, they did not seem to mind, and it did not appear to affect their ability to understand how the technology worked or how they should click and interact with the tablet to achieve what they wanted to do. On the contrary, they felt positive about not having to listen to all the boring information. When presented with the tablet they enthusiastically started exploring. "It doesn't matter that I did not understand what you

tried to say. You know, all those words were not necessary, I have figured it out already, this was very easy”.

3.3. Theme 3. Unwillingness to commit to a pre-defined measure of performance

Although participants were positive, some of them eager, to start using social activities online, they did not want to make commitments regarding how much and for how long time they would use the tablet or how often they would engage in activities. If it was mandatory to use a certain frequency or amount, they did not want the service. They argued this by relating to their poor health. “In my condition I can never give promises, because I don’t know what I’ll be able to do tomorrow”. If pressured to perform they felt the tablet would be a burden and a stress factor instead of an asset for pleasure.

4. Discussion

The result from this study contributes with knowledge that there are essential factors to consider when introducing digital social activities to older persons in a home care context. Even though the older persons seem to be literate and digitally experienced it is not safe to assume they understand the context-related words used to label artefacts and functions. In this study lack of vocabulary related to technology meant that part of the information prepared by researchers became useless and therefore excluded. Talking about something that does not make sense was not considered useful.

During the co-creation process preceding this study [11] severe effort was put into creating simple user interface aiming for it to be intuitive. Theme two can be interpreted as a validation that it was a successful approach. Although all ICTs are not appropriate for all individuals it is possible to apply them with consideration to, and strategies designed for, the context and situation for in which it will be applied [10]. Allowing the end user to take control over the activities is a key factor [13].

Theme three revealed that participants were not willing to commit to promise a specified accomplishment. It is important that researchers keep this in mind as quantity of usage is not the same as how useful something is. For older people, having knowledge about possible benefits from using ICT is a factor that gives motivation [14]. The participants in this study all suffered from isolation and feelings of loneliness. Through home care services they were entitled to social activity. Unfortunately in today’s society many home care organizations, including those in this study setting, lack resources and face difficulties providing social activities according to clients’ needs, thus ICT can provide an alternative [7,9,10].

There are methodological limitations related to the use of fieldnotes as data. One weakness is that they are recorded by an observer and thus subject to (a) memory and (b) possibly the conscious or unconscious bias of the observer [12]. In attempt to minimize this fieldnotes in this project were recorded immediately after leaving the participants.

5. Conclusions

When introducing digital technologies to older persons who are not familiar with ICT it is essential to consider the following factors for a good and sustainable experience for

both the users and the researchers. Be aware, understand, and prepare for, that older persons may not understand common vocabulary related to the context of internet and digital technologies, even though they regularly already use ICT as artefacts and services. Intuitive user interface can compensate for excluded technology-oriented information and inspire older persons to take initiative and explore technology while feeling brave and good about themselves. Do not put pressure on, or make demands, regarding how much older persons with home care need to use ICT when they are introduced to ICT or digital activities. Putting pressure on older persons to perform in a certain way, or to a certain quantity, can cause intended positive benefits to instead be stressful and negative. This may be a challenge for researchers as there is often a demand to measure participants performance in relation to a project or intervention.

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