Author(s): Fan, Qingyun

Title: Supporting older people coping in a digital society : comparing case studies in China and Finland

Year: 2023

Version: Accepted version (Final draft)

Copyright: © 2023 Taylor & Francis

Rights: In Copyright

Rights url: http://rightsstatements.org/page/InC/1.0/?language=en

Please cite the original version:

Supporting older people coping in a digital society: comparing case studies in China and Finland

Qingyun FAN

Department of Social Sciences and Philosophy, Faculty of Humanities and Social Sciences

Kokkola University Consortium Chydenius, University of Jyväskylä, Kokkola, Finland

CONTACT: qifan@student.jyu.fi

Abstract: The use of information and communication technology (ICT) can enrich interactions and improve the quality of life of older people. However, some of them will face difficulties in dealing with digital technologies. Finland and China have conducted several projects coaching older people in using ICT. This article compares the different ways these social services are organised and maintained in two local projects. The data for this comparative case study were collected through participant observation and separate focus group interviews with three groups: older people, practitioners and volunteers. Despite enormous historical and cultural differences, the social service projects share similarities as multisectoral services. Support from the public sector and effectiveness in mobilising volunteers are the core reasons for the smooth implementation of these services. The results of this study may inform approaches to further social services that seek to improve the well-being of older people through ICT.

Keywords: Comparative case study; older people; ICT; social services; welfare mix

标题：支持老年人应对数字社会：中国和芬兰案例研究的比较

作者：范青云

摘要：信息和通信技术（ICT）的使用可以**丰富互**动并改善老年人的生活质量。然而，他们中的一些人将在处理数字技术方面面临困难。芬兰和中国开展了多个服务项目，帮助老年人使用信息化设备。本研究探讨了 ICT 对老年人生活质量的影响，并比较了芬兰和中国两个社会服务项目在老年人使用 ICT 方面的不同组织和维护方式。研究采用了比较案例研究的方法，通过参与观察和焦点小组访谈收集了老年人、从业人员和志愿者的数据。尽管芬兰和中国在历史和文化方面存在巨大差异，但两个社会服务项目都是以多部门服务为特点。研究发现，公共部门的支持和志愿者的动员是确保服务顺利实施的核心原因。本研究结果为进一步通过 ICT 改善老年人福祉的社会服务方法提供了参考。

关键词：比较案例研究；老年人；信息与通讯技术 (ICT)；社会服务；福利混合模式

Introduction

Regarding the global issue of ageing, the Nordic region as a whole, and Finland especially, has a population ageing faster than in many other European areas: it is expected that more than 50% of these countries' people over the age of 15 will be aged 65 or over by 2030 (Grunfelder 2018, 25). Meanwhile, Asian countries such as China and Japan are also becoming ageing societies. China has one of the fastest-growing ageing populations in the world; the population aged 65 and over was 190.64 million, accounting for 13.5% (National Bureau of Statistics, PRC 2021). Although population ageing is a human success story and a reason to celebrate public health, medical progress, and economic and social development (World Health Organization 2019), many older people experience old age as a time of loss, being excluded from opportunities, and disconnection from wider society and social networks of care and support. Increasing geographical distances between generations, and difficulties for older people in maintaining contact with the younger generation, are especially evident in rural areas (Fu and Rønning 2014).

Social exclusion is receiving growing attention within gerontology (Walsh et al. 2017). The lack of effective social interaction, which may lead to the "separation of individuals and groups from mainstream society" (Walsh, Scharf and Keating 2017, 81), is considered one of the key factors affecting the quality of life in old age (Datta, Datta, and Majumdar 2015). The rise in new technologies attracts great attention, and many researchers believe it will benefit healthy ageing (Ollevier et al. 2020). Technology has penetrated every corner of modern society, and social media have become one of our main arenas of social interaction. However, the new technologies are predominantly focused on the physical health of older people, such as monitoring technologies and daily service robots (European Commission 2018). The worrying impact of the rapid development of digitalisation is "rising inequality and social exclusion throughout the world" (Castells 2010, 68). This challenge is defined by Steyaert and Gould (2009, 742) as the digital divide, "the risk of less access to services as well as less choice and possibly greater costs may result in social exclusion because the person does not have access to new technology or skills to use that technology".

Information and communication technologies (ICT) refer mainly to online services that enable communication options, such as calling and social media apps, which may meet older people's social needs. Older people's relationship to the use of ICT is variable. On the one hand, there is evidence that ICT can play an essential role in easing the hardships of everyday life (e.g. Kilpeläinen and Seppänen 2014). A quantitative study found those who used web-connected ICT reported lower levels of loneliness and anomie and higher levels of autonomy (Schlomann et al. 2020). On the other hand, many older people feel excluded from digital society and find using ICT very challenging. For example, almost 10 per cent of Swedes – the majority of older people – say that they have never or rarely used the internet (Hedman 2020). Despite their socioeconomic status and educational background variation, current research often presents older people as a vulnerable group that faces difficulties dealing with

digital technologies (e.g. Marston et al. 2019; Hargittai, Piper, and Morris 2019). As social work adapts to new technologies, it also responds to exclusions brought about by the digital divide as a human rights issue (Sanders and Scanlon 2021).

There emerges globally a need for services to act as a safeguard so that older people can access a digital society, especially regarding communication and coping with digitalised everyday facilities and services. This article is analysing such emerging services in China and Finland. The reasons for selecting comparative cases from these two countries are as follows.

Firstly, Finland and China have similar levels of digitisation according to the Network Readiness Index[1] (NRI), one of the leading global indices on the application and impact of information and communication technology (ICT) in economies worldwide. Finland has been the country with the highest NRI ranking in Europe for the past six years, while China, with a large population in Asia, has risen in NRI ranking year by year, ranking first among the upper-middle-income countries in 2021. Additionally, both countries ranked comparable in one sub-pillar, "individuals", which measures the ICT skills and use of social networks, etc., with Finland ranked 14, and China ranked 19. Besides the similarities in the rapid development of digitalisation and the risks of an ageing society, many studies (e.g. Tutoky et al. 2013, Begum 2019) indicated that among all age groups in both countries, the older group is not engaged very much on the internet. Despite this, there is no statistical age division in using ICT. Meanwhile, both countries prioritise home-based elderly care services and have national social services that offer technical support for older people to use ICT. These factors provide the foundation for a comparative case study between Finland and China, investigating examples of how older people can be supported to stay connected in the digital age.

Against this background, this study will investigate how services that aim to support older people in staying connected in a digital society are organised and how these services are placed in the context of existing welfare service systems. By means of a comparative case study, I will explore the differences and similarities between the Chinese and Finnish examples of such emerging services. The results may inform approaches to further social services that seek to improve the well-being of older people through ICT.

The rapid development of digitalisation and its impact on the ageing population

Contemporary research increasingly discusses how older people cope with digitisation, mostly focusing on facilitators and hindrances to their technology use (e.g. Marston et al. 2019). Research has focused on the technology acceptance and internet appropriation of older people in terms of cognitive level, physical health and motivation rather than on related social services (e.g. Mestheneos and Gheno 2019). Even though all generations have adopted the internet, a digital divide remains between younger and

---

older individuals. In China, 11.2 per cent of internet users are over 60 years old (CNNIC 2022), and the situation in Europe is similar. However, older people who live in developed countries do have easier access (König, Seifert, and Doh 2018). According to a literature review of research on ICT as a means of communication among older people (Fan 2016), the digital divide is keeping older people from accessing information and services. Implemented in 2015, China's national Internet Plus strategy, which integrates the Internet with other industries (including traditional industries) through online platforms and ICT (Wang et al. 2016), has produced as many as 940 million netizens (citizens of the Internet). However, only 10.3 per cent of these netizens are older than 60. Another research team has claimed that it is feasible for ICT to enhance social connectedness among older people in residential care. However, their findings also suggest that even those with better digital literacy need time to adopt a new app (Barbosa Neves et al. 2019). Recently, further research discussed how well-being would be enhanced through ICT usage among older people from a regional perspective (Airola, Rasi, and Outila 2020), especially during COVID-19 (Bakshi and Bhattacharyya 2021). Moreover, the COVID-19 pandemic increased the demand for staying connected during lockdowns (Nguyen et al. 2021), which is more urgent for older people. Furthermore, for older migrants, digital literacy can significantly improve their ability to maintain and expand dispersed support networks (Millard, Baldassar, and Wilding 2018).

Lacking digital capabilities

According to a national survey in China, 48.9 per cent of those who do not use the internet indicate they lack relevant knowledge (CNNIC 2020). Although this survey did not provide the ages of this respondent group, China's state-owned broadcaster CCTV often presents "adult children helping elderly parents to use information technology" as an example of filial piety. For example, before Senior Citizens' Day in 2020, one CCTV channel proposed the Weibo hashtag "#teach 250000000 older people to use a mobile phone#" as part of a "Respect for Older People" festival. In Finland, a two-year programme run by the Digi Everyday Advisory Board reported concerns about the exclusionary effects of digitisation, which must be prevented as digital skills are today's new civic skills.[2] Awareness of the need to support older people using ICT is not recent. Lin, Tang and Kuo (2012) found that older people would have liked to use ICT but often lacked the necessary skills and preferred peer group support. Other research has indicated that many older people are willing to use ICT to communicate (Fokkema and Knipscheer 2007; Näsi, Räsänen, and Sarpila 2012), and some are motivated to apply digital technology to improve their mental well-being (Andrews et al. 2019). However, some – especially those who did not use ICT during their working lives – face challenges in learning how to do so. Hasan and Linger (2016) studied how developing digital capabilities could enhance older people's well-being; the results showed that as their digital capabilities improved, many older people engaged in

---

[2] https://vm.fi/digi-arkeen-neuvottelukunta

meaningful computer-based activities of their choosing. It can be concluded from the research evidence that the availability of ICT is not the sole solution to the problem of adapting to a changing information society. Still, it does provide an option for older people. Older people's social situation and the skills they need to use ICT are essential for improved social well-being.

Social service for older people concerning utilising ICT

In many regions, social services support older people to use ICT, whether through national programmes, as in Finland and China, or through local social services projects, such as Cuenca en RED in Spain (translate in English: More Than Green). In Romania, an ICT-based health service supports older people living independently (Ianculescu, Alexandru, and Tudora 2017). Finland is a global leader in digitisation, and Finnish society places great trust in health and welfare services as a strategy for renewal; however, it does so without recognising the dangers and risks of this approach for older people. Lately, research has discussed the kinds of support older people require and the informal support they receive (Hänninen, Taipale, and Luostari 2020), but social services remain at the margin of welfare state research, despite their growing political and theoretical importance (Anttonen 2017). Digitisation leaves the most vulnerable people without statutory services. (Tuusvuori 2020). Some organisations in Finland have responded to this situation by offering manuals on digital skills for older people (Kärnä and Pihlainen 2020).

Research question

Together these studies provide important insights into the statement that social service has to emerge to include older people as the user of ICT, and some explored projects which aim at supporting older people using ICT are going on in Finland and China. To gain a better understanding of how social services could provide better support for older people to be inclusive in the digital society, this study would like to explore the similarities and differences regarding:

a. The approach of these projects and the service users' experiences;

b. How many actors have been taking action in the services, and what are their roles, and whether there are any limitations?

Method

The comparative case study examines in rich detail the context and features of two or more instances of specific phenomena (Mills, Durepos, and Wiebe 2012). When a holistic, in-depth investigation is required, the case study method can "explore and investigate contemporary real-life phenomenon through detailed contextual analysis of a limited number of events or conditions, and their relationships" (Zainal 1996, 282). Content analysis with an abductive coding approach was used to analyse the collected

data and formulate categories that answer the study's aim and research question. According to Schreier (2012), when using qualitative content analysis, the angle from which the data is to be examined is specified by the research question. To answer how this kind of social service functions, I applied a systems theory paradigm (Barber 1994). The coding of analysis was based on the conceptual framework proposed by Parsons, whereby an action "consists of a person, with particular aims and goals, choosing certain means of achieving them, and these choices are made within conditions, both material and cultural, that constrain the choices and means" (Inglis and Thorpe 2018, 44) to gain a detailed understanding of how the participants of this service acting together for improving the ability of older people using ICT. The data analysis looked for the different actors who participated in the project, and then went to a deeper description of their role and limitations in the project.

Each participant in this research gave their permission to conduct research regarding the services in question. This study did not require a preliminary ethical review, according to the Finnish Advisory Board on Research Integrity guidelines. Research permission was sought for each case from the service-providing agency. Under the European Union's General Data Protection Regulation, all digital research data, such as observation diaries and audio recordings of interviews, were saved on protected university computers.

Case description

Finnish local project

Under the aegis of a national association for older people's welfare, the local branch of the association took on most of the responsibility for running this project. The weekly project sessions occurred in a local community centre in a shopping mall where everyone was welcome. Each session lasted about two hours: local older people could bring their own ICT devices, and one or two volunteers would respond to their questions about how to use the devices. The community centre brought together the activities of many organisations, acting as a kind of local "hotel" for national organisations. It also served as a volunteer and peer support centre for families, immigrants, unemployed people, international students, etc. Older people came to this venue to chat over a cup of coffee. The visitors were mostly 65 to 75 years old and had normal memory and cognition. Most walked to the venue, especially in good weather, and a few of them still drove. Most did not have the latest ICT devices; some used second-hand laptops passed on to them by their children. However, everybody had a mobile phone, and service users had bought their mobiles.

Chinese local project

This local project was organised by a social work organisation. Weekends were always the busiest time at the community service centre. Instead of the usual square dancing, some older people living in this community came together to attend lectures presented

by university student volunteers on using ICT. The students were members of and volunteers for a non-governmental organisation (NGO) that aimed to help older people to better integrate into the digital society. Each meeting session lasted two hours, starting with a themed lecture on online shopping, online banking, online chat, etc. After the lecture, the "teacher" would set some related tasks, and the older people would practise on their own devices, with support from student volunteers acting as learning assistants.

Data collection

Finnish case

The local association gave permission for research at the venue where the project meetings were held. All the focus group participants were given an information sheet and signed an informed consent form explaining the ethical issues involved in the research.

The data comprise three data sets. The first consists of my participant observation as a volunteer on the project. I participated alongside two other volunteers to help service users resolve their questions related to the use of ICT. I kept a fieldwork diary of my observations during 20 sessions. The participant observation lasted for six months and focused on the use of ICT by older people. My fieldwork diary described a) how the service was provided; b) the content of the sessions and the service users' participation; and c) how service users experienced the service and how the service met their needs.

The second data set consists of participant interviews. The interviewees were of three types: service users, organisers and volunteers. Five service users and three volunteers participated in a semi-structured focus group interview. The volunteers were present in the focus group, not just as interviewees: one moderated the interview, another helped me take notes, and one translated the discussion from Finnish into English. All the service users participating in the focus group were retired older people. They mostly had lower-middle-class professional backgrounds: a language teacher (female), a university administrator (male), a railway conductor (male), a nurse (female) and a trade agency manager (male). The focus group interview concentrated on general information about the project, such as a) how service users had come to know about the service, b) why they had started attending the service, c) what kinds of tools they would like to use on their ICT devices, and any problems they had encountered; d) their opinions about loneliness in Finland; and e) their expectations of this kind of service. Following the focus group interview, the national-level project manager gave me an expert consultation. This expert interview focused on the strategy of providing knowledge about ICT use to older people to enhance their social interaction. Furthermore, documents concerning the project were also used as data for this study: data about the project at a national level, general project reports, and so on.

Being a non-Finnish language speaker proved to be a challenge during the data collection, as many service users spoke only a little English. One volunteer took the

role of moderator and helped me conduct the focus group interview in Finnish. Another volunteer took notes during the interview. Later, I used a professional language service to translate the interview transcript into English. For the same reason, I mainly used documents and other materials written in English.

Chinese case

I contacted the founder of the NGO from which I intended to gather the research data, and the NGO granted me research permission. All participants in the different interview sessions were then asked for their consent and informed of the ethical issues involved in the research.

The Chinese data were collected in three settings: one focus group interview with older people, one focus group interview with volunteers and one expert interview with the community social worker. The interview structures were similar to those used in the Finnish case. The focus group interview with older people who attended the service comprised three men. The age gap between the oldest and youngest participants was 23 years. The oldest participant, aged 91, had worked as a mechanical engineer before retirement; the other two men had also worked in the industry. The focus group interview with volunteers comprised five university students, two females and three males. All were in their second or third year of undergraduate study at the same university in city B. One studied management; the others all studied computer science. In addition, I used the NGO's social media accounts on different platforms as my main source of supplementary data. I also acted as a consultant to this NGO, along with hundreds of other people from all walks of life, such as researchers, media workers, politicians and social workers. We had an online chat group where we shared updates on service activities and discussed new activities that might be developed for older people.

Findings

Social contacts are as useful as learning to use ICT

The data analysis demonstrates that after participating in these social services, the older people were more skilful at using computers and smartphones. However, some older people needed to return to ask the same questions again, which took a lot of courage. Social contact is important and was an additional benefit of the project: older people enjoyed visiting the venues to attend the meetings, even when they did not have any questions concerning the use of ICT. In the learning process, the older people explored new apps for contacting families and friends and enjoyed spending time together. The volunteers' teaching was helpful and useful; for most issues, they could find the solution or the information needed to answer the older people's questions. However, sometimes the volunteers needed to Google the solution or figure it out with the older people. Additional devices and services aimed at older people are needed, although the market has already developed many ICT-based innovations concerned with the needs

of older people.

The data analysis indicated that both cases comprised five subjects: the association or organisation, the local government, the volunteers, the older people and the consumer market. Table 1 describes these subjects' roles in each case, showing how they participated in the social service to make it run effectively. The table also presents the different limitations that constrained the subjects.

A new type of organising services in an urgent gap

Regarding the research question, how such new services are organised and how these services are placed in the context of existing different welfare services systems, the data analysis provides a rather surprising result. Then, the main result indicates that despite very different contexts of current systems of welfare states, both the Finnish and the Chinese cases of services comprised five similar types of involved agencies, notably, that the older people as service users are also peer support for other service users. Table 1 describes these subjects' roles in each case, showing how they participated in the social service to make it run effectively. The table also presents the different limitations that constrained the subjects.

Table 1: Roles and limitations of actors in the two cases

Actors	Chinese case	Finnish case
NGO/ association	Roles: Designs the service based on the needs of older people and delivers the service. Publishes a series of online courses and publications based on the service project. Limitations: Initial motivation for the service is government- or state-led; thus, it mostly responds to authorities' needs rather than people.	Roles: National association devises the national organisational plan, provides the service, and organises participation in the service. Local organisation provides the venue for the activities. The national association publishes a manual for local projects on organising this kind of service. Limitations: Cannot guarantee permanent funding.
Older people	Roles: Actively participate in the project and support friends and partners who cannot attend the activities. Limitations: Too shy to share personal challenges during the learning process.	Roles: Actively participate in the project and support each other during the meeting sessions. Limitations: Some elderly individuals would like to participate in the service, but are hindered by various limitations, such as the distance of the meeting location from their residence Some lack the patience to help others.
Volunteers	Roles: Prepare various lectures to teach older people who participate	Roles: Respond to questions from older people who come to the meetings.

	in the project to use ICT. Limitations: Earning credits is not sustainable as a motivation to participate in long-term voluntary activities.	Limitations: Participate in the project as part of labour market training.
Local government	Roles: Provides community service centres as venues. Mobilises participation in the service at the beginning of the project. Limitations: Lack of financial support for services. Insufficient supervision.	Roles: Offers the city library to the organisation as a venue. Limitations: Mainly focuses on professional services. Not experienced in organising or networking with volunteer services.
Consumer market	Roles: Offers paid customer services. Focuses on developing new devices. Limitations: Not very active in supporting charity projects.	Roles: Offers paid after-sales customer services. Sponsors the project. Local newspaper offers free space for the organisation to print service information. Limitations: Lacks services targeted at senior customers. Service fees may not be affordable for some older people.

A multisectoral service model

Despite their enormous historical and cultural differences, the two social service projects shared similarities as multisectoral services that, in both cases, were in line with the welfare mix perspective (Evers 2006; Jenson 2015). The multisectoral mix comprised the public sector (local government), third sector (national and local NGOs/associations, volunteers), informal sector (older people, families and friends) and the market. My data analysis revealed that these different sectors converged around their shared target. The public sector was the main financial resource in both cases, while the third sector planned and implemented the service. The informal sector could motivate and support older people to better assimilate ICT, including as a supplement for inadequate consumer services. Thus, one finding is that this type of service combines a wide range of actors from different sectors, although third-sector organisations mainly provide it. Although the public sector's major challenge is its lack of experience in organising this kind of service, it succeeded with these projects by offering funding, venues and information channels. The projects were able to use local facilities as venues. The Finnish project also had free access to a local newspaper to publicise the project schedule, while the Chinese national broadcaster reported on the project as a support model for older people.

Another interesting finding concerns the connection between the third sector and older people as recipients of social services. In both cases, people shared positive feelings about spending time together beyond simply learning/teaching ICT. The volunteers on the Finnish project were all young jobseekers, and their involvement in the project was part of their labour market integration measures. In the Chinese case, the university students were motivated to volunteer in return for study credits; this reward produced such a large group of volunteers that it effectively limited the older people's self-support and empowerment. During the focus group interview, the Chinese volunteers also said they had become friends with the "grandmas and grandpas". Sometimes this informal support network faced challenges in supporting older people in need. Although volunteers knew computer science, it still required additional skills to impart that knowledge, and they also needed to acquire new knowledge before teaching it to others. The volunteers in both cases considered they needed to keep learning to be ready to respond to the older people's requirements.

The service users also had informal support networks comprising their children, relatives and friends. In the Chinese case, their former colleagues (from before their retirement) were one motivation for their use of ICT; this motivation was not mentioned by the Finnish seniors. Over half of the older people told me during interviews that they had received their first smartphone second-hand from their children when the latter bought new phones for themselves. Since being connected to their families was one of the older people's motivations to use ICT, in this situation, relatives and friends could also lend a hand. However, not every older person had family or friends who could provide such support. The younger seniors were less challenged adjusting to new technologies, which might have influenced their older peers to "catch up". For some older Chinese people, their spouses were their main peer support. This was partly because a spouse might have to take care of the house or grandchildren and therefore could not attend the service; another reason was that some older people did not want to participate in a learning activity in public and among strangers. Finnish older people stressed that couples cannot teach each other. Instead, they prefer to rely on peer service users, which is consistent with a study conducted in Spain on technical support services for older people. The study found that despite having family and friends around them, older people trust formal support more. (Tirado-Morueta et al. 2021).

In providing services supporting older people to use ICT, the market might be considered an indispensable sector because after-sales services should include teaching customers. However, the market fails to provide regular services in this regard. Older people complained that some products no longer came with manuals. Even if the manual for a digital device did exist, it tended to be too short and lacking in detail, forcing the user to discover all the features of the gadget for themselves. They also worried that the fees charged for services offered on the market would be unaffordable – not a groundless worry.

Discussion

This comparative case study has illustrated how social services organised by NGOs

enhance older people's "e-inclusion", defined by Raya Diez (2018, 917) as "the actions carried out to help bridge the digital divide by promoting access to new technologies for the people, groups and communities most at risk of exclusion". This study supports evidence from previous observations about technology acceptance by older people (Weck, Helander, and Meristö 2020). Further, it extends knowledge about the motivations and expectations of older people regarding their use of ICT and, specifically, their need to learn. The positive feedback from older people about their attendance at this service echoes previous studies that have noted the importance of offering technical support to older people to enhance their quality of life (Hofer et al. 2019).

As relevant research discussions over the past few decades have made clear, a mixed social service model is emerging that includes the private, third and public sectors and stronger integration into the service system of informal care from family members (Rantamäki and Kattilakoski 2016). In Nordic countries, including Finland, an increasing proportion of publicly funded care services for older people involve the voluntary or third sectors and other sectors (Anttonen and Karsio 2017). Rapid social and economic changes are creating new configurations of welfare provision, and fiscal and political limitations have put the public sector under pressure, resulting in more involvement by other sectors (Ruuskanen, Selander, and Anttila 2016). This comparative case study echoes the work of Caputo (2018), who found that there has been a significant reshuffling among the four main parties involved in the production of social services: the state, the family, the market (for-profit providers), and the community or third sector (non-profit organisations, which require a steady flow of resources from either the state or users to hire and pay their workforce). It also echoes Evers (2006), who found that different elements, with particular implications for users, could be found in the same service unit. It is interesting to note the changing role of service users. They are overcoming their feelings of fear or shame about expressing their needs, and they can develop solutions together with volunteers: they are no longer simply citizens or consumers. Still, they can also be co-producers of the social service. However, connecting the two generations together might not guarantee a better learning environment; ethnographic research in Italy has suggested that intergenerational learning is not backed by evidence and may be ineffective in general (Carlo and Bonifacio 2020).

This article verifies the rationality of welfare diversification and that universal welfare also requires the participation of all people. The organic solidarity of different sectors can achieve the purpose of providing services more effectively. However, there is no fixed multisectoral welfare model; such services can emerge in unique ways in different contexts and vary during development. Service providers should encourage more subjects to participate in social services based on specific service targets and service items. Since the significance of the informal and NGO-based welfare provision is obvious, the state should find new ways to facilitate and support it. Once a need for volunteers has emerged in a certain area, the state should provide appropriate incentives, such as the study credits received by Chinese university students or the training hours accumulated by Finnish volunteers. Volunteer work could also offer

extra outputs: in the Chinese case, for example, the university student volunteers provided technical and emotional support for older people. Various sectors need joint efforts at different levels to bring people together to further achieve this.

The third sector also actively assists the public sector in ensuring the well-being of older people. Social services provide material and other emotional support resources for citizens to cope with changed life situations (Anttonen 2017). The two local cases in this study make my findings less generalisable, and no conclusions can be drawn about the services' long-term impacts. However, peer support among the participants may have led to long-lasting connections and communication. Furthermore, this multisectoral way of providing a support service enabled a flexible and concrete response to older people's needs while strengthening their active participatory agency. Such participatory approaches – for instance, peer support – could be strengthened as a practicable model for such social services (Matthies, Kattilakoski, and Rantamäki 2011). Service users' participation and influence are significant alternative options to improve the quality and meet the challenges of welfare services (Matthies and Uggerhøj 2014). Since attendees at the projects were people interested in using ICT and participating in social activities, it was no surprise that only one expressed a negative opinion about using ICT. At the same time, it must be acknowledged that the Finnish case was a pilot project which had not reached many potential participants.

Moreover, those who joined the project already had an interest in learning and/or may already have been more active than other older people. Some older people may lack the motivation to attend such services because they have no interest in ICT or because they are limited by their financial situation. Moreover, admitting that "I need help" is also challenging for most people.

Whilst this study did not confirm a national-level comparison, it partially substantiated the similarities between the two cases despite societal differences between Finland and China. More interesting, the case comparison reflects the social and cultural distinctions between the two countries. For example, in the case of China, the community service centre has been taken as the actor of local government because one of the functions of a community ("Shequ" in Chinese) is to support the local government to achieve the management goals, even though it is a grass-roots autonomous organisation. In comparing the relationship between older people and volunteers, in the Chinese case, this is more of an intergenerational relationship. At the same time, the age difference is not so obvious in the Finnish project. Furthermore, we still need to be aware that the connotation of e-exclusive is different in regions with different levels of economic development. Undoubtedly most older people have social needs, so, for example, in China, helping older people to use e-payment systems can obviously enhance convenience in daily life as China is leading the way in electronic payments, but Finnish older people also, would like to manage using online banking because of the sharp decline in manual services.

Conclusion

Older people have always needed social interaction, as indeed have all age groups.

Supporting older people to use ICT is a long-term process; the need to support older people to use ICT is continuous and helps to compensate for the losses that they feel. Although the younger generation of older people is used to using ICT in their work, they still face the challenge of rapid technological advances and limitations resulting from their age. Unsurprisingly, a large group is still excluded from this kind of service because of shortcomings in their abilities. The multisectoral service model found in this study provides a successful example of similar services to involve older people and different sectors in participation. ICT is merely a series of devices and apps to get information and maintain contact, and the focus of social service should be on the older people themselves.

The generalisability of these results is subject to certain limitations. For instance, the sample from local branches did not allow an in-depth national or international discussion. Unfortunately, the study did not include more local sites in Finland and China, and more counties could be included in the comparison. Additionally, the current research has been unable to follow the project continuously, so it is missing a longitude perspective of the service. An issue not addressed in this study was the motivation of each actor, such as whether the market would consider devoting profit to this kind of service with the potentially increased sales. Research could be continued on the role of social work in supporting the inclusion of older people in the digital society. Considerably more work needs to be done to identify digital inequalities among older people – for example, whether those with higher socioeconomic status are more active in using new technical devices (Hargittai and Dobransky 2017), or whether their psychological health also affects older people's adoption of ICT (Zhu, Ma, and Leng 2020). In addition, a researcher or developer working on innovations for older people regarding social interaction could learn from the expectations of service users. In future research, it will be important to study how such services could be developed in similar circumstances. Social service organisations also need to adapt to the needs of older people, and other countries with similar demographic profiles could learn from the Chinese and Finnish models and apply these to their contexts.

Disclosure statement: No potential conflict of interest was reported by the authors.

References

Airola, E., P. Rasi, and M. Outila. 2020. "Older People as Users and Non-users of a Video Conferencing Service for Promoting Social Connectedness and Well-being – A Case Study from Finnish Lapland." *Educational Gerontology* 46 (5): 258–269. doi: 10.1080/03601277.2020.1743008.

Andrews, J. A., L. J. E. Brown, M. S. Hawley, and A. J. Astell. 2019. "Older Adults' Perspectives on Using Digital Technology to Maintain Good Mental Health: Interactive Group Study." *Journal of Medical Internet Research* 21 (2): e11694. doi: 10.2196/11694.

Anttonen, A. 2017. "Challenges and Dilemmas in the Provision of Social Services." Chap 17. In *Social Services Disrupted: Changes, Challenges and Policy Implications for Europe in Times of Austerity*, edited by F. Martinelli, A. Anttonen, and M. Mätzke, 363–375.

Cheltenham: Edward Elgar. doi: 10.4337/9781786432117.00029.

Anttonen, A., and O. Karsio. 2017. "How Marketisation is changing the Nordic Model of Care for Older People." Chap. 10 In *Social Services Disrupted: Changes, Challenges and Policy Implications for Europe in Times of Austerity*, edited by F. Martinelli, A. Anttonen, and M. Mätzke, 219–238. Cheltenham: Edward Elgar. doi: 10.4337/9781786432117.00020.

Bakshi, T., and A. Bhattacharyya. 2021. "Socially Distanced or Socially Connected? Well-being through ICT Usage among the Indian Elderly during COVID-19." *Millennial Asia* 12 (2): 190–208. doi: 10.1177/0976399621989910.

Barber, B. 1994. "Talcott Parsons on the Social System: An Essay in Clarification and Elaboration." *Sociological Theory* 12 (1): 101–105. doi: 10.2307/202038.

Barbosa Neves, B., R. Franz, R. Judges, C. Beermann, and R. Baecker. 2019. "Can Digital Technology Enhance Social Connectedness among Older Adults? A Feasibility Study." *Journal of Applied Gerontology* 38 (1): 49–72. doi: 10.1177/0733464817741369.

Begum, S. 2019. "Ageing, Gender and Transformation of the Arctic." *Gerontologia* 33 (4): 209–212.

Caputo, R. K. 2018. "Transformations of the Welfare State." Review of *Social Services Disrupted: Changes, Challenges and Policy Implications for Europe in Times of Austerity*, edited by F. Martinelli, A. Anttonen, and M. Mätzke. *Journal of Family and Economic Issues* 39 (3): 524–529. doi: 10.1007/s10834-018-9571-x.

Carlo, S., and F. Bonifacio. 2020. ""You Don't Need Instagram, It's for Young People": Intergenerational Relationships and ICTs Learning among Older Adults." In Human *Aspects of IT for the Aged Population. Technology and Society*, edited by Q. Gao, and J. Zhou, 29–41. Cham: Springer.

Castells, M. 2010. *End of Millennium*. Oxford: Wiley-Blackwell.

CNNIC. 2020. "The 46th Survey Report." China Internet Network Information Center. https://www.cnnic.com.cn/IDR/ReportDownloads/202012/P020201201530023411644.pdf

Datta, D., P. P. Datta, and K. K. Majumdar. 2015. "Original Article Role of Social Interaction on Quality of Life." *National Journal of Medical Research* 5 (4): 290–292.

European Commission. 2018. "Top 25 influential ICT for Active and Healthy Ageing projects." https://digital-strategy.ec.europa.eu/en/library/top-25-influential-ict-active-and-healthy-ageing-projects

Evers, A. 2006. "European Perspective and Future Challenges of Welfare Services." Chap. 7 In *Nordic Civic Society Organisations and the Future of Welfare Services: A Model for Europe?*, edited by A.-L. Matthies, 255–276. Copenhagen: Nordic Council of Ministers. http://norden.diva-portal.org/smash/get/diva2:700760/FULLTEXT01.pdf

Fan, Q. 2016. "Utilizing ICT to Prevent Loneliness and Social Isolation of the Elderly. A Literature Review." *Cuadernos de Trabajo Social* 29 (2): 185–200. doi: 10.5209/CUTS.51771.

Fokkema, T., and K. Knipscheer. 2007. "Escape Loneliness by Going Digital: A Quantitative and Qualitative Evaluation of a Dutch Experiment in Using ECT to Overcome Loneliness among Older Adults." *Aging & Mental Health* 11 (5): 496–504. doi: 10.1080/13607860701366129.

Grunfelder, J., Rispling L., and Norlén G. 2018. "State of the Nordic Region 2018: An

Introduction." In *State of the Nordic Region 2018: An Introduction*. 25. Nordic Council of Ministers DOI: 10.6027/NORD2018-001

Fu, H., and R. Rønning. 2014. "Status, Challenges and Innovative Solutions for Elderly Care in China and the Nordic Countries." Chap. 13 In *Reshaping Welfare Institutions in China and the Nordic Countries*, edited by P. Kettunen, S. Kuhnle, and Y. Ren, 289–309. Helsinki: Nordic Centre of Excellence NordWel.

Hänninen, R., S. Taipale, and R. Luostari. 2020. "Exploring Heterogeneous ICT Use among Older Adults: The Warm Experts' Perspective." *New Media and Society* 23 (6): 1584–1601. doi: 10.1177/1461444820917353.

Hargittai, E., and K. Dobransky. 2017. "Old Dogs, New Clicks: Digital Inequality in Skills and Uses among Older Adults." *Canadian Journal of Communication* 42 (2): 195–212. doi: 10.22230/cjc.2017v42n2a3176.

Hargittai, E., A. M. Piper, and M. R. Morris. 2019. "From Internet Access to Internet Skills: Digital Inequality among Older Adults." *Universal Access in the Information Society* 18 (4): 881–890. doi: 10.1007/s10209-018-0617-5.

Hasan, H., and H. Linger. 2016. "Enhancing the Wellbeing of the Elderly: Social Use of Digital Technologies in Aged Care." *Educational Gerontology* 42 (11): 749–757. doi: 10.1080/03601277.2016.1205425.

Hedman, S. 2020. "One million Swedes affected by the digital divide." Tietoevry. https://www.tietoevry.com/en/blog/2020/05/one-million-swedes-affected-by-the-digital-divide/

Hofer, M., E. Hargittai, M. Büchi, and A. Seifert. 2019. "Older Adults' Online Information Seeking and Subjective Well-being: The Moderating Role of Internet Skills." *International Journal of Communication* 13: 4426-4443.

Ianculescu, M., A. Alexandru, and E. Tudora. 2017. "Opportunities Brought by Big Data in Providing Silver Digital Patients with ICT-based Services that Support Independent Living and Lifelong Learning." Paper presented at the 2017 Ninth International Conference on Ubiquitous and Future Networks (ICUFN), Milan, 4 - 7 July. doi: 10.1109/ICUFN.2017.7993817.

Inglis, D., and C. Thorpe. 2018. *An Invitation to Social Theory*, 2nd ed. Cambridge: Polity.

Jenson, J. 2015. "Social Innovation: Redesigning the Welfare Diamond." In *New Frontiers in Social Innovation Research*, edited by A. Nicholls, J. Simon, and M. Gabriel, 89–106. London: Palgrave Macmillan. doi: 10.1057/9781137506801.

Kärnä, E., and K. Pihlainen. 2020. "How Learning Theories Can be Applied to Support Older Adults' Acquisition of Digital Skills?" *Magyar Gerontológia* 12: 5. doi: 10.47225/MG/12/Kulonszam/8447.

Kilpeläinen, A., and M. Seppänen. 2014. "Information Technology and Everyday Life in Ageing Rural Villages." *Journal of Rural Studies* 33: 1–8. doi: 10.1016/j.jrurstud.2013.10.005.

König, R., A. Seifert, and M. Doh. 2018. "Internet Use among Older Europeans: An Analysis based on SHARE Data." *Universal Access in the Information Society* 17 (3): 621–633. doi: 10.1007/s10209-018-0609-5.

Lin, C. I. C., W.-H. Tang, and F.-Y. Kuo. 2012. ""Mommy Wants to Learn the Computer": How Middle-aged and Elderly Women in Taiwan Learn ICT through Social Support." *Adult Education Quarterly* 62 (1): 73–90. doi: 10.1177/0741713610392760.

Marston, H. R., R. Genoe, S. Freeman, C. Kulczycki, and C. Musselwhite. 2019. "Older Adults'
     Perceptions of ICT: Main Findings from the Technology in Later Life (TILL) Study."
     Healthcare 7 (3): 86. doi: 10.3390/healthcare7030086.

Matthies, A.-L., M. Kattilakoski, and N. Rantamäki. 2011. "Citizens' Participation and
     Community Orientation – Indicators of Social Sustainability of Rural Welfare Services."
     Nordic Social Work Research 1 (2): 125–139. doi: 10.1080/2156857X.2011.613575.

Matthies, A.-L., and L. Uggerhøj. 2014. *Participation, Marginalization and Welfare Services:
     Concepts, Politics and Practices across European Countries*. Farnham: Ashgate.

Mestheneos, E., and I. Gheno. 2019. "Reflections on Older People in Relation to ICT-AI." Paper
     presented at the 5th International Conference on Information and Communication
     Technologies for Ageing Well and e-Health (ICT4AWE 2019), Heraklion, 2-4 May. doi:
     10.5220/0008346200070012.

Millard, A., L. Baldassar, and R. Wilding. 2018. "The Significance of Digital Citizenship in the
     Well-being of Older Migrants." *Public Health* 158: 144–148. doi:
     10.1016/j.puhe.2018.03.005.

Mills, A. J., G. Durepos, and E. Wiebe. 2012. "Encyclopedia of Case Study Research."
     Encyclopedia of Case Study Research. Vol. 1: 504–505. doi: 10.4135/9781412957397.

Näsi, M., P. Räsänen, and O. Sarpila. 2012. "ICT Activity in Later Life: Internet Use and Leisure
     Activities amongst Senior Citizens in Finland." *European Journal of Ageing* 9 (2): 169–
     176. doi: 10.1007/s10433-011-0210-8.

National Bureau of Statistics, PRC. 2021. "Diqici quanguo renkoupucha gongbao [Bulletin of the
     Seventh National Census." http://www.gov.cn/guoqing/2021-05/13/content_5606149.htm

Nguyen, M. H., J. Gruber, W. Marler, A. Hunsaker, J. Fuchs, and E. Hargittai. 2021. "Staying
     Connected while Physically Apart: Digital Communication when Face-to-face
     Interactions are Limited." *New Media & Society* 24 (9): 2046-2067. doi:
     10.1177/1461444820985442.

Ollevier, A., G. Aguiar, M. Palomino, and I. S. Simpelaere. 2020. "How Can Technology Support
     Ageing in Place in Healthy Older Adults? A Systematic Review." *Public Health Reviews*
     41 (1): 26. doi: 10.1186/s40985-020-00143-4.

Rantamäki, N., and M. Kattilakoski. 2016. "Local Welfare Systems in Rural Finland as a
     Representation of Sustainable Development." Chap. 11 In *The Ecosocial Transition of
     Societies: The Contribution of Social Work and Social Policy*, edited by A.-L. Matthies
     and K. Närhi, 174-189. New York: Routledge.

Raya Diez, E. 2018. "e-Inclusion and e-Social Work: New Technologies at the Service of Social
     Intervention." *European Journal of Social Work* 21 (6): 916–929. doi:
     10.1080/13691457.2018.1469472.

Ruuskanen, P., K. Selander, and T. Anttila. 2016. "Third-sector Job Quality: Evidence from
     Finland." *Employee Relations* 38 (4): 521–535. doi: 10.1108/ER-06-2015-0134.

Sanders, C. K., and E. Scanlon. 2021. "The Digital Divide is a Human Rights Issue: Advancing
     Social Inclusion through Social Work Advocacy." *Journal of Human Rights and Social
     Work* 6 (2): 130–143. doi: 10.1007/s41134-020-00147-9.

Schlomann, A., A. Seifert, S. Zank, C. Woopen, and C. Rietz. 2020. "Use of Information and
     Communication Technology (ICT) Devices among the Oldest-Old: Loneliness, Anomie,
     and Autonomy." *Innovation in Aging* 4 (2): 1–10. doi: 10.1093/geroni/igz050.

Schreier, M. 2012. *Qualitative Content Analysis in Practice*. Thousand Oaks: Sage.

Steyaert, J., and N. Gould. 2009. "Social Work and the Changing Face of the Digital Divide." *British Journal of Social Work* 39 (4): 740–753. doi: 10.1093/bjsw/bcp022.

Tirado-Morueta, R., Rodríguez-Martín, A., Álvarez-Arregui, E., Ortíz-Sobrino, M. Á., & Aguaded-Gómez, J. I. (2021). Understanding internet appropriation among older people through institutional supports in Spain. *Technology in society, 64*, 101505. https://doi.org/10.1016/j.techsoc.2020.101505Tutoky, G., F. Babič, and J. Wagner. 2013. "ICT-based Solution for Elderly People." 2013 IEEE 11th International Conference on Emerging ELearning Technologies and Applications (ICETA): 399–404. https://doi.org/10.1109/ICETA.2013.6674466

Tuusvuori, A. 2020. Digitalisaatio jättää haavoittuvimpia ihmisiä ilman lakisääteisiä palveluja. [Digitization leaves the most vulnerable people without statutory services] *Yliopisto-lehti[University magazine]* 23.10.2020. https://www.helsinki.fi/fi/uutiset/hyvinvointiyhteiskunta/digitalisaatio-jattaa-haavoittuvimpia-ihmisia-ilman-lakisaateisia-palveluja?fbclid=IwAR12sPH4KqF_dVJqfAE0rPbvCz_M8U4Uz_jQX0ZAhGsPWOwThFqm0jlKehE

Walsh, K., T. Scharf, and N. Keating. 2017. "Social Exclusion of Older Persons: A Scoping Review and Conceptual Framework." *European Journal of Ageing* 14 (1): 81–98. doi: 10.1007/s10433-016-0398-8.

Wang, Z., C. Chen, B. Guo, Z. Yu, and X. Zhou. 2016. "Internet Plus in China." *IT Professional* 18 (3): 5–8. doi: 10.1109/MITP.2016.47.

Weck, M., N. Helander, and T. Meristö. 2020. "Active DigiAge - Technology Acceptance by Ageing People." *International Journal of Telemedicine and Clinical Practices* 3 (3): 223–242. doi: 10.1504/IJTMCP.2020.104894.

World Health Organization. 2019. "World Population Ageing 2019." United Nations. https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2019-Report.pdf

Sokolovsky, M. 1996. "Case study as a research method to study life histories of elderly people: Some ideas and a case study of a case study." *Journal of Aging Studies* 10 (4): 281–294. https://doi.org/10.1016/S0890-4065(96)90002-X

Zhu, Z., W. Ma, and C. Leng. 2020. "ICT Adoption, Individual Income and Psychological Health of Rural Farmers in China." *Applied Research in Quality of Life* 17: 71–91. doi: 10.1007/s11482-020-09879-2.