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Digital Divide and Older People: Thoughts from the Professionals in Peñalolén (Santiago, Chile)

Brecha Digital y Personas Mayores: miradas de las y los Profesionales en Peñalolén (Santiago, Chile)

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In the digital world, only some people can participate actively. Older people in situations of vulnerability or social exclusion are often out of this world. In fact, in the Latin American context, the digital divide increases in this age group. In this research, using an intended sample, 23 professionals who work daily with older people in Peñalolén (Santiago, Chile) were interviewed. The main objective was to identify their vision of how the ageing population lives through the digital divide in a period shaped by the COVID-19 pandemic. Among the results, the professionals highlight difficulties and achievements associated with this gap related to (a) connectivity, linked not only to Internet access, but also derived from intergenerational conflicts that are generated in the private sphere; (b) digitalization, and access to municipal services, related to local and national government efforts, and (c) digital literacy. In conclusion, the authors thematize the inequalities related to the digital divide and reflect on the limitations and proposals for future research.

Keywords: digital divide, older people, ageing, ICT, technology

En el mundo digital, no todas las personas tienen la oportunidad de participar activamente. Las personas mayores en situación de vulnerabilidad o exclusión social suelen estar fuera de este mundo; de hecho, en el contexto latinoamericano, la brecha digital se incrementa en este grupo etario. En esta investigación se entrevistaron, a partir de un muestro intencionado, a 23 profesionales que trabajan con personas mayores en la comuna de Peñalolén (Santiago de Chile), con el objetivo de conocer su visión sobre cómo se vive la brecha digital en la vejez en un periodo caracterizado por el impacto de la pandemia COVID-19. Entre los resultados, las y los profesionales destacan dificultades y logros asociados a esta brecha, relativos a la (a) conectividad, vinculadas no sólo con el acceso a internet, sino también, derivadas de conflictos intergeneracionales que se generan en el ámbito privado; (b) digitalización, y acceso a servicios municipales, relativas a los esfuerzos realizados desde el gobierno local y nacional, y, (c) alfabetización digital. En las conclusiones, se tematizan las desigualdades asociadas a la brecha digital y se reflexiona sobre las limitaciones del estudio y propuestas para futuras investigaciones.

Palabras clave: brecha digital, personas mayores, vejez, TIC, tecnología

The concept of the *digital divide* refers to the structural divide that exists between people and the digital world. This digital divide is not only related to the access, use and opportunities of digital technologies by the general population and older people, but also to existing inequalities, both structural and those related to age, ethnicity, gender or kinship, to name a few (Rivoir et al., 2019).

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We know, therefore, that this gap is an intersectional, multidimensional and situated phenomenon, crossed by multiple axes of inequality (Rivoir et al., 2019). By intersectional, we mean that older people and, among them, women embody the overlapping of exclusionary factors linked to social class, gender and age, among many others (Gonzálvez and & Guizardi, 2020). Some authors point out that "the digital divide would be a new expression of inequality, in terms of social inequalities in terms of access, use and appropriation of Information and Communication Technologies (ICTs)" (Alva de Selva, 2015, p. 266), postulates that have also been extensively worked on by Ellen Helsper (2021). Moreover, when these inequalities impact on the exclusion of older people from the digital world, we speak of a *grey divide* (Rivoir et al., 2019). This concept, however, has been criticised for its tendency to homogenise the older population, disregarding, among other things, the multiple inequalities that cut across them, as well as their motivations and self-perceptions regarding their digital competences (Rivoir et al., 2019).

More and more older people are using ICTs; however, the pandemic caused by COVID-19 has highlighted the prevalence of the digital divide among older people. In Latin America, research on the evolution of older people's internet use has been corroborating that household access to ICTs is determined by the availability of infrastructure, as well as by other economic, social and demographic variables (Sunkel & Ullmann, 2019). Chile is no stranger to this phenomenon. In the country, 68.5% of people aged 60 and over do not use the Internet, in contrast to 31.5% who do (Martínez, Mata & Vega, 2020), figures that have been affected by COVID-19.

Due to the above, an increasing number of studies in the region and in the country are looking at the relationship between the digital divide and older people (Revoir et al., 2019; Sunkel & Ullmann, 2019). Some of them show interest in analysing: (a) the use of ICTs according to different variables, such as gender, ethnicity, educational level and rural/urban residence, among many others (Rondán-Cataluña et al., 2020; Sunkel and & Ullmann, 2019); (b) the discriminatory behaviour of these variables in the use of social networks (Rondán-Cataluña et al., 2020); (c) the increase in the intention to use ICTs associated with greater perceived usefulness, ease of use, facilitating conditions, intention to use and social influence (Aguilar-Flores and & Chiang-Vega, 2020) or (d) the study of the influence of gender on the use of social networks (Rondán-Cataluña et al., 2020). Embracing this literature, our emphasis was on investigating the perception that professionals have of the digital divided experienced by older people, insofar as they assumed a major role in resolving the crises caused by the COVID-19 pandemic, becoming, together with family members, the main observers of older people's digital everyday life. Specifically, the limitations - and prohibitions - on physical mobility that were imposed in the country during the quarantine period (Department of Communications and Public Relations of the Ministry of Health, 2022; Salazar-Norambuena, 2021) showed the difficulties of older people in accessing new digital technologies, because in a very short period of time many of the services that were solved in person were digitised. By focusing on professionals who work with older people, we contribute to the literature from a perspective that has been scarcely contemplated in the studies we have recently published on the relationship between the digital divide and older people.

The objective of our work consisted of investigating the experience of older people with respect to the impact that the digital world has on their lives, from the perspective of the professionals who work with them in municipal services. All of this was framed within a feminist ethnographic perspective on the social organisation of care and the social and gender inequalities experienced by older people in the commune of Peñalolén, in the Metropolitan Region (MR) of Chile. Specifically, we focus on the vision of people in the face-to-face world, i.e. professionals working in local government services, about what happens in the daily interactions of older people -users of municipal services- and the digital world to which they have (or do not have) access. Specifically, from an ethnographic perspective and using face-to-face and virtual methodological strategies, we conducted, between March and September 2021, 19 interviews with 23 professionals working with older people in that commune, the context in which we carried out our case study. Specifically, Peñalolén is a commune created in 1981 (during the Chilean military dictatorship), located in the eastern part of the RM, with an approximate extension of 54 km² and composed of five macro-sectors: Peñalolén Alto, La Faena, Lo Hermida, San Luis and Peñalolén Nuevo (Ilustre Municipalidad de Peñalolén, 2020)..

For the 2017 Census, Peñalolén had a total of 241,599 inhabitants, 3.39% of the population of the RM (Instituto Nacional de Estadísticas, 2018). In the last 15 years, the commune has experienced a proportional growth of elderly people aged 65 and over, corresponding to 107% (from 10,034 to 24,922 people) between 2002 and 2017 (Biblioteca del Congreso Nacional de Chile, 2017). This is reflected in the Elderly Index, which reached 50.71 in Peñalolén in 2017, compared to 20.44 in 2002 - a transformation that occurred at the national level (da Silva Villar et al., 2021).

In 2015, according to data from the National Socioeconomic Characterization Survey (Ministry of Social Development, 2018), in the commune 90% of people between 15 and 29 years old and 65% of those between 30 and 59 years old used the Internet, while only 22% of people over 60 years old used it. More recent data from 2017 (Ministry of Social Development, 2018) report that only 31.5% of older people in the commune used the Internet, even though at least half of the households had such a computer network (Emol Multimedia Team, 2020). According to the IX Survey on Internet Access and Uses (Subsecretaría de Telecomunicaciones, 2017), 54.6% of households with people aged 65 or older had access to the Internet, while 94% of households with children and/or adolescents in school had such access, which shows the existing gap. Likewise, according to data from the fifth version of the Quality of Life in Old Age Survey of the Pontificia Universidad Católica de Chile and Caja Los Andes (Herrera et al., 2020), in 2013 only 31% of older people had Internet access at home, while in 2019 the figure reached 50.6%, revealing an increase of almost 20% of older people with Internet access. We know that in Chile from 2013 to 2015 there was a large increase in the number of people with Internet access, reaching 54.5% (Cimoli & Castillo, 2016), but also that the figure in Organization for Economic Co-operation and Development (OECD) countries is close to 80%, showing a significant difference.

Theoretical Framework

Digital Divide and Inequalities

To begin with, we need to make a basic distinction. There are two worlds that may overlap and complement each other, but for analytical purposes their distinction is useful (Ortiz & Espinosa-Rada, 2023). The first is the *digital world*, which refers to everything that is essentially written in binary codes and belongs to the cloud, i.e. to digital repositories that are not stored in the same place where the person is physically accessing. We are talking about both social media (Facebook, Twitter, Instagram, among others) and the websites and/or systems of different organizations that are *online*. The second is the *real world* (or *"face-to-face"*, as we will call it from here on), which encompasses all the relationships, interactions and events that happen outside this digital world. Both worlds exist and are co-dependent (Helsper, 2017, 2021).

As has been referred to by women and dissident groups, data is not neutral, which directly impacts on what constitutes us as human beings (O'Neil, 2016; Bartoletti, 2020). What happens in the digital world does have an impact on people today. An example of this is how private data associated with pensions are treated by companies or pension managers: people are assigned to a certain retirement scheme, due to the profile they have for the software used (Bartoletti, 2020). Thus, the decisions made through these programmes directly impact, positively or negatively, on the amount of pension received and, therefore, on the daily lives of older people. This type of invasion of privacy has been going on for decades and has had a great impact on people's daily lives, especially on women, as the digital system and the designs that shape the world have always been oriented towards a specific type of audience, men (Criado Perez, 2019). And although the level of control of all programmes that occur in the digital is increasing over the years (O'Neil, 2016), the impact of the digital world on life in the face-to-face world is growing. This does not mean that technology is inherently bad, but that as this process grows, the relationship between people in the face-to-face world and what happens in the digital world matters even more (Wachter-Boettcher, 2017).

Research that focuses on what happens virtually is often characterizations of what has been called *WEIRD* (*Western, Educated, Industrialised, Rich and Democratic*) populations, i.e. those residing in countries in the global North, highly educated, industrialised, wealthy and living in democracies (Henrich et al., 2010). This means that digital is not always representative of what is happening in society (Burgess et al., 2018).

Specifically, the concept of the digital *divide* has been defined by Agudo Prado and Pascual Sevillano (2008) as "the difference between people who have access to information instruments and tools and the ability to use them and those who do not" (p. 114). This divide is not only in terms of access, which is the most studied aspect today, but also in relation to participation, interaction and knowledge of technologies (Siaspera, 2018). This has been called the second digital divide, i.e. the relationship between a certain set of skills to use these technologies and having the opportunity to learn them, something that does not happen for all people, which is due to more structural inequalities (DiMaggio & Hargittai, 2001). This last aspect is particularly interesting in the case of older people, as for many of them such technologies did not exist during their childhood and adolescence. This has meant involving these technologies in their lives without any kind of induction or digital literacy (Siaspera, 2018). Thus, the digital divide not only affects people who are now older, but also increases inequalities.

Thus, the literature has established the existence of three "orders" related to the digital divide, each representing a different inequality, but which, in turn, can be accumulated (Helsper, 2021; Siaspera, 2018). The first order refers to the availability of resources to access in practice all that the digital world provides, for example, having access to a computer connected to the Internet. In the second order, already having the material, also having the possibility of acquiring the skills to handle this computer and the advantages of the Internet, i.e. being digitally literate. And in the third order is the possibility to make use of the opportunities that digitalization brings.

This same distinction is made by van Dijk (2017), who problematizes how the process of adapting to the use of technology has four stages. Thus, people in any context go through these different stages until the fourth stage, which involves not only accessing the tools, but also actively contributing to the digital world. These stages are: (a) having the motivation to access the new technology, which is related to social, cultural, mental and psychological factors; (b) physical access and availability of the software, applications, networks, ICT and others; (c) access to the education necessary to have the digital skills to use the digital world, i.e. digital literacy; and (d) finally, actively using the opportunities provided by the technologies. This last stage is what we mentioned in the previous paragraph as the third order digital divide. The four stages have also been recognized by international organizations when working on this issue (Organization for Economic Co-Operation and Development, 2001; United Nations Development Programme, 2022). Evidence has been found that other aspects also influence whether people can counteract these digital divides, such as people's self-perception of whether or not they know about the topic or the particular context in which the person lives (Benítez Larghi & Guzzo, 2021; Helsper, 2017).

Older People and Digital

Historically, a person's age - social, chronological, functional and subjective - has been used as a standard of what corresponds to their years, which has a direct impact on their life histories (Lampland & Star, 2009; Osorio 2006a, 2006b). Digital technologies have been changing our social relations, for example, by removing geographical restrictions for creating interactions, generating positive expectations of greater participation and integration (Machielse & Hortulanus, 2014). Certain stereotypes regarding the (in)abilities that older people would have when making use of ICTs have also had an impact. In addition, structural conditions - the contextual situation of each person and the different axes of inequality that run through their lives: social class, ethnicity, gender, kinship, among others - can increase the digital divide and the access and use of these media.

A significant proportion of the older population does not use the Internet, the reasons for which are linked to: (a) lack of access, tools or knowledge; (b) associated costs; (c) lack of interest; (d) lack of motivation; (e) feeling too old; (f) fear of technology; (g) feelings of insecurity; and (h) disability (Morris, 2007). There is a discourse of "ageism" that makes older people feel less inclined to access and learn about technologies (McDonough, 2016).

This concept, *viejismo,* refers to a particular theoretical framework:

> Robert Butler (1969) coined this term to refer to the process of systematic age discrimination. For our region, the correct translation is 'viejismo' (Salvarezza, 2002), which refers to that complex behaviour that consciously or unconsciously devalues the PM [older people]. This type of discrimination is widespread in all populations (Bozanic Leal & Ortiz Ruiz, 2021, p. 186).

In contrast, older people who use these media (e.g. tablets) have been found to increase their knowledge, interact more with their family members and create a greater connection with society at large (Delello & McWhorter, 2017). With proper training, many older people could benefit from being part of this digital world, both in everyday bureaucratic tasks and in extending their participation in recreational activities (Jæger, 2004). Indeed, there is a virtuous interconnection between the use of technologies and the quality of life of older people (Abad Alcalá, 2014).

The feeling of being "left behind" by the speed of technology has also been reported by older people, making it difficult for them to connect (Wu et al., 2015). Other studies have shown that this second and third order digital divide is not only related to age, but also to level of education, income, generation (Fang et al., 2019), ability to perform in the digital world (June, 2020) and country of residence (Lapa & Cardoso, 2013; Mubarak & Nycyk, 2017). In this regard, three types of users have been identified among older people: those who seek information, those who want to create/maintain social relationships, and also those who do so for

pragmatic reasons, such as commerce (Hwang & Nam, 2017). Also, family relationships can be dramatically diminished and/or impaired for older people if their primary means of communication are technologies rather than close contact (Lim & Tan, 2003). For older people who have learned and use technology, it begins to become a central part of their lives (Loges & Jung, 2001), a dynamic that was exacerbated by the COVID-19 pandemic (Wang et al., 2021).

Older People, Care and New Technologies

The contextualized experience of the pandemic has revealed multiple crises (health, economics and care), which have been embodied differently in people. In this regard, the elderly have been one of the most affected age groups (Fuentes-García & Osorio-Parraguez, 2020; Pérez Orozco, 2014), showing, even more so, if possible, a care crisis associated with the destabilization process of a model of distribution of responsibilities, related to the social reproduction of life, sustained mainly by gender inequalities (Pérez Orozco, 2006).

The use of new technologies to provide solutions to care needs is currently being discussed in various parts of the world, considering their benefits and limitations, as sources of reinforcement of disciplinary mechanisms and inequalities (Hansen et al., 2022). Furthermore, the development of medicine has strongly visible certain discourses against ageing, in which technology emerges as a solution to the difficulties associated with the ageing process, which has been detrimental by promoting negative prejudices about this stage (Grenier, 2012). Technological solutions to care involve being contextualized as processes and should therefore be framed as part of a policy problem that goes beyond a purely technological challenge (Kovalainen, 2022). Moreover, access to technology should not stop there; it is also associated with training in its use, especially for older people with disabilities, who could eventually be the main beneficiaries (Leahy, 2021). As Moser and Thygesen (2015) identify, the use of technologies to improve the quality of life of older people in health-related aspects has great potential and is a discussion that is currently taking place.

Design and Method

Our research investigated the relationships that are woven between older people and the professionals who deal with old age in the commune of Peñalolén. Specifically, we were interested in learning about the experiences of older people with respect to the impact that the digital world has had on their lives, from the perspective of the professionals who work with them in municipal services, in a period of time in which the dynamics of life and work were affected by the pandemic.

This work was carried out within the framework of a three-year ethnographic research project (2020-2023), the general objective of which was to analyze the practices of caring and being cared for that affect the population in the process of ageing in the commune of Peñalolén. Thus, the project sought to contribute to the understanding of the care relationships between and towards the elderly by the state, the market, communities and families expressed in this territory.

The feminist ethnographic perspective (del Valle, 2010) from the qualitative anthropological approach focused on people's experience and discourses (Taylor & Bogdan, 1975/1984; Valles, 1999) was our methodological framework. Specifically, ethnography was deployed in the different macro-sectors of the commune in which the elderly live, applying the techniques of participant observation in their places of sociability, as well as in-depth interviews with the elderly and semi-structured interviews with the professionals who work with them. We focus on the latter in this article.

Participants

We constructed the purposive sample by searching for the professionals who work in the programmes and services aimed at the elderly -exclusively for this group of the population or for the population in general- in the commune of Peñalolén. The official website of the commune of Peñalolén mentions the organization chart of the people in charge of these programmes, information that allowed us to get in touch with them. In addition, this information was confirmed by the same people working there. We achieved a sample size of 23 staff members.

Between April and June 2020, we conducted an exploration of the care network (public and private) for the older population in Peñalolén, identifying the services aimed at older people (da Silva Villar et al., 2021). In order to complement the information, between March and July 2021, we conducted initial interviews with

managers and staff. We anonymized everyone, using pseudonyms to protect their identity. The distribution of participants is shown in Table 1.

Table 1
Participants

N°	Pseudonym	Age	Training area	Cargo	Institution	Type of interview and date
1	Álvaro	36	Health Sciences	Position of responsibility Family Health Centre 1	Municipal Corporation 1	Individual attendance (01.03.2021)
2	Beatriz	30	Health Sciences	Programme Co-manager Health Area/Family Health Centre 1	Municipal Corporation 1	Individual attendance (01.03.2021)
3	Maria	26	Health Sciences	Programme Co-manager Health Area/Family Health Centre 1	Municipal Corporation 1	Individual attendance (01.03.2021)
4	Carlos	38	Social, Political and Communication Sciences	Position of responsibility Communication Area	Municipal Corporation 1	Virtual individual (01.07.2021)
5	Ana	59	Social, Political and Communication Sciences	Position of responsibility Health Area	Municipal Corporation 1	Individual attendance (13.08.2021)
6	Oscar	54	Social, Political and Communication Sciences	Position of responsibility Health and Education Area	Municipal Corporation 1	Individual attendance (13.08.2021)
7	Laura	45	Psychology	Responsible Elderly Care Programme	Private Foundation (non-profit)	Virtual individual (16.08.2021)
8	Peter	49	Health Sciences	Position of responsibility Family Health Centre 2	Municipal Corporation 1	Group attendance (16.08.2021)
9	Carolina	42	Health Sciences	Director Health Service/Family Health Centre 2	Municipal Corporation 1	Group attendance (16.08.2021)
10	Lara	42	Economic and Administrative Sciences	Political office	Municipality	Individual attendance (16.08.2021)
11	Angela	33	Social, Political and Communication Sciences	Coordinator Elderly Care Programme	Municipality	Virtual group (19.08.2021)
12	Cristina	32	Health Sciences	Member of the Elderly Care Programme team	Municipality	Virtual group (19.08.2021)

(continued)

Table 1 (Conclusion)
Participants

N°	Pseudonym	Age	Training area	Cargo	Institution	Type of interview and date
13	Yolanda	28	Social, Political and Communication Sciences	Member of the Elderly Care Programme team	Municipality	Virtual group (19.08.2021)
14	Francisca	48	Social, Political and Communication Sciences	Director Municipal Service	Municipality	Virtual individual (20.08.2021)
15	Carmen	33	Health Sciences	Position of responsibility Family Health Centre 3	Municipal Corporation 1	Virtual individual 20.08.2021)
16	Claudio	32	Psychology	Manager Elderly Care Programme	Municipality	Individual attendance (23.08.2021)
17	Patricia	59	Social, Political and Communication Sciences	Coordinator Elderly Care Unit	Municipality	Individual attendance (23.08.2021)
18	Angel	37	Arts	Coordinator Elderly Care Programme	Municipal Corporation 2	Virtual individual (24.08.2021)
19	Cayetano	27	Social, Political and Communication Sciences	Member of the Elderly Care Service team	Municipality	Virtual individual (26.08.2021)
20	Gael	29	Health Sciences	Workshops Coordinator Elderly Care Unit	Municipality	Individual attendance (27.08.2021)
21	Gloria	46	Health Sciences	Position of responsibility Family Health Centre 4	Municipal Corporation 1	Virtual individual (31.08.2021)
22	Camila	33	Health Sciences	Position of responsibility Family Health Centre 6	Municipality	Virtual individual (02.09.2021)
23	Amaro	37	Health Sciences	Position of responsibility Family Health Centre 5	Municipal Corporation 1	Virtual individual (07.09.2021)

* The Chilean National Accreditation Commission (CNA), in charge of the accreditation processes of undergraduate and postgraduate programmes, groups each programme into different areas, including "Arts", "Health Sciences", "Economic and Administrative Sciences", "Social, Political and Communication Sciences" and "Psychology" (CNA, 2023). For the purpose of this research, we use the definitions of the CNA areas.

Instruments

Interview

We conducted a semi-structured interview with each of the 23 participants. The questions asked were related to: (a) the profile of the elderly users of the services and their carers; (b) the work they carry out in the commune of Peñalolén with elderly people and their carers (what is their day-to-day life like, what challenges they face, the achievements made, the difficulties faced during the pandemic) and, (c) the relationship they maintain as professionals with their bosses, and with the institution in which they work.

Field diary

The field diaries consisted of collecting information about the fieldwork carried out during the months in which the interviews were conducted. There, the researcher in charge reflected her impressions regarding the access to the interviewees, how the professionals perceived the questions asked, and how she felt during the interviews. When the interviews were face-to-face, the field diaries also recorded information about the work spaces, as well as the interactions of the professionals with the older people.

Procedure

Between August 2020 and September 2021, we conducted 19 interviews (9 face-to-face and 10 virtual) with 23 staff members: 16 were individual and three were group interviews, with an average duration of 60 minutes. Most of the interviews, both virtual and face-to-face, were conducted at (or from) the workplace, except for one of the virtual interviews in which the interviewee connected via the zoom platform from home. All interviews were conducted by Herminia Gonzálvez Torralbo, anthropologist and researcher responsible for the project. Each participant was informed of the voluntary nature of their participation and their right to anonymity. Each participant signed an informed consent form, previously approved by the Ethics Committee of the Universidad Central de Chile.

Information Analysis

The interviews were recorded, transcribed and subjected to discourse analysis (van Dijk, 1999, 2016) using MaxQDA 2001 software (VERBI Software, 2001). We created an analytical matrix consisting of five macro-categories: (a) profile of older people/service users, (b) services for older people/users, (c) trajectories and jobs of professionals, (d) impact of the pandemic and (e) digital divide. The coding of the interviews was done inductively. It is worth mentioning that the macro-categories emerge in the light of a process that is not linear, but rather an iterative work between the conceptualizations and the reality analyzed. Therefore, they are interdependent on each other. We carry out the analysis in relation to the theoretical axes we have mentioned. Throughout this process, we met regularly as a team to share our impressions and make timely changes in the coding, involving ourselves in the process of analysis. Specifically, in this text we focus on the macro-category "digital divide", itself composed of six categories. Our central analytical axes around which they were grouped were: (a) connectivity, (b) digitization and access to municipal services, and (c) digital literacy. We also analyzed the field diaries in the same way as the interviews were analyzed.

Results

During the health crisis caused by the COVID-19 pandemic, the different uses given to ICTs (we refer to their use, knowledge of them and the difficulties implicit in their use) and the Internet made it possible to continue certain aspects of daily life by maintaining communication with family, work and community networks. All of this took place in a context in which, as we have already mentioned, restrictions on mobility meant, in many cases, the inevitable adaptation to the virtual context. This meant that a large number of older people were cut off from communication during the first months of the pandemic, exponentially widening the digital divide. During this period, the professionals, from their fields of action in health centres and community social services, identified difficulties and challenges associated with connectivity, digitalization and access to municipal services and digital literacy. We will go into these in more detail below.

Connectivity

Connectivity - referring to the ability to connect and link through digital networks - became a key element in maintaining communication between people during the pandemic. In this regard, Francisca, Claudio and Laura point out, for example, how the use of platforms (especially WhatsApp and Zoom) allowed for continuity in communication with users of municipal services, showing not only the *difficulties*, but also the *strategies* that older people and their close networks adopted to overcome the limitations in communication resulting from the pandemic context. But they also show the other side of the same coin, the case of those older people who were unable to maintain connectivity or were only able to do so thanks to the help of a family member.

Specifically, Claudio explains that a large number of people did not have (and do not have) access to an *internet connection* or a mobile device, which made it impossible to use social networks, impacting on access to information provided by the various services and programmes of the Municipality of Peñalolén, which, during the pandemic, were the only means through which they were able to reach out to the community:

> Our biggest issue is with communications, because people have been totally cut off since the terrain stopped being physical because of the pandemic. People didn't find out about things anymore. I mean, no more, I mean, the bulk of the people who don't connect to the internet, who don't have social networks, don't have a way to find out (Claudio, personal communication, Municipality, 23 August 2021).

This difficulty for older people in accessing information on virtual social networks was also pointed out by Laura, who points out that the limitations in accessing an Internet network associated with the possibility of connection, as well as the lack of knowledge regarding its use, accentuated the exclusion of older people, who had to overcome barriers associated with the processing of different benefits granted by public services from digital platforms:

> In some cases, we had to request other support from social services, such as technical assistance. Also support on the issue of vouchers [economic benefits provided by the Chilean state to certain segments of the population], because that has been a big, big issue: all the technology that the pandemic forced us to use. For older people it was something totally discriminatory, because they didn't have that and many couldn't access it and were deprived of lots of things, because they didn't have Internet or didn't know how to use it (Laura, personal communication, Fundación Privada, 16 August 2021).

Recognizing these difficulties in terms of connectivity and the resulting consequences, Francisca tells how the Municipal Service where she works took on the problem, in conjunction with the Conecta Mayor programme, by providing mobile devices and training for older people on the use of ICTs and digital platforms:

> Francisca: And finally, we also have the programme, the Conecta Mayor, the one that Don Francisco [renowned Chilean entertainer, who headed the Telethon] did, which was not enough with the programme because we also included... we did a Youth Employment programme, we do everything with... And these kids went to the homes of those who gave them the phones, because it was training, and with that... And they went to the homes to give them the phones and to teach them; if they needed them again, they went again.
>
> Researcher: And did they also give them a phone?
>
> Francisca: Yes, the Conecta Mayor, that is, they gave them a telephone, that's Don Francisco's programme, which was like a Telethon (Francisca, personal communication, Municipal Corporation 1, 20 August 2021).

The Conecta Mayor Foundation of the Pontificia Universidad Católica de Chile is an initiative born in 2020, during the pandemic. The foundation began with the "Vamos Chilenos" campaign, a charitable initiative broadcast on ANATEL channels on 18 and 19 September, hosted by Mario Kreutzberger (Don Francisco), with the aim of raising awareness of vulnerable elderly people and raising funds to help them. With the money raised during the days the programme was broadcast, technological devices were given to facilitate the intergenerational encounter with the digital world.

Another of the difficulties associated with connectivity pointed out by the professionals is linked to the conflicts arising from the *processes of learning to use ICTs* in the family environment, which is closely linked to the possibilities of Internet connection. In this sense, Claudio mentions that, within the framework of an intergenerational dialogue in the private sphere, certain tensions arose from the support of family networks:

> The achievement is that they connect, demonstrate that they can. And it also helps others to say: "Let's see, what's going on, why can't I do it if everyone else can", which has also happened to us. Many times I've realized that learning is interfered with by emotional and bonding issues in one's own environment that don't help, that don't help to connect, but it's not that they don't help for the sake of it, but that there's a conflict behind it. And it seems, I would even dare to say, like an interest. It's like a double discourse of "Oh, and you have to connect, but then, if...". When you have to connect, it's like a problem to connect. So, it's like an ambivalent discourse, it's like "let my father, my mother, a relative connect", but then it's like "no, but...". No, no help at all. Then, after that comes the complaint: "Oh, it doesn't connect". (Claudio, personal communication, Municipality, 23 August 2021).

Camila also points out that the problem lies not only in access to the Internet for older people, but also in the support they receive from family support networks in exploring and learning to use digital platforms, stating that this is a challenge that is equally relevant for primary care services:

> Yes, the issue of communication, I think it's a challenge... A current challenge is the day centre, basically, it's about how we take this up again, because many people say to me: "Oh, sure, but people don't connect because they don't have Internet". No, the truth is that nowadays many people have access to the internet, but very few people have the time and the desire to sit down with my dad and put my computer on and say: "Dad, look, this is the kine [kinesiologist]'s class", because they get disorientated, they neglect it. So, it also means that someone has to be there, and that's what families don't have much availability, they don't have much time, so I think that's a current challenge: how to reformulate the day centre. (Camila, personal communication, Municipality, 2 September 2021).

However, as Claudio relates, the real possibilities for older people to connect, thanks to the help of others, has contributed to demystifying the prejudices associated with the digital illiteracy of this age group and, consequently, the learning abilities of older people with regard to the use of ICTs:

> There were going to be 25 clubs that were going to expand. But, well, the pandemic arrived and all that was... That project came to a standstill. It was also paralysed by prejudice, because the truth is that the Zoom activity could have been done much earlier, but there was this prejudice, that if it was going to connect... In fact, when we started, when we proposed it, they said "let's try it", like "let's try it for three months to see if it connects" and yes, we had a lot of attendance at the beginning, registration, but many people dropped out along the way, because they couldn't connect and others learned or looked for strategies. And finally, you have to know how to turn on Zoom. You still have to turn off the session, but he knows how to connect, right? At least he knows how to log on and that's... He broke the barrier. And that's what, the programme that was initially from January to April, we have reached today (Claudio, personal communication, Municipality, 23 August 2021).

Digitalization and Access to Municipal Services

Digitising public services through digital transformation is fundamental to achieve social progress and digital well-being for all citizens (Huamán & Medina, 2022)). Moreover, citizens "must have the capacity to exercise digital citizenship, based on equality and the protection of rights and freedoms, in order to generate a cultural and structural change in society" (Huamán & Medina, 2022, p. 102). Two pillars underpin the digital transformation strategy for Chile: "Chile connected without gaps and Chile digitized. These pillars in turn shape the digital ecosystem". (Órdenes et al., 2023, p. 7). From the second pillar, the digitization of the state is a priority, which implies "the design and implementation of digital plans to lower the agenda at the sectoral level and at different levels of government" (Órdenes et al., 2023, p. 9).

Related to the above, the professionals observe, from their own experiences in the daily work of the different programmes and services at local government level, how the digitization of services and digital access to them led to the exclusion of older people, exposing the existence of this digital divide. The pandemic led to the obligation to digitize the communication of various programmes, which highlighted the complexities of bringing information to older people through digital platforms, but also the impossibility of fully transferring communication to the virtual world. In response to this, the professionals mentioned how different support networks have been integrated into the digital learning processes of older people, especially from the community.

In this sense, Álvaro says that the decision to digitalize (or not) some of the services of the Family Health Centre associated, for example, with taking medical hours, took into consideration the difficulties of access that older people would have, due to the necessary digital literacy. From her daily experience, she states that older people's choices are linked to the face-to-face nature of the processes and, therefore, the transition to virtuality becomes challenging:

> In fact, some time ago, we and N and the boss were looking at a topic called Hora Fácil, to see the possibility of digitalising all the attention of... of different professionals on a platform. But I think that... both culturally and... and also from the point of view of age range, obviously, there is always a limitation of saying: "hey, technologically, how do we do it? How do we do it with people over 65 who sometimes don't know how to handle technology, what happens with this. This also happened, that the strategy that I was telling you about, the face-to-face hours with the elderly, came out exclusively and we said: "no, the elderly are not going to ask for an appointment, they are going to go to the clinic". (Álvaro, personal communication, Municipal Corporation 1, 1 March 2021).

But also, professionals such as Amaro, from Family Health Centre 5, and Laura identified other difficulties associated with misinformation about existing services, which not only have to do with access to ICTs in the pandemic context, but also because: (a) information is not available online or (b) information is not aggregated in an inclusive format for older people:

> Yes, it is true, now a lot of the information that patients handle is because they consult here, in person. It is not available online or otherwise (Amaro, personal communication, Municipal Corporation 1, 7 September 2021).

> The digital divide was very noticeable. So, sometimes my registration was only to ask a social worker to call the older user and explain how to access the vouchers, because even that information was not very clear to them (Laura, personal communication, Fundación Privada, 16 August 2021).

However, in the face of the difficulties reported, we also identified strategies that contributed to older people being able to access the programmes and workshops that continued to operate during the months of remote confinement. Carmen, from Family Health Centre 3, details the achievements of the professionals in relation to the continuity of communication and information flows with older people:

> I think that one of our achievements, to some extent, is to have been able to maintain certain benefits, I don't know, of these, for example, programmes for the self-supporting elderly, which were purely face-to-face, and to be able, to some extent, to reinvent ourselves for this pandemic. The kids, I mean, I put my backpack on [I get involved with them in whatever is necessary] a seven for them, like this, because going out, going from house to house, asking them how they were doing... (Carmen, personal communication, Municipal Corporation 1, 20 August 2021).

For his part, Ángel tells how the radio drama workshop for older people was developed - carried out remotely during January 2021 - and how they overcame the difficulties linked to the use of ICTs and communication platforms (Zoom):

> When we started in January, they were very excited because they literally hadn't interacted with other people for a year. So, it was also a very big challenge to control the expectation because the digital divide was very high, so there were some who got frustrated, who didn't understand the application, who... or the other one who knew a little bit more about the application, who got frustrated because the other one didn't know. So, when they were in rehearsal, they kept the microphones open and fought among themselves, then they made up and after that, everyone was happy. So, they were post-pandemic meeting spaces. Last year it was harder than now, so the fact that we were able to hold the workshop, in this case virtually, was a great escape and even more so to be able to get together, even for a morning or an afternoon, to record. (Ángel, personal communication, Municipal Corporation 2, 24 August 2021).

Digital Literacy

Digital literacy is a key instrument for breaking the digital divide among older people, as it enables older people to optimise the use of ICTs to improve their personal and social situation (Abad Alcalá, 2016). Aiming at the necessary digital literacy of this population group, Lara, from his political position in the municipality, highlights the complexity involved in giving continuity to programmes and services virtually, mainly due to the existence of a significant number of older people who are not familiar with ICTs. Although the institution convened several workshops in remote mode, participation was hampered:

> We see that, of course, the pandemic is coming, everyone makes a very conscious decision that they have to take care of themselves, that they can't go out, because this obviously affects them, something unexpected, it changes their daily life a little bit and, therefore, the clubs, as far as possible, also try to coordinate through WhatsApp, WhatsApp groups; the ones they have. Not all of them count, because obviously older adults are not so familiar with technologies, ICTs. (Lara, personal communication, Municipality, 16 August 2021).

Carmen, from Family Health Centre 3, identifies the achievements in the digital literacy processes of older people during the pandemic, highlighting the *intergenerational dialogue* involved in the learning processes:

> [...] and that the granddaughters, who were no longer going to school, who were there, could help them with the mobile phone. And that, "look, you know what? we're going to do the Zoom meetings, we're going to get together every day the same way". And the granddaughter is in charge of connecting it and we're going to do the exercises the same way. And, to maintain and educate as well, many were taught how to use a mobile phone, which I did have to make a video call and I had no idea how to use it. And, that they taught them all, one by one, a little bit of technological education of... to keep them connected, also many times with their own family members. So... I think that was one of the achievements, a little bit, that I give... I kind of put my hat on [admire the work they do] for the team, to keep that... that challenge and never lose it, because at the beginning we were like, 'but, wow, you knew' our population, I mean, the mobile phone they use... hopefully, they don't even know their number.

> So... we are going to ask them to make a video call now". (Carmen, personal communication, Municipal Corporation 1, 20 August 2021).

Another factor that we identified as positive in relation to the digital literacy processes experienced during the social and health crisis has to do with the contribution of the Fundación Conecta Mayor, mainly in access to mobile devices and the deployment of volunteers for training in the use of ICTs. In this sense, Gael identifies the role of the foundation in the massification of the use of digital tools in the most vulnerable population of Peñalolén and the challenges associated with the digital literacy of older people:

> [...] it has just been a process of closing the campaign where we have to be constantly reviewing cases of vulnerable elderly people, so to speak, who... we have already given them the telephone device, because it was a campaign that provided telephone benefits associated with a 24-month data plan; it provided two food boxes on different dates... And that has allowed us to visualise that we have an important challenge in terms of bringing people digitally closer (Gael, personal communication, Municipality, 27 August 2021).

However, in the framework of the challenges presented in the accompaniment processes for the use of mobile devices, the need to facilitate training is mentioned. For example, Francisca recognises the importance of more training on the use of the devices, understanding that learning processes differ from person to person. In this sense, the municipal service in which she works took charge of the training that was not included in the programme, deploying a team of young people in charge of accompanying the digital literacy processes, again highlighting the importance of intergenerational dialogues in digital media learning processes:

> Yes, the Conecta Mayor, that is, they gave them a telephone, that's Don Francisco's programme, which was like a Telethon. But the programme provides them with a box of food and training, and we realised that training was not enough. So we hired young students and they would leave them the telephones, they would leave them the boxes of goods, always the same ones, and they would train them and teach them again, and if they had to go again, they would go again. So, we gave them like four or five trainings so that they would learn how to use them (...) Of course, the following week they forgot, so we had to reinforce them again (Francisca, personal communication, Municipal Corporation 1, 20 August 2021).

Conclusions

In the light of our journey, we would like to point out several conclusive elements regarding the view that professionals working in the Peñalolén commune have of the digital divide experienced by older people, which, as we have been able to verify from the accounts, has been exacerbated during the period of the pandemic.

Firstly, we highlight strategies based on efforts and commitments sustained in the close relationships between professionals and their users, which contributed to older people's access to programmes and workshops that continued to operate during the months of confinement, in remote mode. Support also emanated from the family, especially granddaughters and grandsons, who served as a bridge between older people and the digital platforms.

Secondly, we found that access to digital technologies and inclusion of the older population who are unfamiliar with ICTs and who do not have access to mobile devices and networks requires more intensive or extended training in the use of the devices, promoting digital literacy, with the understanding that learning processes differ from person to person.

Discussion

To conclude, we would first like to point out that, although in our analysis we established a characterization associated with three categories (connectivity, digitalization and access to municipal services and digital literacy), which emerged in the light of the interviews we conducted, we observed that it was not always possible to establish a strict separation between them, due to dimensions that go beyond the structural and that are not always considered in the analyses related to the digital divide. We refer to those that emanate from gender, kinship and social class inequalities and that show us that the process of ageing is heterogeneous. However, from the professionals' accounts, we have been able to identify that access to the Internet does not only depend on the real possibilities of connection associated with infrastructure. While we are not unaware that there are gaps in achieving a connected Chile, associated, among others, with income and geographical singularities such as, for example, those related to the particular characteristics of each macro-sector of the commune, in our work we found that those related to the kinship positions that older people occupy in the framework of the family dynamics that exist within households can act, in some cases,

as obstacles to connection and in others as facilitators. Thus, we can conclude that connectivity difficulties are not only related to Internet access, but also to various conflicts that are generated in the intergenerational dialogue in the private sphere of the household (Órdenes et al., 2023).

Secondly, we identified that the need to digitise community services does not only depend on efforts at the local level; it depends, above all, on national policies that provide sufficient resources, recognising the inequalities in access to resources that exist in each territory and within them. The pandemic led to an acceleration of the digitisation processes of the various services for older people, revealing the disarticulation between them and the lack of familiarisation linked to training in the use of ICTs. More precisely, we found that certain difficulties associated with digitisation and digital access to public services for older people are articulated in the light of three fundamental axes: (a) *communication* of services and benefits with users; (b) *misinformation* of users, caused by deficiencies and gaps in the communication of public services; and (c) the deficit in training in the *use of* ICTs in the older population. As a large number of older people were uninformed about the digital functioning of certain services, the digital divide widened even more, especially during the months of confinement, when the main alternative for accessing these services was through digital platforms, which made it difficult to access social benefits, workshops and programmes offered in the commune.

Limitations

Finally, we would like to mention some limitations of our study that allow us to think about future research along these lines:

1. Studying the digital divide of older people from the perspective of the professionals working with them provides valuable information, which would be further enriched by complementing it with older people's own experiences of the digital world.
2. As the literature acknowledges, the digital world presents certain barriers to entry due to multiple inequalities that hinder older people from belonging to the face-to-face world. Therefore, by problematising the digital divide, we are, at the same time, leaving out all those older people who do not use or are not familiar with technologies.
3. In our study we did not delve into the gap between those who know (and those who do not) about the functionality of digital platforms and how they use them. For example, we could investigate the type of relationships and interactions that older people engage in *online*, on the one hand, or the uses that older people make of digital platforms, including the types of websites they access, schedules and particular uses, on the other.
4. We did not get into how the digital divide is expressed considering the differences in the ageing process by macro-sector.
5. We are approaching the analysis of the digital divide in older people at a global historical moment in which the lives of all people were affected by the COVID pandemic. We therefore consider that it would be useful to analyse how this digital divide is present in older people beyond this multidimensional global crisis. We point this out because of our starting assumption that it is the pandemic crisis that has highlighted the prevalence of the digital divide among older people.

These issues could form the basis of future research.

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