Digital Transformations in Care for Older People: Critical Perspectives

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Chapter 8

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Introduction

As in other areas, care work is undergoing a process of digitalisation that is expected to resolve the shortage in workforce and to increase the cost-effectiveness of care services (Frennert and Östlund, 2018). Consequently, introducing technology to service processes, care workers use various digital tools and applications for work. These are introduced either formally by the work organisation or in a more informal, bottom-up manner by the care workers themselves.

The growing use of a variety of digital technologies in the workplace, as well as reforms that increase work flexibility and efficiency inspired by new public management (NPM), inevitably leads to changes in the practices of work, interaction, and communication with colleagues and the wider professional community. Some applications such as instant messaging (e.g. WhatsApp and Messenger) can be especially beneficial when they are used for non-clinical or non-professional purposes, such as socialising and sharing emotions (Bautista and Lin, 2017; Buschmann Iversen et al., 2013; Hirvonen et al., 2021). They also play an important role in supporting the work community both within and outside organisations and workplaces. Also, social media applications allow individuals to maintain their private and professional networks.

Digitalisation is often viewed as a means towards more efficient service delivery and improved communication in care work communities. As care work is increasingly conducted under tight temporal frames and online, it is important to assess the consequences of digital technologies against the sense of belonging in care work communities. In this light we argue that it is likely that COVID-19 will amplify the effects of digitalisation even further and that the consequences of digitalisation of work need further research.

This chapter investigates the digital technologies that care workers in long-term care for older people (LTC) in 24-hour, 7-days-a-week (24/7) service housing units use at work. In particular, we examine the extent to which everyday practices involving the use of technology in intensive service housing (ISH) units contribute to care workers' sense of belonging. The primary focus of our study

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is on how practices involving the use of digital technologies foster or prevent a sense of belonging in a care work community.

Sense of belonging and digital technologies

Belonging to an organisation entails being a member of a work community, and tight, collegial relationships are characteristic of care work communities. The Finnish eldercare system is characterised by multi-professional teams and a participatory management style as well as low hierarchies and flexible allocation of the staff as needed inside the organisation (Vehko et al., 2018). It is also common that workers share professional as well as private matters and emotions with their work community (Hirvonen et al., 2021). The organisational culture in ISH encourages employees to negotiate residents' care and to share work tasks in close collaboration with one another. Teamwork, communication, and interaction between workers are a prerequisite for successful and effective functioning of the ISH units. Support from colleagues and managers and well-functioning social relations form the basis of work well-being in care work. This may also reduce the negative influence of harsh mental and physical working conditions reported by care workers (Kröger et al., 2018; Trydegård, 2012).

Work is performed within a specific structure that is idiosyncratic to the organisation, including the temporal and spatial aspects of care work (see Chapters 6 and 7). One of the characteristics of care for older people in ISH units is that work takes place in spatially fixed locations around the clock as shift work. This affects workers' social ties in that those ties may be weakening and workers' opportunities to build a sense of belonging in their work community may erode. However, digitalisation can provide new opportunities that are not temporally or spatially limited to maintain and create a sense of belonging in communities.

The erosion of social ties has also been acknowledged at a wider societal level and in communities (Giddens, 1991; Wallace et al., 2016). According to this line of thinking, digitalisation may further enable the loosening or disruption of social relationships based on locality and in favour of personal communities and networks. Yet this is not deterministic, and individuals are not without agency. The deterministic understanding of technology as the motor of social change has also been increasingly criticised by social scientists (Wajcman, 2009). Human agency stems from both individual and external circumstances that direct personal choices and reproduce social structures (Hitlin and Elder, 2007). In the context of care work, the reproduction of social relationships and structures is performed in the daily activities of the work and as part of the work community, both contributing to a sense of belonging.

Sense of belonging: concept and the influence of digitalisation

Sense of belonging has been widely studied across social sciences that introduce the concept as an essential element of individual well-being, noted, for example,

in the influential Maslow's hierarchy of needs (1943) (McBeath et al., 2018). It also intersects with concepts such as social cohesion (Wallace et al., 2016) and belonging in a work community (Cheung et al., 2013). However, studies focusing on sense of belonging and other related fields of communality in the context of digital technologies and work practices are still scarce.

Sense of belonging is a subjective and emotional feeling of belonging to a community or a social milieu, space, or place involving 'a feeling of being at home' (Youkhana, 2015, p. 12; Marlowe et al., 2017, p. 5), 'feeling at ease and being familiar with unwritten rules' (May, 2011), or a sense of being part of the system (Lampinen et al., 2018). Some scholars emphasise that it is the feeling of being valued and needed or being important with respect to other people, groups, or environments that creates the sense of belonging (Hagerty et al., 1992, 1996; Lampinen et al., 2018). Other studies, such as Antonsich (2010; cited in Youkhana, 2015), emphasise that it is part of the identity work of the individuals to locate themselves in relation to their wider surroundings.

Previous research on work organisations associates sense of belonging with sense of community in the workplace or a psychological sense of community as related concepts (Klein and D'Aunno, 1986). According to Lampinen and colleagues (2018, p. 469), sense of belonging in the workplace occurs 'when members of the workplace community identify with one another and have feelings, beliefs and expectations that they fit in the organisation and have a place there'. The sense of community (Klein and D'Aunno, 1986; Burrounghs and Eby, 1998; Lampinen et al., 2018) in turn entails a feeling of participation, identification with and membership of a work community, and includes various dimensions, such as the individual's feeling of belonging, according to Burroughs and Eby (1998).

The feeling of belonging to a group in an organisation links with particular organisational factors, and it has practical consequences. According to Lampinen et al. (2018), the factors that foster a sense of belonging include open interaction, effective conversation culture, support and encouragement, common values, and a shared vision of the work and its objectives. Correspondingly, the factors that prevent a shared sense of belonging are negative work atmosphere, lack of common time, and problems related to leadership and management.

The positive consequences of a sense of belonging are many. These include work engagement, job satisfaction, and efficiency of teamwork (Lampinen et al., 2018; Lampinen 2018), all of which are critical to care work. Organisations have the means to influence the creation of a sense of belonging. Creating a sense of community can be achieved in care work units if the staff can share goals and develop positive interpersonal relationships together as a team (Lampinen et al., 2018; McKenna & Newton, 2008). This is vital in care work, where the employees' ability to produce high-quality services relies heavily on workers. Although spatial distance, such as around the clock shifts or various locations of work, may weaken the feeling of belonging, digital communication may help in reasserting it (Lampinen et al., 2018).

Digitalisation alters the sense of belonging in a work community by fostering new possibilities for participation, expression of values and beliefs, and sharing information, ideas, opinions, and feelings, such as affection between colleagues (Lampinen et al., 2018). Communication and a 'smooth' flow of information are important for creating a feeling of being at ease and belonging to the group. However, not all communication and interaction are necessarily positive – negative emotions and disputes may also take place within and outside work communities. The possibility of staying connected and online, and to be engaged in various life spheres simultaneously, is enabled by digital technology (Ollier-Malaterre et al., 2019).

The spatially and temporally dispersed nature of care work guides the circumstances for building a sense of belonging. These conditions may weaken social ties and the idea of having a work community. Against this background, the focus of this study is crucial to the understanding of the multifaceted effects of digitalisation to care work. While the study by Lampinen et al. (2018) recognised that work practices involving digital devices and applications have the potential to contribute to maintaining and creating a sense of belonging in a community across the temporal and spatial constraints of work, their potential needs to be assessed in more detail. Our study adds to this previous research, exploring the practices at work that contribute to a sense of belonging in the context of digitalisation. We argue that studies on work practices add to the understanding of the ways workers' attach meaning to and feel a sense of belonging in a work community. In this study, we explore the ways in which digital work practices both foster and prevent the sense of belonging to a work community.

Work practices in the technological conversion

Adoption of digital technologies shapes work practices. In organisational studies, practice research highlights the ways people's behaviour is socially embedded in societal, cultural, and institutional norms and relations of power. These studies focus on actions, language, behaviour, and routines that form the organising of work, learning, and knowledge in organisations (Corradi, Gherardi and Verzelloni, 2010).

Following Nicolini (2016, p. 892), we argue that practical regimes constitute the horizon within which un-reflexive reactions, actions, utterances, linguistic acts, behaviours, and routine convey meaning. According to Nicolini, practice consists of all these elements but cannot be reduced to any of them (ibid.). These elements may foster or erode the sense of belonging. Practice is not created in isolation from the wider community and may also be associated with normative assumptions and, as such involves a background knowledge, know-how, and understanding. According to Schatzki (1996, p. 89), practices are developed over time by groups of practitioners and are therefore performed and reproduced as an evolving process and as a part of the activities at work. As an integrated practice begins to diffuse, institutions emerge to make it more widely known, to teach

novices, to improve performance, and to promote and legitimate it and its virtues. In modern Western societies, this institutionalisation is pronounced and occurs through formal vehicles such as practitioner organisations and training schools, but also through informal means such as personal conversation. Therefore, each work episode (re)produces the practices at work and, as such has the potential to foster or erode the sense of belonging.

Along with the practice approach, technology is never only a neutral object or device: the outcome and significance of technology depend on the context, including the users and the specific organisational characteristics (Christensen, 2018). In this study, our point of departure is the understanding that technologies affect not only the communication practices of the workplace but also the work processes and practices through which workers maintain a sense of belonging. Feeling at ease and belonging to a work community is established in the daily routines of work, such as reporting, residents' care, and leisure activities. These repeated activities require skills and knowledge that are internalised. As care work is increasingly mediated by digital technologies, their use has become part of the everyday practice of care work (Lundberg, 2019, p. 57). To understand the context of work, it is necessary to recognise certain characteristics of the setting of this study, which is the long-term care for older people (LTC). Next is a brief account of the characteristics of LTC in Finland.

Digitalisation of long-term care for older people in Finland

In Finland, long-term care for older people (LTC) consists of nursing home care, LTC wards in hospitals, and assisted living units with 24-hour services. Our study on care workers' sense of belonging focuses on work communities in the assisted living units with 24-hour services, which are also known as intensive service housing (ISH). ISH units consist of small-scale group homes providing round-the-clock assistance and care for the residents. In recent decades, ISH units have become the primary type of sheltered housing in Finland for older people. In 2016, 7.3% of all those aged 75 or over lived in ISH units (THL, 2018). The residents in ISH units typically have extensive care needs and suffer from some degree of memory loss or other conditions characteristic of old age. Round-the-clock care is provided via three eight-hour shifts, with a recommended worker/client ratio of 0.5. However, the actual ratio is often less than this (Kröger et al., 2018). The work in ISH units revolves around the residents' daily routines, consisting of meals, personal hygiene, recreational activities, and healthcare services. Each nurse is typically responsible for attending to those residents whose care has been specifically designated to them for a longer period of time. This is to create stability in the residents' life and to help nurses familiarise themselves with the residents (see Hämäläinen and Hirvonen, 2020).

The work conditions in LTC services have raised heated discussions in Finland over the past few decades. During this time, New Public Management (NPM) inspired reforms have been implemented to increase work flexibility and

efficiency in the publicly funded, universal service system that is available for all residents. As a consequence, LTC work has become increasingly standardised, which has contributed to time pressure and exhaustion among care workers and undermines their professional discretion and autonomy (Trydegård, 2012; Kröger et al., 2018; Pekkarinen and Pekka, 2016). These factors, along with a relatively low level of remuneration, are presented as a partial explanation for a high turnover rate and prevalent intentions to quit one's job among the LTC workforce (Kröger et al., 2018).

In general terms, the Finnish system of care for old people is characterised by management of multi-professional teams and a participatory management style, low hierarchies, and a flexible allocation of the staff as needed (Vehko et al., 2018). In other words, the organisational culture in ISH units encourages employees to negotiate residents' care and to share work tasks in close communication with one another regardless of their professional background. Since the ISH units operate round the clock, the work also requires remote involvement from unit managers and capability from the staff to self-monitor their own work. Good communication and interaction skills among the staff are therefore a prerequisite for successful and effective management and operation of the ISH units. Communication between colleagues in ISH units typically takes place through telephone calls, emails, face-to-face meetings, and increasingly through written entries in electronic patient records (Hämäläinen and Hirvonen, 2020). Instant messaging has also been taken up, particularly as a bottom-up mode of communication initiated by care workers themselves rather than the organisation.

Harsh working conditions such as shift work, stress and time pressure, as well as low remuneration explain the expectations presented at policy level (STM, 2017; HE, 4/2020) and placed on digital technologies in assisting in provision of care services. Although digitalisation has been rapid in care services in general, digitalisation of care services for older people has taken place relatively slowly (Kuusisto-Niemi, 2018). However, in the care work setting, the use of welfare technology has a short lifespan, and workplaces' lack of financial resources inhibit the adoption of new technology (Frennert and Östlund, 2018). Workers may also be reluctant to adopt technology. Care workers in the services for older people often claim that technology competes for their attention with their actual care tasks (Saborowski and Kollak, 2015). According to our interview data, however, despite these problems, digital technologies have gradually found their way to long-term care work also in the ISH environment.

In the services for older people, technological solutions are adopted to manage the workload in LTC and to communicate efficiently. Based on a recent survey study (Oinas et al., 2021), the digital solutions currently in use by care workers engaged with older people can be roughly classified under the following categories: (i) personal or sensor-based safety alarm technologies for residents (e.g. alarm bracelets and sensory floors), (ii) robotics solutions (e.g. personal lifts, walkers), (iii) gaming and fitness technologies and apps (e.g. karaoke, tablet computers), (iv) office and health informatics technology (e.g.

email, Internet, and electronic health records), and (v) mobile communication devices and applications (e.g. smartphones, instant messaging). The first three categories represent technology the use of which involves both the residents and the staff in the ISH units, while the last two represent technologies that are directed to the staff as a mode of communication and information management in the ISH unit, as well as between the unit and a broader group of stakeholders. While the categorisation might not be exhaustive, it is a good overview of how the current state-of-the-art digital technologies are used by care workers. Additionally, other digital technologies may exist, including those used by older people themselves.

To conclude, technology is increasingly used for providing care in ISH units and is an integral part of work. Therefore, it is part of the work processes and community as well. Sometimes technology may appear as the silent and well-functioning partner that is hardly noticeable. However, technology may also be regarded as troublesome and problematic if it does not function in the manner that is required or expected. Regardless of its functions, technology is part of the work practices and plays a role in the (re)production of those practices. Next, we concentrate on the practices of belonging empirically and how they are enacted in a digitalised work environment.

Methodology

Qualitative, semistructured interviews (n = 25) were collected for the study in 2018 from residential LTC workers and nurses employed in the ISH units of two Finnish cities. The units in our study were of an average size of 12–18 residents and a total of 15–20 nurses per unit, with 2–4 nurses each working an eight-hour shift. The work revolves around the residents' daily routines, consisting of meals, personal hygiene, recreational activities, and healthcare services.

The interviewees represented a typical sample of the workforce in residential care: most were either practical (n = 14) or registered nurses (n = 8), some of whom had a managerial role in their unit, while the other interviewees were activity instructors and occupational therapists (n = 3). All groups were nevertheless involved in the hands-on care and shared many of the same tasks. Gender distribution among the interviewees was also typical of the health and social care sector: 23 were women and only 2 were men. The age of the care workers participating in the study ranged from 26 to 57 years.

Interview themes concerned different elements of work, such as the use of information and communication technologies (ICT); the use of smartphones at work; the pace of technology-related changes; the benefits and risks of technology for workers and residents; the impact of technology on residents' needs and how ICT may affect employees' work–life balance. The average duration of an interview was one and a half hours.

In the first phase of the thematic analysis (Braun and Clarke, 2006), we organised the interview data that depicted digital work practices. In the second phase,

we assessed these practices in the light of sense of belonging, and in the third phase, the manner in which the practices related to a sense of belonging among care workers. The analysis was organised into two main categories based on the work practice and how it related to a sense of belonging, that is digital work practices that fostered and those that prevented the sense of belonging among care workers.

Digital practices at work both foster and prevent sense of belonging

Digital technologies are widely used in the ISH units where they serve a variety of functions. In this section, we explore care work practices involving the use of digital technologies and their ability to foster and prevent the sense of belonging among LTC workers. The results are presented under the following themes: first, a discussion of those digital work practices that fostered the sense of belonging among care workers, and second, a discussion of those practices that prevented or disturbed the sense of belonging.

Informal and normative practices fostering a sense of belonging

An important function of the digital technologies is related to enhancing communication and interaction. These include, for example, mobile communication devices and applications, as well as technology used to both interact with older people and provide high-quality care for them. Communication and interaction with peers in particular foster the linkages with colleagues and create a shared sense of a community. In the interviews, care workers extensively explained their use of instant messaging (IM), which is presented in detail below. IM was used to stay in touch both at work and outside it, which provides insight into the many uses of digital technologies that support creating a sense of belonging.

In the context of residential care, IM facilitates communication among a potentially large number of staff working in a service environment characterised by staff shortages and a high incidence of mental and physical strain among the workforce (Kröger et al., 2018; Trydegård, 2012). This encourages workers to find ways to save time and to enhance the work process. In this light, it is understandable that LTC workers have resorted to IM as an offset for a bottom-up communication practice to support both the professional goal of patient-centred care and the organisational goal of efficient management of work and time. Moreover, the practice of instant messaging appeared to contribute to a sense of belonging through interaction and communication with peers. Most of the work communities in our study had created a WhatsApp group that had been introduced by the workers themselves. These informal or semi-formal groups were used as a means to share information, including sharing private matters with colleagues. In summary, IM creates a channel of communication on matters relating to work and beyond, as the following excerpt demonstrates:

Q: Do you have these IM groups on your personal mobile, too?
A: Yes. And we have another with just the staff in my own unit, too. The other day, for instance, someone sent a message asking if the night duty nurse could go remove a nitro bandage from one of the residents.
Q: Do you often get messages on it [IM group] via your private phone?
A: No, I mean, maybe once a week. And we might send jokes and stuff there, too. It's not always just work-related, because it's our unit's private group that doesn't include the manager or anyone else. So, you could ask for example if the new shifts are up yet, and if someone at work could take a photo and post it up there, or something like that.

As the quotation above depicts, information sharing supports work process flow. IM also maintains ongoing, spatially and temporally unrestricted communication in the work community. Therefore, it has the potential of 'bridging' care workers together and building a sense of belonging regardless of temporal or spatial distance. Many of the interviewees added that 'we are friends also', which can explain the wide distribution of IM as a bottom-up communication device during and especially off working hours.

IM technology differs in the array of digital technologies among care workers: it was typically adopted as a bottom-up practice and voluntarily used through care workers' own mobile phones. While information sharing supplements emotional sharing and thus further builds a sense of belonging, it also promotes crossing the boundaries between work and non-work. Some nurses actively resisted joining their unit's instant messaging groups because of the constant flow of information and the burden brought by it: 'Yes, there is that [WhatsApp-group]. I did not want to participate. I felt it was distressing'. However, some of the care workers claimed that while IM was used on a voluntary basis, it had unexpectedly become the primary means to 'connect' with one's colleagues when working on different shifts. Thus, such practices can also lead to inequalities in the care workers' sense of belonging if collegial interaction increasingly takes place online.

Digital work practices foster a sense of belonging by bringing people together and by allowing interaction and communication, but they also create needs, such as the necessity of working together. Adoption of new technology was one critical point. Our informants described how their limited ability to use new technologies, whether leisure technology or mandatory programmes, was often the result of a combination of factors, including personal lack of motivation and shortage of time, guidelines, and support in the workplace (see also Chapters 9 and 10). Here, younger workers were often better equipped to take on new devices and programmes. As a result, they often ended up providing peer support for their older colleagues:

Q: Are there great differences related to workers' age?
A: Yes, like they (older workers) don't even know how to print, or anything … They always ask me and I have to stop my own work to help them. But I'm

> happy to do so, I'm glad I can help, and then they go 'wow, how can you know so much'. But yeah, I always have to stop for this.

Although professional guidance and growth typically took place by learning from senior colleagues, in the context of technology this pedagogical relationship can also be reversed in terms of younger colleagues teaching their fellow workers to use digital devices and applications (Ifenthalerne, 2018; Hänninen, Taipale and Luostari, 2020). While providing help required extra effort and time away from the actual work tasks of the interviewees, digital support was also a way to enhance the younger workers' sense of belonging in particular.

As digital work practices are created in the work community, they can also include normative dimensions that differ from the informal aspects of digital care work discussed above. Our analysis suggests that the care workers shared a vision of normative work practices and that they recognised these practices as a source of a sense of community. Consequently, the sense of community was identified as an important component of these work practices, explaining how the sense of belonging was enacted in the digitalised work environment.

Practices are developed over time by groups of practitioners (Schatzki, 1996), and technology-mediated routines are formed by the work community. An example of this is the practices related to maintaining electronic health records. One of the daily practices in ISH units is the mandatory reporting, that is the documenting of individual care descriptions (ICDs) including residents' medical and social care, in a medical database using the unit's computer or, increasingly, mobile devices. Reporting is not only an expression of workers' accountability but also a way to share information.

The results of our analysis indicate that reporting practices bring up the normative aspects of ICD reporting as well as mutual goals, common rules, and a shared vision of work, thereby contributing to workers' sense of belonging. The ICD entries are a widely used practice (around 80–90% of nurses use them in Finland; Karhinen et al., 2019) but also a widely contested practice because they can only provide a limited understanding of what is going on in the ISH unit, as face-to-face meetings often provide more detailed knowledge of the resident's mood and the mundane events that remain outside of mandatory reports (Hämäläinen and Hirvonen, 2020). In the interviews it was mentioned that face-to-face reporting (usually during shift rotation) has shifted towards an idea of silent reporting and the expectation that one reads the ICD entries written by others on the unit's computer (see also Hämäläinen and Hirvonen, 2020a). Many of our informants described at length how this had affected their conceptualisation of care work (see also Lundberg, 2019, p. 60). The goal of writing ICD entries was one question that raised discussion. Should it reflect what was done with the resident or how the resident was doing? As one interviewee remarked: 'I think that I still report on what I have done with the resident, although it shouldn't be like that. I have read the way others report, and it is much about what we nurses have done'.

The worker explicitly pointed out that she followed the established style of reporting while acknowledging at the same time that the official guidelines of the unit emphasised the resident's well-being. Silent reporting created practices of digital interaction between colleagues and with the work community and enforced care workers' belonging as a relational act: it was easy to look at the reports of others and uphold their reporting practices.

Digital technologies may also assist in providing high-quality care and benefit communicating and bridging with residents. In ISH units, providing a high quality of care entails making the residents feel at home in the unit. In a care context, it is not only the work community one belongs to but also the care setting and practices of care, as well as the residents. Using mobile technology to make familiar music, soundscapes, and TV programmes available in the residents' daily life helped care workers provide person-centred, high-quality care that simultaneously supported the nurses' ethical and professional standards (see for example Pols, 2017; Mol, 2008). One of the nurses explained this in the following manner:

> For instance, we have this lady, a former bird-watcher, who suffers from dementia. So, with her, it's wonderful that now you can just play birdsongs on a computer and ask 'hey, which bird is this?', and the answer comes straight away, like 'a Siberian jay, a great tit'. It's really great what it enables us to do, because in the past, you'd have to get a CD from the library, or something much more complicated.

Practices disrupting the sense of belonging

Work practices may also disturb or prevent sense of belonging. Among the interviewees, the disruptive practices had to do with the insistence of constant connectivity and structural constraints, such as lack of resources. These resources most often concerned disturbances in the care work, lack time to learn new technologies, or shortage of devices such as computers for filling in ICD entries. Paradoxically, the personal or sensor-based safety alarm technologies that were meant to improve the residents' safety in ISH units, that is to ensure constant connectivity, were a major cause of disturbance. They were even able to obstruct the care process and interaction with others, as the sound of the alarm would often interrupt a care task with another resident:

> You have that phone ringing all the time in the pocket, and you try to be there for the resident. And the residents says 'it is ok, just answer', and then you answer and leave. … Then you try to hang up to the other, and often there is nothing acute but attention seeking or loneliness, but you need to think I am now here and then I go to give my time for the next one. … sometimes there are calls from the nurse to another, across the house, and anyone can call, or residents relatives or the doctor, and then you try to get someone else to answer, I try to concentrate on the moment here.

The quote above suggests that alarm technologies are yet to redeem their promise to improve not just safety but quality of care in ISH units, where urgency and a heavy workload add to the workers' experience of not being able to build a sense of belonging. Another practical disturbance was caused by having insufficient time to be standing in line for the unit's only office computer to read and write ICDs. As suggested by Hämäläinen and Hirvonen (2020), in an ideal world, ICDs inhabit the intersecting social worlds of nurses, medical doctors, administration, and the units' residents and/or their families as well as satisfy the information requirements of everyone. In reality, however, this is often not the case.

> It's always up to you what you record, really, and there are often situation that remind you of the importance of doing it well. But the time for it is limited.
> Q: What kind of situations remind you of this?
> Well, if a resident falls and then his or her family members arrive and find out what has just happened, it may lead to a need to find out who's responsible. I've never been accused of malpractice but I've heard many stories of families wanting to find out what has happened, what has been recorded, and so on.

The limitations that technology bestowed upon the care for older people to foster a sense of belonging also have to do with the limitations of the skills and capabilities of both the residents and the workers. For one, to enhance the sense of community and sense of belonging, leisure technologies seem to be influential, cheap, and efficient in care work settings. However, the residents in ISH units often suffer from some degree of memory loss or other diseases typical of old age, which can impair their ability to use leisure technology. Although used for leisure and activity purposes, these may 'require a lot from the care worker to "capture" the resident with a memory loss, and that you get him/her to orient to that moment', as one of our informants explained (see also Chapter 9). Importantly, the use of leisure technology mostly occurred on a voluntary basis (choice of either the nurses or the residents). Care workers did not necessarily have the time to learn how to use new devices and programmes if these were not mandatory in their work. The opportunities for creating a sense of community were therefore dependent on the resources available as well as both the residents' and workers' capabilities.

Conclusion and discussion

Care work in Finland, as elsewhere, is being reshaped by digital technologies. Much of the attention has been focused on the use of individual technologies, digital skills, or adoption of technology. Although enormous expectations are placed on the use of technology, the knowledge of how technology is shaping the practices of care work or the effects of technology on work communities, management, and work process are still scarce. We argue that work practices provide a useful approach to understanding the varying effects and experiences of technology in care work. It allows us to capture the micro-mechanisms of care work that

influence both the everyday work situations and the experiences and well-being of workers.

In this chapter, we have studied the digital technologies that care workers use at work in LTC and the practices related to digitalisation in fostering or preventing a sense of belonging in a work community. Our results suggest the use of digital technologies enhanced the sense of belonging by strengthening collegial relationships, by providing emotional support, and by re-enforcing the social relations of care workers. Additionally, it allowed the care workers to provide high-quality care, fulfil their professional aspirations, and follow shared and normative practices of work. However, not all digital practices contributed positively to the sense of belonging. Interruptions and lack of time to meet the demands of intensified reporting, for example, contributed to digital work practices disrupting or preventing the sense of belonging.

Previous studies offer little information on the use of technologies introduced by the workers themselves, as opposed to the organisation (Hirvonen et al., 2020). Paradoxically, digital technologies at work are not always introduced by the work organisation but may be set up based on the needs of the workers. In LTC units, instant messaging was introduced by the care workers themselves. These digital work practices were unofficial and voluntary, but proved to be important in creating a sense of belonging.

Digital technology that fosters communication in the work unit has the potential to bridge and tie dispersed communities together but also to further break them down. Some workers opt out of the voluntary instant messaging groups. The overall technological environment of the care work organisations is mixed, and various applications and devices are used. In this light, more research is needed on how workers and residents cope with the various technologies that may be introduced for various purposes and do not form an entity supporting each other. Are there technologies used for same or almost the same purposes? Furthermore, it is important to understand that in care work settings, the characteristics of the digital technologies in use are not for the workers to choose. However, workers do have agency regarding other technologies and are able to choose whether or not to use those. An interesting topic for future research would be to explore agency in relation to digital work practices, which was not included in the scope of our study.

A key finding of our analysis is that using digital technologies for various purposes of communication such as silent reporting and leisure activities can create a sense of belonging in ISH units. This finding should be acknowledged in the practices of care work and in the organisations providing care. Adequate resources, such as time, applications, and devices, are needed to make use of the possibilities offered by technology. If these basic resources are not in place, the possibilities provided by digital technologies cannot be fully utilised. The sense of belonging to a group and a work community is an important factor for work well-being. Therefore, lack of resources and other factors preventing it should gain attention as the quality and cost-effectiveness of care is produced by workers. In general,

understanding that digital work practices may support close collegial relations and sense of belonging should be a focus in work organisations.

The study has some limitations. First, although the interviews shed light on some of the contextual factors related to digital technology and care, they lacked an overall view of the organisation and work community. Yet, the semistructured interviews left space for bringing up concerns important for the interviewees, and none of the respondents informed any of these. A second limitation is that the data was cross-sectional. Particularly, as technologies are being taken up increasingly more, a longitudinal setting would be important to learn how workers, organisations, and residents adapt to the technological change. A qualitative longitudinal approach would also be important for highlighting the changes involved with work practices.

From a theoretical and conceptual perspective, the results suggest that in order to understand what sense of belonging means in digitalised care work communities, it is essential to acknowledge the socio-material intertwining of both human and non-human as well as the material and immaterial aspects of care work. As the professional practices of care increasingly involve various technologies, learning how these technologies can support or disturb care work is a collective learning process. We have demonstrated in this chapter how these processes simultaneously contribute to workers' sense of belonging as well as disturb it with technology.

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