



Renegotiating Work-Home Boundaries: Reconciliations of Remote Work and School During COVID-19¹

■ **Mari Karhu²**

University of Lapland, Finland

■ **Jonna Häkkinen**

University of Lapland, Finland

■ **Matilda Kalving**

University of Lapland, Finland

■ **Mari Mäkiranta**

University of Lapland, Finland

■ **Ashley Colley**

University of Lapland, Finland

ABSTRACT

This article contributes to understanding the radical transformation of everyday lives when parents' remote work and children's remote school were reconciled in homes during the early moments of the COVID-19 pandemic in 2020. The dataset comprises an online survey ($n = 92$) plus interviews, online diaries, and sampled experiences from 16 Finnish remotely working parents. Identified challenges to the parents' remote work included interruptions and fragmentation of work tasks, non-optimal work ergonomics, and rescheduling of work times. We present the strategies parents used to create new rhythms and routines, a shared space under the same roof, peace, and privacy for daily work and school, as well as managing multiple simultaneous social roles. Parents' rich experiences provide insights into the early steps of COVID-19-catalyzed remote work. Thus, the paper offers a reference point for exploring potential development trajectories in the increasingly common hybrid work setting.

KEYWORDS

COVID-19 / family / home / remote school / remote work / work-life balance

Introduction

In Spring 2020, the COVID-19 pandemic strained daily life all over the world. The measures to stop the virus spread by adopting social distancing broke the everyday infrastructures as we know them. Countries quickly began to implement restrictions

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² Corresponding author: Mari Karhu. University of Lapland, P.O. Box 122, FI-96101 Rovaniemi, Finland. E-mail: mari.karhu@ulapland.fi

for citizen mobility and face-to-face gatherings, and a recommended or enforced switch to a remote mode in work and school life took place globally. As a result, different social spaces converged in the home (Fuchs 2020; Häkkinen *et al.* 2020; Iivari *et al.* 2020). Everyday life shrank between the home walls when work and school were switched into remote mode, and communication applications such as Microsoft Teams turned homes into offices and classrooms.

Our paper encompasses the spillover and blurring effects in the work-home boundaries as we ask how reconciling parents' remote work and children's school in Finnish families during the COVID-19 pandemic affected the entire family setting, especially parents' remote work arrangements. We focus on the viewpoint of working parents and investigate how they experienced and practically handled the situation when different spheres converged in the home. Our research is based on a rich dataset comprising a user study ($n = 16$) employing interviews, diary entries, the experience sampling method (ESM), and an online survey ($n = 92$). The work contributes to understanding the challenges of work-life balance in remote work (e.g., de Wind *et al.* 2021; Felstead & Henseke 2017; Rodríguez-Modroño & López-Igual 2021; Shirmohammadi *et al.* 2022a & 2022b) by investigating a setting where parents must simultaneously handle different spheres. Although a need for further research concerning remote work combined with the presence of children has been previously identified (e.g., Bellmann & Hübner 2021), performing one's work while caring for one's children remains an underexplored challenge in daily working life.

In addition, we shed light on the early moments of COVID-19-catalyzed remote work. In that sense, the explored experiences serve as an essential retrospective to remote work, which has become more common due to the pandemic. Parents' experiences reconciling remote work and children's remote school describe a memorable historical period when people struggled with the new situation and remote work practices were taking initial shape. It is expected that parents will carry these experiences with them for a long time and that they have potentially shaped further remote work arrangements and attitudes. Therefore, we believe that providing a rich understanding of these initial experiences can help in understanding later remote work trajectories. Also, though COVID-19 seems to have loosened its grip at the time of writing this paper, disruptive events such as new pandemic outbreaks and natural disasters may require a similar shift to remote arrangements in the future.

Theoretical framework

(Remote)-Work-life balance

During the COVID-19 pandemic, the shift to remote work was a common trend globally. A study with more than 5000 participants conducted in the Netherlands showed that before the pandemic, people spent an average of 29 working hours at the workplace and 4 hours working at home. In contrast, by the end of March 2020, the hours were equally divided between the two locations (Von Gaudecker *et al.* 2020). Researchers have analyzed Twitter-based data to investigate public sentiment toward working from home during the COVID-19 pandemic. According to the findings, the work-from-home experience created a positive perception (Akash & Tripathi 2020; Daneshfar *et al.*

2022). Similar insights have been gained through other methods. For instance, a survey conducted in 29 countries highlights how respondents were more positive than negative about working from home (Ipsen et al. 2021).

However, the question of remote work related experiences is not that simple. In general, not limited to the COVID-era, people experience that working from home both positively and negatively affects work and private life. Although opportunities to combine work and private life increase (Samuelsson et al. 2022), it does not necessarily lead to an improved work-life balance, which can be understood in terms of overall satisfaction with the balance between work and nonwork (Mellner et al. 2014). Already, pre-pandemic research argued that the impact of remote work on work-life balance is generally negative due to, for example, negative work-home spillover and increasing work-family conflict (Bellmann & Hübler 2021; Felstead & Henseke 2017; Higgins et al. 2014). However, seeking to further understand the impact of working from home on work-life balance, many researchers found it beneficial to study the issue during pandemic times (Shirmohammadi et al. 2022b). Researchers argue that remote work during the pandemic reduced work-life balance (Sandoval et al. 2021; Saragih et al. 2021), in which both women and men had management difficulties (González Ramos & García-de-Diego 2022). But opposite observations have been made as well. For instance, Ipsen et al. (2021) highlight increased work-life balance as an experienced advantage that resulted in positive sentiments toward working from home during the COVID-19 pandemic. Further elaborated, work-life balance is tightly bound to the question of boundaries between these two spheres.

Blurring boundaries between (remote) work and home

Generally, stronger boundaries between work and nonwork are related to a better work-life balance (Spieler et al. 2018). Although the subjective and variable nature of work-life balance must be considered (Wattis et al. 2013), people mostly prefer a boundary strategy where work and family are kept apart (Ammons 2013; Mellner et al. 2014; Ojala 2011). Still, there are different degrees of effort to separate work and home life (Moazami-Goodarzi et al. 2015), and only a few clearly maintain work-home boundaries (Ojala 2011; Mellner et al. 2014). Sull et al. (2020) have pointed out a need to manage the *paradox of remote-work-life balance*, indicating how remote work allows adjusted schedules and gives more time with families, but on the other hand, blurs the boundaries between professional and personal lives. Altogether, the omnipresence of ICT technology has blurred the boundaries between work and home life (Bødker 2016; Mazmanian et al. 2013), resulting in a negative work/home spillover (Berkowsky 2013) and technology-mediated interruptions occurring in after-work hours (Chen & Karahanna 2018). The prior art has shown, for instance, how technology-assisted work after office hours at home has implications for work-life balance (Adisa et al. 2017; Bauwens et al. 2020), is prone to lead to family conflicts (Fenner & Renn 2010) and is significantly associated with technostress (Leung & Zhang 2017).

In the context of the COVID-19 pandemic, there is a strong indication of how the pandemic-era blurred the boundaries between work and private life (e.g., Cannito & Scavarda 2020; Karjalainen 2023; Otonkorpi-Lehtoranta et al. 2021) and remote

workers experienced a constant presence of work (Karjalainen 2023). Interestingly, parents of children under 12 and women were the groups most vulnerable to increased work-family conflict when work-family conflict was examined in the context of the COVID-19 pandemic (Kuśnierz et al. 2022). Systematic reviews by Shirmohammadi et al. (2022a, 2022b) analyze studies examining work-life balance among those who worked from home during the COVID-19 pandemic. Housework and care intensity emerge as one of the key themes. However, there is a lack of research on how working parents practically handled the situation when the different spheres converged into the home. Instead, the focus is, for instance, on the overall work-family arrangements (i.e., whether to work remotely or not) (Goldberg et al. 2021), gendered realities of work-life balance (Del Boca et al. 2020; Hjálmsdóttir & Bjarnadóttir 2021; Parlak et al. 2021) as well as the psychological well-being of working mothers who managed both work and home duties during the pandemic (Clark et al. 2020). In sum, blurred work-home boundaries point out a need to pay closer attention to how the boundaries are drawn and negotiated.

Drawing and negotiating (remote)-work-life boundaries

Researchers have pointed out a need for person-centered approaches in understanding work-life boundary management styles (Kossek et al. 2012). People have habits and ritualized behavior for drawing boundaries between work and home, including, for example, clothing, commuting, and how we engage with family, friends, and colleagues (Nippert-Eng 2008). As work-family conflict is related to temporal and spatial transitions and to transitions between work and family roles (French et al. 2022), individuals' *perceived control* of the boundaries between work and private life is crucial for the experience of work-life balance (Mellner et al. 2014).

In terms of managing the boundaries between remote work and life, research has highlighted the issues of time pressure and time use control (Thulin et al. 2019), how remote work is associated with a reconfiguration of daily work, family and leisure activities (Hilbrecht et al. 2013), managing work-life boundaries with ICT (Sayah 2013), as well as the use of ICT in negotiating the temporal and spatial dynamics of the working-home (Nansen et al. 2010). Earlier research has also pointed out a lack of research focusing on how the physical conditions of the house and family contribute to the effectiveness of home offices as a workplace (Inalhan & Fan Ng 2010). When paying attention to reconciling parents' remote work and children's remote school, there needs to be a special focus on family coordination. Generally, the practical everyday life in families requires coordinating and balancing the demands of the parent's work life, children's schooling, and leisure time activities. Here, established routines have been found to ease the smooth execution of the activities (Davidoff et al. 2011). Families use different tools to support coordination both in practical and socio-emotional ways (Brown et al. 2007; Leshed et al. 2014), and for example, the design of different tools for supporting family communication and coordination has gained much attention (e.g., Neustaedter et al. 2009; Plaisant et al. 2006; Sellen et al. 2006).

As pointed out by Bødker (2016), the boundaries of life are not static but are constantly being renegotiated. We use artifacts to define and negotiate different boundaries

in collaborative work (Lee 2005), and technology has a role in both boundary drawing and opening (Bødker 2016). This is an exciting and relevant framework in the pandemic-driven remote circumstances. When reconciling remote work and children's remote school happening simultaneously at home, the established transition patterns and routines naturally did not apply. Instead, working parents had to adapt to support the organization and practicalities of children attending school from home while keeping their own work running. It is evident that reconciling remote work and children's remote school during the COVID-19 pandemic set challenges for achieving work-life balance, and there was a need to readjust the work-life boundaries. Therefore, we need to understand how the boundaries between work and family were negotiated in exceptional circumstances.

Positioning our research

Prior studies have addressed remote work and remote school during COVID-19 times, but few focus on the combination of these two. Already before the COVID-19 pandemic, researchers (e.g., Bellmann & Hübler 2021) highlighted a need for further research concerning remote work combined with the presence of children. The conditions created by the pandemic further emphasize the need for such research. Fuchs (2020) has identified the radical transformation of the space-time of everyday life during the crisis, where various social spaces converge and blur in the home. What remains unanswered is how everyday life is organized in such conditions and how individuals manage multiple social roles simultaneously in the same space. We address this through a user research approach, focusing on how working parents experienced and practically handled the situation when their remote work and children's school happened simultaneously in the home during the early moments of the COVID-19 pandemic. Here, it should be noted that remote schooling is not homeschooling, where a parent fully takes on the role of the teacher (Ray 2015). Still, parents had a role not only in supporting teaching tasks (Brom et al. 2020) but also in assisting with ICT infrastructure (Häkkinen et al. 2020). With our research, we seek to fill the research gap of how family practicalities affect work and extend prior work on adapting homes to become home offices (Inalhan & Fan Ng 2010). We also provide a Nordic perspective on working from home during the COVID era. For instance, Risi et al. (2021) have researched the redefined boundaries of life in Italy during the COVID-19 lockdown and point out a need to research how the restrictions were perceived in different socio-cultural contexts.

Methods and materials

Research context

In Finland, on 12 March 2020, employees were advised to work remotely if their tasks could be carried out from home (Finnish Government 2020a). A few days later, a state of emergency over the COVID-19 outbreak was declared. In the context of schools, that meant closing the premises of all education providers and reorganizing teaching as



distance learning (Finnish Government 2020b). The studies reported in this paper were conducted in the turn of April–May 2020, when remote schooling had been in operation for almost two months. Contact teaching in Finland’s primary and lower secondary education resumed on 14 May 2020 (Finnish Government 2020c). Thus, our research is positioned to sample a unique 2-month time window. To produce a rich dataset, two separate studies were conducted: (1) a qualitative user study and (2) an online survey. The participants in the two studies were different.

Qualitative user study

Participants

The user study collected data using several methods: (1) ESM via WhatsApp messages, (2) online diary entries, and (3) semi-structured interviews. The user study was conducted during the first wave of the COVID-19 pandemic at the beginning of May 2020. Due to the limited time window, the participants of the qualitative user study were recruited through informal networks of colleagues across Finland. In addition, a request for participants was shared in Finnish social media forums dedicated to discussing remote school-related topics. Altogether 16 participants, 11 female and 5 male, from different regions of Finland, were recruited. Details of the interviewees are provided in Table 1.

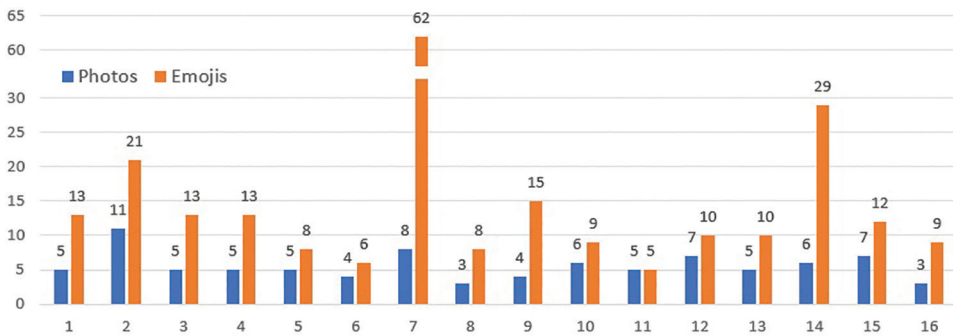
Table 1 User study participants, n = 16.

Participant number	Gender	Adults in household/ interviewed parent	Children’s ages	Parental work situation
1	Male	1	9, 12	RW
2	Female	2	11, 13, 14, 17	RW, RW
3	Male	2	5, 8	RW, OH
4	Male	2	10, 13	RW, OH
5	Female	2	10, 12	RW, RW
6	Female	2	9, 11	RW, TL
7	Female	2	15, 17	RW, RW
8	Male	1	11, 14	RW
9	Female	1	6, 8	RW
10	Female	2	11, 14	RW, RW
11	Female	2	14	RW, RW
12	Female	2	9, 12	RW, RW
13	Male	1	11, 13	RW
14	Female	2	9, 13	RW, OH
15	Female	Other	c1	RW, RW
16	Female	2	c1, c2	RW, OH
c1, c2, Did not want to reveal the school child’s age; OH, Working outside the home; RW, At home – Remote work; TL, At home – Temporarily laid off.				

Experience sampling

The ESM was deployed as a data collection method. With ESM, people are prompted to provide self-reports at random times during the day (Larson & Csikszentmihalyi 2014). Mobile phones are well suited as a platform for ESM, as they are widely adopted, and using them for data collection creates only a minor load for the participants (Van Berkel et al. 2017). In our study, participants received WhatsApp messages from a prepaid research phone number. Altogether, seven prompting messages were sent to each participant, at different times over a period of three days. Participants were asked to reply with photos, or emoji symbols and short explanations. The questions focused on space usage and home arrangements, home atmosphere, and overall experience in reconciling remote work and remote school. The resulting ESM dataset contained textual answers and, in total, 89 photos and 243 emojis, Figure 1. Exemplary emoji-based responses are presented in Figure 3.

Figure 1 Number of photos and emojis sent by participant.



Diary study

Participants were asked to write online diary entries over a two to three-day period. The diary entries were written in the same week as participants replied to the ESM WhatsApp messages. The online diary forms were created in Google Forms and consisted of a background form and an identical diary form for each day of the study. In the diaries, participants were asked to describe their mornings at home, what happened during the workday, things that parents needed to take into consideration in children's remote schooling, concrete examples in reconciling remote work and remote school, changes in the daily rhythm, as well as the positive feelings and challenges they experienced.

Interviews

At the end of the study period, after participants had completed the ESM and diary tasks, semi-structured interviews were conducted by phone or online meeting. The interviewees were divided between two interviewing researchers, and interviews lasted for

approximately 15 minutes, consisting of background questions and nine semi-structured interview questions. The focus of the interviews was on parents' experiences in reconciling remote work and remote school. This dealt with parents' positive and negative feelings related to remote school, and remote school's effects on the overall home and family setting, including space usage, working ergonomics, family dynamics, parent's ability to work, as well as the effects on overall daily life such as a division of household chores and time together.

The participants invested relatively much of their time in the qualitative user study conducted through the various data collection methods. At the same time, they struggled to keep the remote work and remote school running simultaneously at home. Therefore, we decided to keep the interviews efficient. For this reason, the material collected by ESM and the diary study was not used systematically as the basis for the interviews. However, the participants were asked to reflect organically on the material they produced through their ESM and diary replies in the interviews. Due to the participants' prior engagement in the ESM and diary study, participants were oriented toward the questions in advance. That enabled deepening participants' insights in the relatively short interview slots.

Qualitative user study analysis

The qualitative user study data was prepared for analysis by the authors, including transcribing audio-recorded interviews and organizing diary entries and ESM data to Excel sheets per participant. The methods used to analyze text are also regarded as effective for analyzing visual data (Saldaña 2015). Thus, we relied on a combined textual and visual analysis by using an affinity wall method. Through the affinity wall method, emerging themes were identified by reading the rich datasets line by line, then structured into conceptually similar groups, and finally organized into higher-level categories. The authors discussed the themes emerging from the data iteratively throughout the process. The first author then compiled a codebook where nine theme categories captured the 49 identified subthemes (Table 2). The codebook was reviewed and agreed upon among the co-authors. Two researchers then independently analyzed the interviews, diary entries, and ESM material, thematically coding the data according to the codebook. A third researcher then arbitrated any conflicts in the coding.

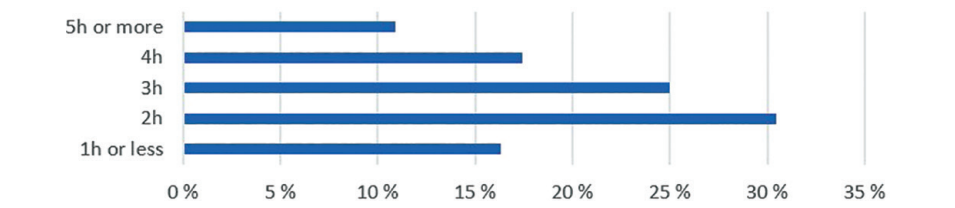
Online survey

An online survey was organized at the end of April 2020 to collect feedback from a broader sample of participants. The survey was distributed through email lists by contacting school personnel across Finland. In addition, the survey was shared in domestic remote school-related social media forums. The survey was completed by 140 parents. The data was then filtered to include only answers where at least one parent in the family was working remotely at home during the remote schooling. This resulted in a dataset of 92 participants from different parts (and consequently, different schools) in Finland. The survey included open questions, where participants were asked to describe the challenges of combining remote work at the home office and the remote school, as well as the positive and negative experiences of remote

schooling in families. The free text data was analyzed using an open coding approach. One researcher first created a codebook by identifying themes and grouping them to reduce the number of categories, resulting in a set of themes describing the parents' challenges. Two researchers then independently coded the participants' responses using the developed codebook. A third researcher then arbitrated any conflicts in the coding.

Of the total of 92, 72 (78%) participants were female, 19 (11%) male, and one other/preferred not to state gender. The mean number of elementary school (ages 7–13) children in remote schooling was 1.6 (*SD* = 0.7). In addition, 59% had older children in the household, and 41% had younger children. Both the parents remote work and the children's remote schooling was very ICT intense (Figure 2).

Figure 2 Parents' (*n* = 92) estimation of their child's or children's ICT technology use during an average remote school day.



Results

In the following, we present the findings from our combined qualitative user study and survey datasets. Themes emerging from the qualitative user study are presented in Table 2 and thematically analyzed survey findings in Table 3. We refer to the qualitative study participants with the letter P and survey participants with the letter S.

Table 2 Themes emerging from the qualitative user study.

Themes emerging from the qualitative user study		
WORKING SPACE	Kitchen	Children's room
	Living room	Expansion of workspaces outside the home (e.g. garage)
	Workroom	Outdoors
	Bedroom	Changes in workspace
WORKING ERGONOMICS	Table	Standing position
	Couch	Experience of poor ergonomics
	Bed	
	DIY workstation	
RHYTHM AND ROUTINES	Re-rhythm of adults' work	Changes in sleep rhythm
	Remote meetings and lessons as rhythmists of the day	Slowed down life
	Mealtimes	Clear daily rhythm and routines
	Outdoor times	No rhythm and routines



Themes emerging from the qualitative user study		
PEACE OF WORK AND PRIVACY	Interruptions Space utilization Scheduling remote meetings and lessons Closed door	Closed microphone/camera Headphones Intra-family agreements Intra-family communication channels Showing private outside the home Challenges in attention sharing
NEW WAYS OF WORKING	Adopting new ways of working (e.g., not being proactive at work)	
INTRA-FAMILY ROLES	Parent's minor role in remote schooling Parent's major in remote schooling Other parent's clear supervision responsibility on remote schooling	Children's responsibilities in housework Care for children under school age Parents' division of housework
INTRA-FAMILY RELATIONSHIPS	Increased time together Rapprochement of family members	Parent as an employee in the eyes of a child Child as a schoolchild in the eyes of a parent
OTHER EFFECTS ON THE DAILY LIFE AT HOME	Increased cooking Increased cleaning	
THE EFFECTS OF EMOTIONAL LIFE	Initial negative emotions Negative emotions from time to time	Positive emotions Positive trajectory

Table 3 Themes emerging from the survey. Number of respondents mentioning (n = 92).

What have been the challenges to manage remote work and remote school?				
WORK INTERRUPTIONS	Concentration difficulties	16	Multitasking	12
	Interruptions	8	Fragmentation	5
SCHEDULING CHANGES	Change of work rhythm	17	Scheduling home tasks	15
CHILD MONITORING	Child monitoring	17	Guilty feeling of not helping child	14
SPACE RELATED	No space and peace issues	9		
WORK-LIFE BALANCE	Home atmosphere suffers	7	Sleep disturbance	4
	Blurring work-life boundaries	2		

Figure 3 Exemplary emoji-based responses to the question 'Describe with emojis how remote work was during the remote schooling period this spring'. The responses illustrate the various emotions the parents experienced, from being concerned, unwell, and angry to feeling joy, affection, and strength. The participant reference number is indicated.



Working space and ergonomics

Working space

Turning the home not only into an office but also a classroom was primarily a question of space usage during the intense use of ICT tools. In many families, shared spaces such as the kitchen and living room were utilized as working spaces, for example, ‘I must run between the kitchen and living room workstations’ (P7). Setting up a workstation in the kitchen or living room was also a chance for parents and children to work side by side, which was a solution some families enjoyed, for example, ‘It’s nice to have the whole family together in the same space’ (P6, diary entry). Or, as one participant aptly describes, sharing the same space is a solution families ended up at, more or less intentionally, ‘... children wanted to do tasks in the same room [as everyone else] all the time’ (P5).

There were also families who wished for separate spaces to conduct work and school tasks. However, only a small minority of participants had a dedicated workroom for the adults, for example, ‘Fortunately, we have three floors in the house, so we basically have a study in the basement, then there is a workspace on the middle floor’ (P11). Instead, many participants said they found peace in a bedroom, for example, ‘I’ve been working in my bedroom, behind the door, in practice in the bed’ (P9). In addition, there were participants who made creative solutions aiming to guarantee separate working spaces. In these cases, the home was extended, for example, to the yard or a garage: ‘Sometimes my son went to an office in our garage’ (P16). But rather than being fixed, workspaces were in constant flux. Participants reported that both parents and children moved between different rooms. As one participant summarized, ‘I vary between the kitchen and the living room ... also the children move from place to place’ (P4).

Working ergonomics

Generally, participants sought working positions at tables, couches, and beds, and typically moved between these three. As one participant summarized, ‘Pretty fifty-fifty, I was at the desk, on the couch, in the bed’ (P2). The working position often depended on the nature of the work, for example, ‘If I need to write, then I’m at the table and try to focus on that position. If I read a lot, I like to lift my legs’ (P6). Illustrative photos provided by the participants are shown in Figures 4 and 5. Many participants recognized the poor ergonomics of their working situations, for example, ‘Of course, when you’re working on couches, it’s by no means an extremely good posture if you’re in it all day’ (P11).

Figure 4 Example photos of different participants working at home. Sofa (with Laptop, not shown in the photo), sofa, bed, and bed.



Several parents noted prioritizing their children’s ergonomics above their own. Some participants searched DIY solutions to poor ergonomics, for example, ‘I then built a standing table using kitchen stools’ (P7). Some participants also reported working in standing positions or walking around, for example, ‘I’ve done a lot of walking outdoors. If there I can participate while chatting or just listening’ (P9.)

Figure 5 The parent’s work ergonomics at home was typically not optimal, as illustrated in participants’ photos.



New rhythms of parents’ work

Changing the time of the work

To mitigate the effects of interruptions and the inability to concentrate (Table 3), families often sought new rhythms and time slots for the adults’ work. Some parents could adjust their working schedules to help children in remote schooling, for example, ‘... I can pretty well influence my work, to control days and reschedule meetings. I start a little later, so that children get to start their school tasks’ (P4). Participants also worked in a different rhythm compared to normal to better concentrate on their own work while the children were at home, for example, ‘I intended to do as much work as possible without interruption before the children settle down at the same table to do school assignments’ (P6, diary entry). Remotely working parents also organized taking turns: ‘My partner and I monitor school in turn every second day so that the other one can work. The one who does the schooling then works after, until midnight’ (S36). The rescheduling of one’s own work also tired parents, who related, for example, ‘My day starts when [remote school] things are done, and then lasts late’ (S31).

Scheduling the day with meals as the key routine

Other central necessities, which set a rhythm for everyday life, were mealtimes, brought up in both user studies. This was often not without challenges, as illustrated by participants’ provided photos, Figure 6. In the interviews, participants reported trying to reconcile mealtimes with everyone’s remote meeting schedules, for example, ‘All lunch breaks and such were adjusted according to them [remote meetings], we could not keep any fixed lunchtime but had to devise a little bit about where will be a half-hour slot that we can have a lunch done’ (P1). The need to prepare all kinds of meals for the family

was emphasized in all the collected data and was an aspect that burdened parents, for example, ‘Well, of course, mom has had to be a chef here’ (P16).

Figure 6 Participants’ reflections on what does not work with remote schooling. From left ‘Friction in the food supply chain at times, when everyone is working’; ‘Organizing school meals while working remotely keeps you busy [...] It feels you have to be cooking all the time’; ‘Common mealtimes are hard to find, and after eating fast, the kitchen is a mess’; ‘Remote schooling takes the biggest part of the kitchen table’.



Remote meetings and remote lessons giving a rhythm for the day

Participants reported on how remote meetings and remote school lessons set a framework for the day: ‘A quick breakfast, the schoolchild’s classes began at 8:45 am as instructed in the Qridi App. Teams classes began after lunch. My Teams call started at 9 am and the husband’s teaching work through Teams at 8.15 am. The day went by calls’ (P11, diary entry). Whether it was the children’s or parents’ meetings that dominated as the rhythms of the day, and on whose terms days were scheduled, varied between families. In many families, the remote school meetings gave the structure for the day, for example, ‘In practice, it was precisely because of how those children’s remote school lessons, let alone these video calls, were’ (P1). For others, the remote work meetings played a key role in scheduling the days at home, for example, ‘We have in the morning usually planned the schedule according to when I need to be in work-related meetings...’ (P9).

Peace and privacy for work

Interruptions with parents’ work

Participants noted the impact of interruptions in work caused by children being at home in remote school, Table 3. One participant commented, ‘I had to read a couple of texts that typically would take an hour in total. But I spent four hours on it, because I had to stop reading all the time, and then I had to gather my thoughts again’ (P6). Many participants had also interrupted their work to help children with technical issues related to remote schooling, for example, ‘Zoom or Meet doesn’t open or something like that’ (P4). Overall, participants were not always able to pay attention to their children. ‘When



I had work-related calls, the child was looking for my attention simultaneously. Then, I could not talk about things to the extent I wanted to' (P3). The previous quote illustrates how the capacity of work decreased: an experience shared by other participants as well. 'I cannot be proactive in my work. I do my job and do what has to be done. But it is very much about answering emails and stuff like that' (P2). On the other hand, parents also commented on the positive aspects of the child asking for help, for example, 'The parent sees all the time where the child needs more help and where they are doing well' (S41). There were also some positive implications of interruptions, for example, 'The highlight of the morning was a high school 1st-grade music class, and he came to play and sing for his assignment. I got to enjoy a morning concert while working' (P7, diary entry).

Practical solutions for guaranteeing peace of work

Remote meetings and remote school lessons set their own needs for peace and privacy when family members worked and studied under the same roof, for example, 'Then, when we had scheduled who is on the phone at any given time, everyone was assigned their own room or corner' (P1). Many participants described how they utilize spaces especially to create possibilities to retreat to their own peace, for example, 'At some point, I retreated downstairs, which has been perhaps a little quieter' (P7). In addition, participants utilized several solutions to guarantee peace of work and privacy. One simple one was to close the door, clearly signaling the need for peace and privacy. Participants also noted becoming more skilled, for example, in muting the microphone when in a meeting, for example, 'We initially thought that when making video calls, everyone must be in a different room. But in practice, when we used headsets, it didn't matter so much' (P5). Often peace of work and privacy were also based on intra-family agreements, for example, 'In a way, it was tacitly agreed that if someone has Meet [Google Meet] going on, then don't jump with underpants into the background' (P15). Providing screen time for children, aiming to guarantee peace for the adults' work, for example, 'PlayStation time was arranged for the children during my longer meeting to keep the house quiet' (P9, diary entry).

Discussion

The findings shed light on a COVID-era paradox of remote-work-life balance (Sull et al. 2020). Although prior research has indicated that remote work gives more time with families (Sull et al. 2020), the pandemic led to another extreme: suddenly, people had nothing but time with family when all day-to-day activities were handled under one roof. The families drifted into a solution out of necessity. In Finland, parents were not forced but recommended to work from home if their tasks could be carried out from home. However, closing the premises of education providers led to a situation where parents worked remotely not only to curb the virus but to take care of their school children. The investigated experiences cannot be focused into a question about whether the overall situation was experienced as positive (Akash & Tripathi 2020; Daneshfar et al. 2022; Ipsen et al. 2021) or negative – or whether work-life balance improved (Ipsen et al. 2021) or degraded (Sandoval et al. 2021; Saragih et al. 2021) in the exceptional circumstances.

Instead, the experiences must be understood holistically, with both positive and negative aspects. We know from prior research that the *perceived control* of the work-life boundaries is significant in work-life balance experience (Mellner et al. 2014). What is interesting is how this control was sought when the world suddenly slipped out of control. The focus gets attached to renegotiating the boundaries of life (Bødker 2016) as our particular interest has been how parents experienced and practically handled the situation when their own remote work and children's school happened simultaneously at home. Next, we discuss the reframed boundaries regarding roles, space, and time.

Renegotiating the boundaries between roles

A need for further research concerning remote work combined with the presence of children has been recognized in prior work (Bellmann & Hübler 2021). Our study emphasizes how the pandemic set parents in a vulnerable position (Kuśnierz et al. 2022) when reconciling their work with children's remote school. Parents rarely must simultaneously be both employee and parent on such a concrete level during their working hours. In our study, multitasking while working was common, as the exceptional conditions required parents to balance and perform different social duties simultaneously. This type of role transition has been previously researched, for example, in the context of remote work and work-home conflicts, where remote workers have been found to have more interruptions caused by home demands during work hours (Delanoeije 2019). Still, the circumstances posed by COVID-19 put working parents in very different situations compared to the context of prior research.

The prior art has reported how computer-mediated work interruptions at home during over hours cause negative effects through interruption overload and the psychological transition (Chen & Karahanna 2018). In our study, the parents had the same difficulties but somewhat in the reverse conditions, in trying to concentrate on working at the home office. Interruptions, work fragmentation, and difficulties concentrating on work tasks were common challenges the parents faced. The parents needed to support the children during remote schooldays, as reported by Brom et al. (2020). However, they often felt guilty when not able to pay enough attention to it or immediately help the children. Also, as parents arranged work meetings from home and had work-related calls, paying attention to the children was challenging. Participants described how these situations caused conflicts, especially with younger children. In addition, many participants experienced that the mess and time spent cooking at home increased exponentially as the other family members stayed home during the day. On the other hand, the feeling of inadequacy was also reflected in work as parents, for instance, experienced that they could not be proactive in their work. The experiences are related to work-family conflict (e.g., Gallie & Russell 2009; Roman 2017; Tammelin et al. 2017) as a broader theme. COVID-19-related research has identified the intensity of housework and care as central themes (Shirmohammadi et al. 2022a). In contrast with previous encounters, our paper has explored in a solution-oriented way what practical means the parents used to adapt to the situation. The COVID-19-forced convergence of social spaces in the home can result in overburdening individuals who cannot manage multiple social roles simultaneously in one place (Fuchs 2020). Our study demonstrates how the parents became masters at this kind of role management, but also felt overwhelmed. This links to the spillovers between



work and family-related emotions and aligns with Palm *et al.* (2022) who argue how both work and non-work matters trigger emotions experienced at work.

Renegotiating spatial and temporal boundaries

The study highlights work and home as extremely intertwined social spaces without clear temporal and spatial boundaries. Reconciling parents' remote work and children's remote school led to workspace limitation: an issue identified in other pandemic-related studies as well (Risi *et al.* 2021; Shirmohammadi *et al.* 2022a). Our study highlights how parents actively sought solutions that eased the reconciliation of remote work and remote school at home. That is a question about family members negotiating the domains of work (Jokinen 2009) and school. Kawsar and Brush (2013) have earlier reported that, although computer usage at home has emerged, for example, in bedrooms and the bathroom, work-related computer usage is still mostly done in dedicated workspaces. However, in our study, remote-working parents were pushed to work in bedrooms and on sofas – and in garages and sheds – as the table spaces had been occupied by school children. Whilst raising ergonomic concerns, on the plus side, this provided parents peace and privacy for their work, for example, for teleconferencing.

It is also noteworthy that renegotiating spatial boundaries was not only a question about physical space but to a large extent, a combination of physical and online spaces. We know from prior research how the omnipresence of ICT technology has blurred the boundaries between work and life (Bødker 2016; Mazmanian *et al.* 2013). During the COVID-19 pandemic, work was transferred to remote work applications with a few days' notice, resulting in a sudden interweaving of physical and online spaces. If there were no physical workspaces at home, the technology was not always in order, either. The circumstances emphasized the spillover of physical and online spaces. Parents needed to figure out what and who they wanted to show outside when working at home, and with what means is work peace guaranteed for everyone, for example, when having work-related meetings. In many families, family members became the distant ancestors of work and school communities: flashing and audible people in the background, with whom parents tried to arrange schedules and space reservations. The situation was also increasingly a question about technological ergonomics when technology was intensively present in remote work and school. Prior research has illustrated the challenges when new applications and communications channels were introduced rapidly in the early stages of the COVID-19 restrictions. Consequently, adapting to remote schooling required many families to install new applications and share computing equipment between family members (Häkkilä *et al.* 2020).

Prior research has indicated how working from home during the COVID-era increased intensity in several areas of life, including not only work, but also housework, and care (Shirmohammadi *et al.* 2022a). It is evident that these intense experiences are related to temporal boundaries and attempts to renegotiate them. Regarding temporal boundaries, parents reported the dramatically changed working rhythms and the need to adapt to new ways of work, including making a new prioritization of work tasks and managing the overlap of work and home life. Rescheduling the work activities to early mornings, evenings, or late nights commonly took place. In dual-income families, parents also reported taking turns in who works and who takes care of the children.

Overall, parents sought a new structure in workdays, and our study highlights a longing for routines. There were attempts to bring familiar rhythmists – such as meals and meetings – from previous everyday life to the new situation. This highlights how social rhythm (e.g., Tjora 2016) was continuously renegotiated in families in the pervasively changed circumstances.

In sum, the COVID-19 pandemic not only changed how parents work and children study but also overturned everyday life as work and school functions moved inside the home walls. Although our study demonstrates how reconciling parents' remote work and children's remote school at home drastically collapsed the work-life boundaries, the ways in which families coped with new circumstances by reframing their everyday highlight their resilience and adaptation. Our datasets give insights into how parents developed new ways to work while taking care of children and daily duties.

Limitations and methodological notes

We acknowledge that our study has several limitations. User behavior and preferences differ across cultural contexts (Hofstede 2011) and the socio-economical context varies between different countries. Finland is a country of high technology adoption, which eased the transition to remote work and schooling. A cross-cultural study would offer interesting comparisons and insight into the topic from a wider perspective. Our study is also limited by the sample size. We sought to compensate for this by employing different data collection methods. Although we managed to recruit participants from various backgrounds, the study method does not reach, for example, marginalized families, who may not have the possibility or energy to volunteer for research. Overall, it has been shown that workers with higher incomes (Adams-Prassl et al. 2020) and higher education (Bick & Blandin 2020) have better opportunities to work from home.

In addition, we acknowledge that most of the qualitative user study participants and survey respondents were female. This might be related to the gender roles and inequalities in general. In Finland, women take more responsibility for home and family (Känsälä & Oinas 2015). These gendered inequalities have been a cross-cultural phenomenon during COVID-19 too (see, e.g., Del Boca et al. 2020; Hjálmsdóttir & Bjarnadóttir 2021; Parlak et al. 2021). Also, in the Finnish context, prior research has suggested that the work-home boundary work practices were gendered during the pandemic times (Karjalainen 2023; Otonkorpi-Lehtoranta et al. 2021). On the other hand, 5 of the 16 qualitative user study participants were men; thus, the study presents men's perspective relatively well.

We also acknowledge the methodological limitation of conducting user studies with interviews and self-reports. This can lead to positive bias, as people are not as willing to discuss the difficulties and failings of their everyday lives. The phenomenon where people have an urge to tell about positive things is referred to as a happiness barrier (Roos 1988). We believe that some of this may be present, for example, in the interview data. Here, we also wish to highlight that the ESM data provided a rich and valuable dataset, also illustrating the challenges in home organization, and the conflicting feelings of remote-working parents. Comparing our data collection methods, the momentary nature of the ESM method, where participants documented their day with photos and

gave comments with emojis, was effective in exposing emotional challenges. On the other hand, the interview data gave deeper and wider insights.

Conclusion

In this paper, we have presented the findings of a study investigating how Finnish parents experienced and practically handled the situation when their own remote work and children's school happened simultaneously at home during the early moments of the COVID-19 pandemic. The research extends our knowledge of renegotiating the boundaries of life when parents' work-from-home is combined with the presence of children and contributes to the research regarding the impact of the COVID-era on work-life balance. From a dataset collected from 16 working parents, combining semi-structured interviews, online diaries, and sampled experiences, complemented with survey data from 92 parents, we identified the drastic effects on the entire family setting caused by the technology-enabled transformation. The challenges reported by parents included interruptions and fragmentation of remote work tasks, non-optimal work ergonomics with computer-mediated work (laptops), and rescheduling of work times, for example, to evenings. As positive aspects, increased family time together and the ability to pace the day more flexibly were emphasized. Parents' rich experiences provide insights into the early steps of COVID-19-catalyzed remote work. Thus, the paper offers a reference point for exploring potential development trajectories in the rapidly increased remote work as a broader phenomenon.

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