



RETHINKING THE HOME OFFICE AS A CO-WORKING SPACE: NEW DIRECTIONS FOR RESEARCH AND PRACTICE

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**Rethinking the Home Office as a Social Co-Working Space:
Implications for Research and Practice**

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ABSTRACT

Few studies have approached the home office as a shared workspace where people (i.e., individual workers) accustomed to their own workflows, schedules, equipment, and work set-ups find themselves coping with new and complex co-working situations. This paper positions the home office as a human-centered design problem rather than a problem of the individual solo worker. Our aim is to contribute to a broader understanding of the future home office that builds on the challenges and opportunities it presents as a co-working space. Here, the home office extends beyond an ‘individual worker’ and takes into consideration that there might be other people within the home who in turn, also have set-up their own home office within a shared living space while juggling household chores and caretaking work. In fact, we suggest that the home office is made up of several individual home offices. We argue that a deeper understanding and acknowledgement of the situational aspects of the home office can inform future practices, aid the development of more suitable work-set ups in the home and point to hidden benefits, for example when it comes to interdisciplinary and transdisciplinary learning. These insights are relevant for managers and organizations alike.

KEYWORDS: co-working, home office, experiences, learning, interdisciplinary,
transdisciplinary

1. Introduction

For many professionals, the pandemic has put them in a situation, where they have to pursue their work in the constant presence of other people in the home. Partners and other family members are required to set up their own workspaces in parallel. Depending on the respective profession and job demands, resources and equipment need to be shared, new forms of collaboration and even new co-working practices developed. These challenges the current definitions of co-working spaces as spaces chosen outside the home by self-employed individuals. It also challenges the general notion of ‘the’ home office as the place where employees of organizations and institutions work outside their assigned office spaces (Berbegal-Mirabent, 2021). Instead, we find a blurring of the two concepts. However, the implications for research and practice have yet to be explored and addressed by management and organization studies.

Beyond one office, one desk

Most studies still approach the home office from the vantage point of the outsourced office desk. In this view, there is one worker, one desk, and one job to be done. But the pandemic has revealed that for many people, the home office resembles a shared workspace presenting complex co-working situations. In these cases, a home serves many workers and different work set-ups at the same time. Imagine, for example, a dual career couple where both partners work in different fields that employ different methods and principles. Pre-pandemic, both could maintain separate work realms and with that ‘perform’, ‘hide’ or ‘protect’ their own work-persona while being ‘another person’ at home (Goffman, 1959; Beaton, 2015). As soon as both had to work from their shared home, they also began to share their home ‘office’, introducing these work-personas into their private space. In addition, many details of work entailing specific processes, methods, or issues remained unknown to the partner when both or at least one of them worked outside the home. We do not want to dwell on couple

dynamics here. The example merely serves to illustrate that co-working is no longer relegated to co-working spaces or the self-employed. Instead, we find that many people involuntarily find themselves in co-working spaces in their own homes.

Research and literature around ‘the’ home office ignore that for most people, ‘the’ home office comprises multiple office set-ups operating in the home with several people working at the same time in the same space. The real home office resembles more a co-working space where different people work on different projects. Unlike people for whom working in a shared co-working space is a conscious choice and who can leave if the working styles of others in the space interfere with their own work, this is hardly an option at home. The existence of multiple home offices allows us to speculate that social relations and human interactions have a role in the home office experience. Yet so far, aspects of co-working and shared working spaces have hardly found their way into the home office literature.

This paper reports on an effort to address this gap. It is an attempt to gain insights into what co-working from home implies and how rethinking the home office as a co-working space may reshape policies, products, and services around our current notion of working in and from the home. Our aim is to provide deeper insights into new ways of working that may, for example, help managers, employees, and employers to develop more appropriate home working policies. At the same time, we aim to inform the development of new products and services that are suitable for co-working and shared ‘office’ spaces in a home.

This paper begins with a review of basic concepts around working from home and the home office. We find three areas or dimensions, that studies have focused on. All of them, we note, build on the idea of one home office worker, one desk, one office. In other words, the social relations, and the human interactions we anticipate existing within a shared workspace and the co-working elements are hardly noted or addressed. To advance our understanding, we suggest a fourth dimension that specifically focuses on aspects of the

social and allows us to frame questions intended to explore this area. We point out that there has yet to be a cross-over between literature and research in the context of co-working and shared working spaces. These insights form the basis for a user research study which we conducted during the home office mandated during the pandemic in Switzerland in 2020. We present and discuss the findings with a focus on the insights on how people working from home view and cope with their own co-working situations.

2. Previous Research

Research about working from home can be traced back to the 1970s. At the time perceived as a new work model, it was first promoted by Jack Nilles who also coined the term ‘telecommuting’ to describe ‘working from home’ (Narayanan et al., 2017). Since then, different terms have been used in various studies to refer to ‘working from home’, e.g., teleworking, homeworking, remote working, e-work, distance work, mobile work, and flexplace. For our purpose, the term ‘working from home’ (WFH) means that a person works from their home instead of the space provided by their employer or another space separate and external to the place they make a living. Co-working and shared working spaces were not common at the time. Work from home centered on the ability of individual workers to be as productive at home (or perhaps more) than in the office building.

Research into WFH has been conducted by various disciplines and from different perspectives, such as management and organization (Griffith et al., 2018), human resources development (Wilkie, 2019), personnel psychology (Felstead & Henseke, 2017), productivity and profitability of organizations (Allen et al., 2015; De Menezes & Kelliher, 2011), regulations and law (Guiler & Kelly, 2009), and with interdisciplinary approach (Meissner et al., 2016). These and other studies have shown that there are both positive and negative aspects of WFH.

Among the many positive aspects of WFH, research has identified better performance and increased productivity (Ansong & Boateng, 2018; Bloom et al., 2015; DuBrin & Barnard, 1993; Global Workplace Analytics, 2009, Hill et al., 1998; Hill et al., 2003); increased flexibility (Ansong & Boateng, 2018; DuBrin & Barnard, 1993; Hill et al., 1998; Hill et al., 2003; Klopotek, 2017), fewer interruptions from colleagues (Courtney, 2020; Iometrics and Global Workplace Analytics, 2020), and saving on time consuming commutes to work (Klopotek, 2017). The latter has gained new relevance in the context of efforts by workers to reduce their CO2 emissions and footprints (Maipas et al., 2021).

The negative aspects that have been reported consistently over time include the problem of overworking or expansion of work hours due to lack of clear transitions (Noonan & Glass, 2012); interruptions and distractions in the home; a blurring of work and home/personal life (DuBrin & Barnard, 1993), and the feeling of isolation that includes a fear of missing out (Schawbel, 2018). However, despite these challenges and disadvantages, WFH remains appealing to some workers (Gainey & Clenney, 2006). It also increases the attractiveness of organizations to employees favoring more autonomy when part of a blended work model (Wörtler et al., 2021) to achieve a more balanced work-life (Afrianty et al., 2021).

More recently, scholars have approached WFH from the gender perspective to highlight the unequal impacts of the pandemic on female scientists (Frederickson, 2020; Minello, 2020; Myers et al., 2020). In this context, it surprises that majority of studies still focus on solo workers and fail to investigate the social dimension that adds to the organizational, physical, technical, and psychological/emotional aspects of WFH. Especially for female employees, the reality of the co-working experience at home in shared workspaces may require different support than is currently offered. But overall, the domestic multi-person office with co-working and shared workspaces has received limited attention in the

literature. To this day, co-working spaces are referring to shared workspaces outside of the home. Within the home, the concepts of co-working are not discussed and with that not addressed. For example, while WFH might lead to a reduction in interruptions from colleagues (Courtney, 2020), how do we account for the interruptions from household members (housemates, partners, relatives, children, etc.)? How do families maintain and organize the multi-person, multi-project spaces within their homes, for example when children do schoolwork from home? Do working couples imitate colleagues when they share a working space? Do they learn from each other while WFH, in a similar way colleagues do in an office? Does their co-working facilitate new interdisciplinary exchanges (Weingart & Stehr, 2000)? Even transdisciplinary when children and young adults cannot help but overhear and may be engage in work issues? If so, what does all this mean for organizational learning – and how may it be brought back into the organization?

All this points to the need to explore the social dimension of WFH.

3. Aspects of Working from Home

The research on home office shows that studies sought to bring in an individual user-centered perspective on the home office and have looked at how the physical/spatial, the digital/technical or the managerial aspects contribute to the home office experience. Therefore, today, we know much about ergonomic set-ups for the office desk, the office chair, and useful tools both digital and analogue that can support the office worker and ways to optimize daily efficiency and overall productivity. The recent research on these aspects of WFH, in summary, addresses communication issues (e.g., Griffith et al., 2018), physical and technical infrastructure (e.g., Reznik et al., 2021; Davis et al., 2020), environment mental wellness and safety (e.g., Unterweger, 2021; Meissner et al., 2016). However, the research on the social relations dimension has hardly been addressed.

Therefore, in our study, we inquired not only the physical/spatial, the digital/technical and the self-management aspects but also the social relations aspect of WFH.

3.1 The Physical/Spatial Aspect

Although the adoption of working from home was increasing as a work model among worldwide even before the pandemic (Global Workplace Analytics, 2020), the research on the ergonomics of home office is limited (Carayon & Smith, 2000), except the great deal of resources giving tips and advice about how to establish an adequate workspace at home (e.g., Pelta, n.d.). However, it is slowly starting to attract researchers due to the forced WFH situation (e.g., Davis et al., 2020).

In their 2005 study, Anjum et al. point out that the work environment is changing rapidly from the traditional office to more flexible workspaces. They invite researchers and designers to focus not only on the traditional office space but also other forms of office concepts including home offices, providing some factors to consider for furniture design (Anjum et al., 2005).

Similarly, the extensive review study by Fan Ng (2010) shows that there is little research on the physical/spatial aspect of home offices. She asks, “How might the extent and choice of teleworking relate to the design and physical conditions of teleworkers’ home workspace?” (Fan Ng, 2010, p.139). Based on our professional and personal experiences, it would not be wrong to say that these two are highly related; therefore, one of the aspects we investigated within the study is the *physical/spatial aspect* of WFH.

As it is self-explanatory, the *physical/spatial aspect* refers to the physical surroundings and space of home office; what constitutes of an adequate and effective work setting (setup) at home. This dimension is related to the space itself, the furniture, desktop products, lighting, acoustics, ventilation, or the lack thereof. Furthermore, the space has an impact on the social relations while WFH, as spatial and social relations construct each other

throughout the daily practices of the remote workers and household members (Richardson & McKenna, 2014).

3.2 The Digital/Technical Aspect

The *digital/technical aspect* of WFH refers to the digital and technical infrastructure and services that enable home office. It might include online services such as remote meeting platforms or digital workspaces (file sharing, collaboration tools, etc.) which are crucial for remote work. For instance, according to a 2019 survey conducted in the US, 14% of people who work from home attend 11 or more meetings a week while only 3% of on-site workers attend that many meetings per week (Owl Labs, 2019). This highlights not only the importance of communication while WFH, but also the high level of exposure to virtual communication, thus the significance of the *digital/technical aspect* of WFH. Besides, recently, using emerging technologies for WFH is being inquired; for instance using smart home technologies for remote work purposes (Marikyan et al., 2021).

3.3 The Self-Management Aspect

In addition to having an adequate physical workspace and necessary technical equipment, WFH requires a certain level of motivation, focusing and self-organization to be productive and work efficiently (Felstead & Jewson, 1999). One would argue that all these skills are necessary also for an office worker, however, when it comes to self-management, WFH could be more demanding and challenging than working in the office due to several factors, e.g., the difficulty of defining working hours. Recent studies show that people tend to work more when they work from home (de Quervain et al., 2020; DeFilippis et al., 2020; Unterweger, 2021).

Apart from organizing oneself, characteristics of work have also an influential role on job performance while WFH, which is not necessarily negative (Golden & Gajendran, 2019). However, while service jobs such as sales, IT support, call center and secretarial assistance might be suitable for WFH, work that is dependent on others or on-site tasks might have a negative impact on the ability to perform the job, thus might reduce the productivity, increase the stress level, and create the feeling of incompetency.

All these issues with many others constitute the *self-management aspect* of the research. By focusing on this aspect, we tried to understand how our participants adapted to the recent model of work and how they organized themselves and their workday to handle the challenges of WFH.

3.4 The Social Relations Aspect

The fourth aspect of our study is *social relations* which makes it significant compared to previous research done on the subject. This aspect refers to the relations within household members, especially when several members work from home in shared home offices.

As the pandemic imposed special circumstances on people, family members had to share the domestic space all day while trying to deliver work related tasks, do household chores, take care of children, and attend distance learning classes. The recent lockdown situation created new social relations and experiences at home which might have a significant impact on the nature of WFH as it is already known that household members have implications on the workday at home. For instance, one of the most cited studies on WFH which shows how WFH successfully worked for the Chinese travel agency Ctrip also finds out that 50% the employees who volunteered to work from home for the study returned to office after the study ends, citing reasons related to social relations aspect of WFH (Bloom et al., 2015). Similarly, being able to take care of children while WFH is

something employees value most about this working model, however, paradoxically, it could be at the same time on top of the list of disadvantages of WFH as it creates interruptions and distractions (DuBrin & Barnard, 1993).

Another example is from a recent study which focused on the impact of COVID-19 on the digital communication patterns while WFH. According to the study of DeFilippis et al. (2020), though the reason being unclear, employees started to work longer and send more emails after business hours. Reasons to that might vary from increase of workload to intentional adoption of flexible working hours. However, given the unprecedented nature of the situation, the increase of workday span could be due to interruptions from family members during regular working hours which might impact the nature of WFH.

Pre-pandemic research on the social relations with family members mostly approached the topic from the perspective of the individual worker and/or from the organizational context. Issues such as distractions in the home for the individual worker (DuBrin & Barnard, 1993), the achievement of work-life balance (e.g., Kossek et al., 2010) -rarely from the perspective of dual earner couples (Haddock et al., 2006), and the impact of WFH on work-family conflict (e.g., Golden et al., 2006) were commonly inquired.

The research on co-working at home revolve around topics of, such as, the impact of WFH on the team performance when one employee's co-workers work from home (e.g., van der Lippe & Lippényi, 2020). However, with the pandemic, the concept of co-working has been transformed to co-workers at home, in other words shared home offices. Hence, new research related to social relations dimension of WFH focuses, for instance, on the division of housework among dual workers (Chung et al., 2020; Craig & Churchill, 2021), on the challenges of dual career ethnic couples who work from home (Arija & Perdhana, 2021), on the changing social scheduling (Popyk, 2021) and on the new

dimension of gender inequality of using space in the shared home offices (Waismel-Manor et al., 2021). These recent approaches also support our line of thinking which signifies the need to inquire into how working couples organize and manage the shared home office, especially, for example, when children are enrolled in distance education. What kind of exchanges, interactions and maybe new relations emerge from this new home and work setting?

From a human-centered approach, these relations and exchanges between family members, experiences, evolving behaviors, and the possible alterations they cause in everyday life are significant for research since it is vital to understand people and their context, i.e., the everyday circumstances. This enables not just a better understanding of people, but also their perspectives, values, lifestyles thus of society which in the end could help providing solutions that work widely in this new model of work, especially for better WFH policies.

4. Methods and Research Design

Our study was conducted during COVID-19 pandemic, between June and December 2020. We conducted a literature review to trace the concepts of WFH and the home office. We paid particular attention to any mention of social relations and human interactions and to shared home offices and workspaces. The literature review informed an online survey we conducted with professionals and students WFH (See Appendix). We asked questions along the three dimensions we identified in the literature (physical, technological, managerial/organizational) and inquired specifically into ‘social relations’ as a fourth dimension. Questions here aimed to find out how and in what way participants’ home office experiences involved social interactions with people in the home. The aims and the human-centeredness of the study required an exploratory qualitative methodology with an

ethnographical focus on the shared home offices. Following Miles and Huberman (1994), we studied the interview transcriptions separately several times. We created excerpts and notes to identify the joys, challenges, adaptations, and future implications of WFH in general and particularly regarding the four aspects of the study. By comparing and validating our notes, we were able to notice patterns according to the four aspects of the study which enabled us to generate a thick description of the topic (Geertz, 2008).

4.1 Online Questionnaire with Professionals & Students

Guided by existing literature and informed by a preliminary round of at-home students' self-observations, we prepared a 12-min. mixed anonymous questionnaire of which its link was shared on digital channels of our institution. It was also published on the social media channels of our research group. The questionnaire (see Appendix) consisted of:

- 3 demographic questions (occupancy type, age group, gender)
- 3 pre-COVID and during COVID comparison questions (weekly hours worked from home, designated workspace at home, how much they enjoyed WFH)
- 4 multi-select multiple-choice questions regarding the four aspects of the study
- 4 five-point Likert scale questions concerning the demands on and from the four aspects of the study
- 2 multi-select multiple-choice question to understand the changes they have made, and they would make to improve WFH situation
- 2 open-ended questions to learn the joys and challenges of WFH.

To collect additional qualitative data, we added an 'Other' option to each multiple-choice question allowing participants to type in their own answer (see Appendix for the results of our questionnaire). To see if there are any special arrangements to enhance working, we requested photos of workspaces in homes; however, we did not receive any.

With this data, the aim was to understand how work life was affected in terms of the four aspects of the study and to have a better idea of the current WFH situation. We also wanted to investigate the challenges and joys of WFH with open-ended questions.

We received responses from 6 male and 12 female participants, in total 18 participants consisting of 13 professionals (10 from Switzerland, 1 from Australia, 2 from Turkey) and 5 students from our university. On the other hand, 6 of the survey respondents (all professionals) opted for a follow-up interview which generated our main set of data (see Table 1 for the interviewee profiles).

4.2 Follow-up Interviews with Professionals

As being one of the commonly used tools of qualitative studies, semi-structured interviews are based on the use of an interview guide which is constructed of open-ended questions that follow certain topics in a particular order (Bernard, 2006). Semi-structured interviews are broader and more free allowing the inquiry to go further and/or deeper when compared to structured ones (Fontana & Frey, 2005). This type of interview leaves the researcher to follow the reactions of the interviewee and change the direction of the interview according to the interviewee's statements if it is needed. The semi-structured type of interview is important for the qualitative researcher since "it gives access to people's meaning-endowing capacities and produces rich, deep data that come in the form of extracts of natural language" (Brewer, 2000, p. 66).

We conducted six in-depth, semi-structured interviews using Zoom platform which lasted between 45 minutes and one hour. The interviewees were asked to join the interview from their workspaces in their houses (5 conformed to this) which provided us access to their home offices and the opportunity to use the 'show & tell' technique when necessary.

Before the interviews, we studied the participant’s questionnaire answers and decided on some follow-up questions. However, to understand the work setup and the social relations better, we started with basic demographic information on the household and descriptive information on the physical setup of the workspace. Then we asked them to describe a typical workday before COVID, a typical workday during lockdown and a very bad workday during lockdown which provided us information about how they work and the joys and challenges of WFH, then we probed further where necessary. Since the interviews were semi-structured, we followed a rather flexible flow which allowed us to probe into a statement or insert our follow-up questions from the questionnaire whenever appropriate. Finally, we asked about their opinions on their employer’s handling the situation and if they were satisfied with its approach towards WFH.

After the interviews, we asked them to send photographs of their workspaces which we regarded as visual ethnographic data and they were contributory and supplementary to the interview transcriptions.

All interviewees have been assured of the anonymity of their identities.

Table 1 Interviewee Profiles

	Gender	Age	Occupation	Household Type	Partner
I 1	male	37	Manager - Switzerland	Partnered w 2 kids	Unemployed
I 2	female	38	Researcher - Switzerland	Partnered w 1 kid	WFH
I 9	male	36	R&D Manager - Turkey	Divorced (has a pet bird)	----
I 16	female	47	Research Coordinator - Switzerland	Divorced w 1 teen	----
I 17	male	37	UX Designer - Turkey	Partnered w 2 kids	WFH
I 18	male	42	Assoc. Director - Switzerland	Partnered (has a cat)	WFH

5. Findings and Discussion

In this section we display and discuss our key findings according to the four aspects of the study separately, however, the boundaries between these aspects are not always sharp. A finding related to one dimension we describe might also be related to another aspect. We attributed the data that points to more than one dimension to the one we found most significant.

5.1 Physical/Spatial Aspect

Our study confirms that the spatiality of home – its features and limitations – directly impacts on the ability to enjoy as well as the decision and satisfaction of WFH. The cozy feeling provided by the comfort of the home; the absence of distractions by colleagues (up to a point), the ability to engage in exercises between work sessions, are core factors. So are the freedom to switch actual work locations – by using a variety of spots with different qualities in the home (this was mostly mentioned by students) and – for those who participated in our study – a comparatively quiet place to study and work that came with the benefits of having control over the room temperature and when to allow for fresh air. However, the perceived limitations of their physical/spatial home weight heavier on most. For some of our respondents, the lack of a spatial distinction between work and home created confusion and uneasiness. These participants reported that the spatial perception of being at home affects their mood, their motivation, and their productivity:

“Because it [the office] is a formal setting, it is another setting, it does not mean that I don't work [at home], it just feels different. [When you are at the office] It feels you're at work. At home you work differently, because it's just... you have the fridge, you have the coffee machine very close by, you put in the washing from time to time, it just feels different” (I 16, research coordinator).

Motivation and productivity are not only affected by the perception of space but also by the quality of the physical setup at home. Our findings confirm that both affect the

efficiency and productivity of WFH. Employers and experts have been giving numerous tips and advice on how to create a ‘proper’ home office since the start of the pandemic (e.g., van de Weetering, 2020). However, creating an adequate workspace at home remains far more challenging for people working from home despite available expert advice.

We tried to understand what this means for our participants and asked specifically to share with us how they improved their WFH situation. ‘Converted a space into workspace’ was the second most selected choice after ‘bought technology’. Our respondents have been creative in terms of converting space into workspace according to their needs (Figure 1). Everyone found a unique solution to make their physical environment suitable and convenient enough to pursue work related tasks and to incorporate work into their daily lives at home. This incorporation is a dynamic process in which people keep adapting the physical setup according to the changes occur in their needs, in their work tasks, in the needs of the family or according to the demands from the physical setup. Most reported on a process of *trial and error* they had to go through to determine which physical setup works best for them. However, according to our survey, more than 60% of our respondents say that they need to further improve on their physical setup if they need to work more from home in the future. In general, our data points to the illusion of a one-size-fits-all workspace setup. This, in its own right, is challenging the assumptions underlying studies that assume the home office to be about one person, one desk, one office in the same way as an office building has been providing workspaces with the same table and the same chair for all its employees.

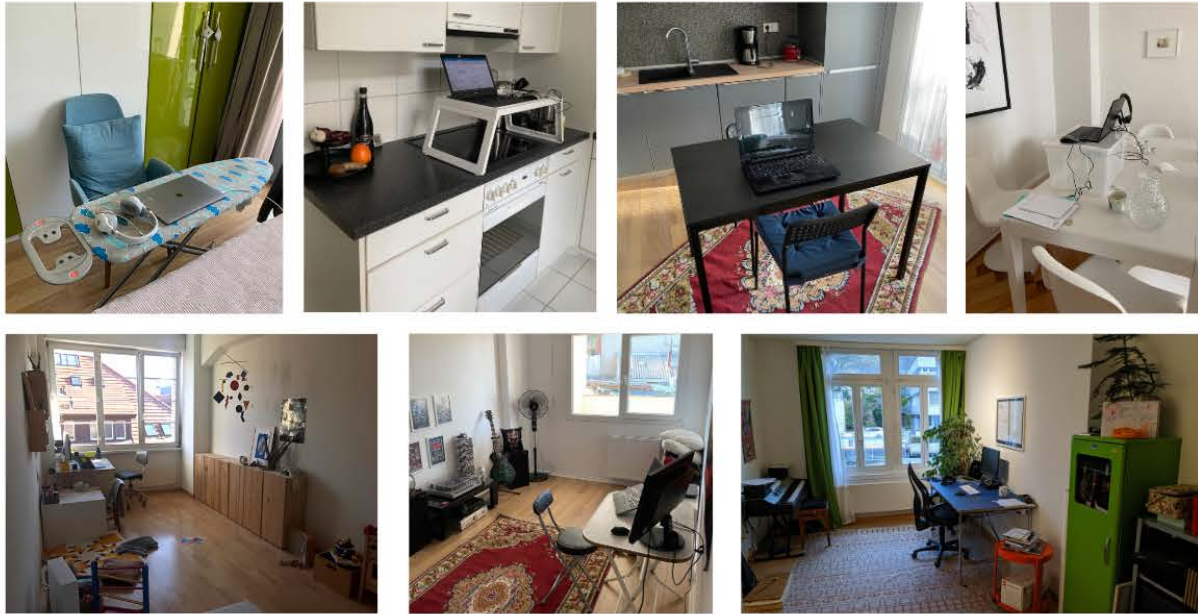


Figure 1: Work setups of our Interviewees

The current uncertainty of the situation creates a challenge for some of our respondents who do not have a designated workspace at home. They create temporary solutions with what they already have or could gather quickly. Just by looking at some of these wobbly set-ups, one cannot help but foresee how they trigger health problems in the long run – especially neck, shoulder, and back pain. These temporary and improvised spatial solutions can also be expected to influence people’s motivation, productivity, and efficiency, all of which may contribute lead to resenting WFH. For our participants, creating a temporary or ‘not-so-proper’ workspace was linked to financial and aesthetic concerns. First, gathering good quality office furniture presents a costly personal investment. Understandably, people think twice about budgeting for something that could become idle in some months when they return to their office desk in their organization. But the resistance is also rooted in a general expectation that materials and equipment need to work efficiently and productively are to be provided by the employing

organization. It is an interesting new twist in the concept of the sharing economy when employees in traditional businesses and institutions begin to share their own tools, flats and materials with their employer. Before the pandemic, this was a concept limited to Uber and Airbnb. The consequences of this have yet to be explored and understood. For the person WFH, any improvement in their physical work setup at home, especially if it involves a move to a bigger flat with a designated study room, directly benefits their employer:

“Because I think they [employer] profit also a lot, if I can focus that much, they profit a lot, so maybe they can also support the equipment or the space” (I 2, researcher).

Some of our interviewees were granted the option of taking home their office screen and office chair during lockdown period; others received reimbursements for internet bills and discount offers in certain stores to purchase home-office equipment. However, this is not just an expectation due to mutual profit but a question of employer responsibility and employee rights (Swissinfo, 2020; Brouzos et al., 2020) when it comes to WFH.

A second rationale for improvising was mentioned by respondents who did not have a designated study room. They were concerned with interfering with an otherwise carefully designed aesthetic ‘atmosphere’ of their living room or bedroom. For them, the presence of an ‘ugly’ office chair or a printer presented an intrusion into their home. This resistance points to the desire to keep the concept of home/private life and office/work separate from each other. The effort to keep personal and professional life separate is not limited to emotional aspects of working from home but extends to the physical and spatial realm. Resisting to create a ‘real’ office at home ensures that these two worlds are kept apart – both in the mind and in physical spatial terms.

One participant who struggled with this separation insisted that converting a space at home into workspace should be avoided (be that the hobby room or the couch):

“I think we should not be converting one thing into another at home [...] I make that distinction strictly; for me home is home, workplace is workplace. I mean, I work at workplace, I relax at home. You know, these two... they say, “Worlds collide”, when worlds collide, I lose it... What to do where... It makes me uncomfortable”. (I 9, R&D manager)

This echoes DuBrin & Barnard’s observation (1993, p. 17) that “the day never ends.” This state of being intertwined due to the lack of spatial distinction/separation might drive our everyday lives in a way we are not used to before. As one participant noted:

“My balance has been completely lost. Now, when I am at home, I constantly think about work. Playing guitar, playing computer games, drinking coffee, etc., I do not consider these anymore. Normally, when I was at home, I was thinking such things, now, I don’t; I immediately think about work or right after breakfast, I think to myself “I was going to do that thing”. (I 18, assoc. director)

5.2 Digital/Technical Aspect

In regard to the digital/technical aspect of WFH, we noticed that for our participants the challenges and downsides of the digital work life outweigh its joys and its opportunities. The sole joy seems to be found in the practicality of digital meetings that are perceived as easier to organize than physical get-togethers. This joy, however, is tainted by increased screen time and the fatigue it brings, numerous technical issues or inadequacies, the artificial feeling of online meetings and personal concerns about privacy and data security.

At least partially, the experience that WFH poses more challenges than enjoyment might be traced to the ever changing and evolving ways of tools. In line with Nellis (2020); Rana & McLymore (2020) and Spataro (2020), our respondents describe an overwhelming situation with an increasing number of various digital platforms, collaborative tools and equipment features in addition to an increase in number of users.

With that comes an obligation to learn new online tools frequently. Our respondents reported feeling pushed to learn yet another digital tool or meeting on yet another digital platform. However, some also expressed that although they felt reluctant to try a new tool in the beginning, they found it useful after giving some time to it, learning it and seeing how to use it efficiently in time. This learning curve is not only necessary to learn and excel digital tools, but also to change the preconceived opinions about them (Semuels, 2020).

Almost all participants stated that their digital casual meetings do not compensate for the spontaneous chit-chats they enjoy when they are in the office or come together for lunch. Considering our engagement with the digital world today and in the future, a reassessment and redesign of digital tools is needed and can be expected to have a profound impact on future ways of working from home:

“How can we translate our experience and the things we know from the physical world into the digital way of working?” (Quote from one of our students).

A recent extensive survey study shows that when teleworkers are satisfied with such tools, it increases the collaborative productivity (Dahik et al., 2020). The encouragement, support and guidance from employers, supervisors and colleagues seem to play a critical role here, and is also stated by corporations (see Allianz SE, 2020).

Considering that we found ourselves in a post-digital era, it is interesting to hear that some of our participants expressed surprise that the sudden and unplanned shift was handled well by their company/institution: “I have never thought that this would work” (I 9 and I 16).

In the context of our study, this may be an indication that it is still challenging to change the traditional mindset of individual workers for whom work means going to the office buildings where your colleagues are.

Just like in matters of the physical setup, participants reported on applying a *trial-and-error* process to find out what works best regarding their digital/technical setup of WFH.

They continuously keep improving their digital/technical setup according to their changing needs by buying better quality equipment, increasing Internet packages, or by creating their own solutions to deal with the challenges they encounter. For instance, they may be deactivating videos during meetings especially when there are concurrent meetings in the household, teaching children when not to watch internet videos or exchanging the day and time of important online meetings with partners.

Much of the digital/technical dimension of working from home serves to achieve a professional appearance during online conferences. This includes creating proper lighting situations, properly placing the camera and creating an appropriate physical background or simply making use of a virtual background. Nowadays, it is common practice to use virtual backgrounds to hide personalized, maybe not so appropriate spaces and to create a more professional look (sometimes just for fun). With virtual backgrounds idealized sceneries or images are being created to look more professional. According to a recent survey done with 2025 full time remote workers in the US, 56% of the participants found it necessary to get dressed up for a video meeting (Owl Labs & Global Workplace Analytics, 2020). However, as one of our students notes:

“Looking nice and professional is not always possible. We need to learn how to deal with this without affecting us negatively”.

Since homes are personal and shared spaces, some of our participants are concerned with how professional they will be perceived assuming that it will affect the work relation, decisions and impression. For instance, if they are working in kids’ room, they pay extra attention not to show toys in the background.

This is another indication of the presence of the social in WFH and that it remains poorly addressed.

5.3 Self-Management Aspect

Confirming the literature and recent survey studies (Dahik et al., 2020; Deloitte AG, 2020), more than 60% of our survey participants feel more productive when they work from home. Although the rest did not feel more productive, they still enjoyed working from home during or after lockdown. Moreover, all our participants (specific to their own circumstances) enjoyed and praised the flexibility WFH provides: the flexibility in working hours, the flexibility in space and location as well as the flexibility of pacing their own work. 44% of our survey participants enjoyed working from home after lockdown ‘very much’ and 22% enjoyed it ‘somewhat’. Especially for families with small children, organizing workdays is easier and better when they work from home which brings other challenges at the same time such as care giving tasks, internet sharing, cooking for them, etc., however the flexibility aspect overrides.

Again, no one-size-fits-all solution exists for self-management when WFH, which is consistent with recent studies as well. Referring to a study conducted by Sadun, Kost (2020) summarizes, “This is one of those things where it’s hard to make one statement for everybody. If you have a large house, life is good. If you have to combine your bedroom with your office, it’s not as good.”

While self-management might be challenging for one participant, for another it might pose few problems. We, too, found some people easily find solutions to handle organizational problems or adapt themselves to this new working model, while others struggle. As has been pointed out in the literature, factors including personality, household type and size, work habits, work type and work task play a role. For instance, when the job requires being on site, WFH might increase stress level rather than productivity, as in the case of Interviewee 9, who is a manager at a manufacturing company. Although his company adopted the necessary online communication and management services and tools efficiently, he felt he was not able

to control some on-site issues properly from home with these tools. This supports the view that manufacturing companies require a collaboration tool specifically designed for manufacturing to be able to provide equal conditions for all type of work tasks (De Bernardini, 2020).

Apart from work habits or type, the lack of seemingly insignificant skills like cooking might have a negative impact on the joy of WFH. Preparing lunch itself was reported to be a burden for some of our participants. Being “not good in the kitchen” or fearing “the whole activity requires more time than eating at cafeteria”, they mourned the loss of regular food:

"[...] at least I eat lunch there [at the office]" (I 9, R&D manager).

Although it is claimed that WFH makes the work more distinct as “the focus shifts from office formalities to the work itself, because the work is what's most visible” (Knight, 2021), some of our participants felt that they had to “show” that they were “working”, especially in the beginning of lockdown:

“At the beginning what I [was] thinking that if you work in the office, you are working just by being there. This already kind of counts as you [are] being productive, the change of place. If you stay at home, you actually [have] to do something for in to be work. This was the case in the beginning, but this disappeared. Now, I don't feel this anymore in anyway” (I 1, manager).

In the analogue world, being present in the office was counting as and synonymous with working. Being physically there was a way to demonstrate that one delivered on tasks, or at least was eager to deliver them. However, with the sudden transformation of WFH, the visibility of someone is working challenge of ‘showing’ one is working occurred. Based on our interviews, in the beginning of lockdown (the transformation-adaptation phase), the effort of being always online produced overtime work, meant a loss of tracking working hours and breaks and contributed to a blurring of boundaries between work and private life. This was

due to the pressure of assumed expectation of being always reachable. In conclusion, a negative WFH experience was gained initially:

“Working from home is not as relaxed as working from office [...] You are expected to work 7/24 when you are working from home. [...] It was a general complaint; the concept of work hours was lost; you are expected to be in front of the computer all the time. [...] I try to use it very carefully, the status in Teams. I always try to keep it at ‘available’. For example, I feel uncomfortable when it shows ‘away’” (I 9, R&D manager).

However, our participants were able to adapt over time. Once they realized that poor self-management had direct effects on their physical and mental health and after realizing that the duration of WFH might be prolonged, they started to make better use of digital tools to work with colleagues, report and communicate. In other words, they practiced better self-management:

“I have also started to block these times to really make use of this focused work, as kind of a meeting, so everyone thinks that I am in a meeting, but I just block the time for [myself]” (I 2, researcher).

Creating a healthy exchange while WFH is significant for both sides, not only for subordinates, but also for supervisors, hence in general significant for the organization. When employees or teams start WFH without proper training, it might cause a negative experience, negative outcome and thus the termination of WFH (Wilkie, 2019).

The communication between colleagues or supervisors becomes even more important when there is a hybrid model within a team. If some employees work on site and some from home, the WFH employees might feel neglected or as if they are missing out critical information which circulates via personal contact or informal chats, which might be strategic for promotions (DuBrin & Barnard, 1993, p. 17), also stated by Interviewee 1:

"[If] Most of the people are [at the office] and I am not, then I have the impression of I am missing something, I can't connect that much with the people and I am missing discussions, all [these] informal meetings, just a connection to the colleagues. So, I am very aware of that as well. When

deciding if I go to the office or work at home, peer pressure is an important factor for me. It just affects my decision. If I am at home and all the others are in the office, I do have a disadvantage" (I 1, manager).

5.4 Social Relations Aspect

As anticipated, we found a range of indicators that affirmed our participants to be co-working and sharing workspaces. WFH entails special social relations around the home, especially when both partners work, and children are enrolled to distance learning. In this regard, the joys and challenges are inevitably intertwined. Almost all our participants stated that WFH home is joyful in the sense that they can spend more quality time with their families and pets. But at the same time, they describe it as challenging and exhausting. Since all family members are at home most of the day or all day, sharing the home office, organizing the day, and managing work at the same time, people find themselves in relentless co-working situations that we know requires special arrangements. Yet, insights into co-working spaces, co-working practices and co-learning cultures (i.e., Lahti et al., 2021; Bach, 2015) have yet to be aligned with our studies into working from home.

These arrangements (strategies) reach beyond self-management issues and self-organization, just as they reach beyond the physical/spatial and the digital/technical dimensions that shape the home working experience. The social dimension involves negotiations of daily/weekly meetings and workload both relating to the office and to home maintenance between partners, coordination of who works where at the house and when, adapting workday to children's day structure and coordination of household chores. Tasks like taking children to school, picking them up and childcare at home are also needed to be coordinated among our participants with kids. For some of them, non-working partners might be overwhelmed with childcare which creates guilt for the working partner. Moreover, knowing that they are playing next door and not being able to join them sometimes leads to guilt for the working partner. On the other hand, seeing children right after a difficult meeting

quickly helps them to forget work-related concerns: “I see much more directly that life goes on” (I 17, UX designer).

Having different responsibilities in the same space creates confusion not just for our participants but also for their children. They had to learn the concept of WFH, the daily structure and what is allowed and not allowed while parents work at home. It is advised that with the ‘new normal’, WFH parents could try integration rather than balancing, in other words, a new mindset which based on thinking work and family time not as “distinct and separate blocks” as they were once (Wheeler & Gunasekara, 2020). However, some of our participants discovered that creating strict rules for children works better for every family member which helps children to differentiate work time and family/play time.

According to our interviewees, WFH with the presence of children was most challenging during the pandemic lockdown situation when children were also learning from home. The distance education model resulted in parents feeling responsible to monitor their teenage children which created additional task and challenge while WFH. On the other hand, the dense ‘togetherness’ with children during quarantine was described by one of our participants as “great time” once they were able to organize themselves:

“One week it was hard, but then we really had a good vibe in the family. We really remember it as a great time. I actually wanted to make a photo album about the time we spent together because all we did in our spare time; we did as a family. So, this is a good memory, I have to say” (I 1, manager).

Although WFH in shared home offices with family members creates its own challenges, it is still favorable for families with kids since it provides flexibility (DuBrin & Barnard, 1993):

“For me, I realize also that it is much [easier] to organize childcare and work together. Yeah, it is not that complicated... You have other [challenging] issues [of WFH], but overall, I would say, it makes it better for women and men which have a childcare to take over and are ambitious at work” (I 2, researcher).

For people living alone, WFH seems to be also challenging but in another way; they can feel more isolated compared to not-living-alone teleworkers. Especially with the special pandemic conditions, living-alone teleworkers could not only see their colleagues but also were not able to socialize with friends. For instance, Interviewee 16 tried to overcome this struggle by working a few hours at a café back while they were allowed to stay open, and she found this helpful.

WFH not only taught new ways of coping life to our participants but also new things about their partners. Sharing the home office, naturally made the work-personas visible for each other which led to, e.g., increase in the exchange, learning new things about each other or learning more about each other's jobs and tasks.

The findings of our study align with previous research also in that the three aspects commonly addressed – the physical, the digital/technical and the self-management. These aspects are well understood by the participants, and they can articulate their needs and experiences around these quite well. However, the one aspect that we hypothesized is also playing a significant role in the experience of the home office, the social relations/human interactions, is commonly downplayed by the participants as if it had nothing to do with their work experience or work in general. In fact, our participants would only marginally refer to these and often only if prompted, it became clear in the conversations that these social relations and interactions often shaped how they work from home. Most of the participants had developed coping strategies such as putting different stickers on doors to guide children present to when they could interrupt a parent and which parent to interrupt first.

6. Conclusion and Implications

Our findings indicate that a deeper understanding and acknowledgement of the situational aspects of shared home offices that takes into consideration the social relations and human

interactions is needed to inform future practices, aid the development of more suitable work-
set ups in the home and point to hidden benefits, for example when it comes to
interdisciplinary and transdisciplinary learning. These insights are relevant for managers and
organizations alike. Although our study is admittedly limited, it does provide initial answers
and insights into the use and experience of the home office as a co-working and shared
workspace. We have been able to demonstrate that the social aspects and those relating to
human interactions are as important to consider in our growing understanding of WFH as are
the spatial/physical, technological/digital and managerial/organizational dimensions.
Accounting for the social, the reality of multiple offices in one home as part of working will
add new depth and allow for improved practices and new models for people to work
effectively within their private homes. When we begin to look at how people really work from
home – from the banalities of whether they are sitting, standing, spreading on sofa, etc. – we
allow for new ways to think about work and new concepts of work environments.

Regarding the four aspects of WFH, there is no one-size-fits-all solution. The future of
work seems like a combination of WFH and in the office: a hybrid, blended and flexible
solution. With that, WFH remains a dynamic concept that involves learning for everyone
involved.

Our study underlines that the four aspects of WFH have significant impact on the
way we work from home, which raises the question of how much responsibility an
employee has for securing a work environment at home. It is crucial providing necessary
tools and guidance to employees so that they could better manage and organize
themselves for a better and positive WFH experience. This question is also relevant in
terms of future efforts at creating family friendly jobs, considering that the social relations
around shared home offices determine how we and others around the house live, play and
work which eventually affects the productivity.

Another question is, will the home office return to be a singular affair, i.e., for an individual worker or will the future home office accommodate, let us say, a dual career couple and if so, how can we take these insights forward?

Even if we overcome the pandemic finally, large employers have begun to institutionalize home office options for their key staff. And this may open new options for work-life models for working couples as well as workers with families. Already we see in the public sector efforts to envision new work models and work profiles that build on these new opportunities. For managers and organizations, this also presents opportunities to attract a more diverse group of managers from different backgrounds. Such research and resulting new practices may be especially helpful in attracting more female managers.

7. Suggestions for Future Research

Our limited research shows that further research is needed on shared home offices focusing on the social relations and human interactions with family members while more than one household member learns and/or works from home. With a qualitative approach, future work can include perspectives from couples who represent various interdisciplinary, cultural, ethnic, and economic backgrounds, and furthermore children of the household. Understanding the opportunities of the home office from a social and relational perspective allows us to envision new forms of ‘office’ furniture, for example, reflecting both an acceptance of new life and work balances in ways that support healthier physical and mental habits. Here, it will be of particular interest to explore the implications for ‘boundary management’ (Kossek et al., 2012).

We hope that our initial findings serve as input for much needed further research since the pandemic seems to continue, and after the pandemic is over, many workers are

considering models of WFH more than ever (Dahik et al., 2020; Colombus Consulting, 2020; Deloitte AG, 2020).

8. Limitations of the Study

As design researchers, with a human-centered approach, to gather information, we explored experiences of everyday life of people; we tried to understand the lived experiences of individuals focusing on their personal narratives when WFH.

Due to the qualitative nature of this limited research, the main data of the study is generated through in-depth, semi-structured interviews. Different from quantitative studies, qualitative research focuses in depth on relatively small samples that are selected purposefully, where the researcher selects information-rich cases to study in depth (Patton, 2002). Therefore, without the aim of representation of a larger cohort, we focused on a small number of interviewees to conduct an in-depth analysis. Nonetheless, the data generated allows for valuable insights due to thick data, rich details and descriptions.

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APPENDIX – Summary of the Survey Results

Working from Home

October 2020

33.3% male
66.7% female

Age Groups

- 18-24: 1
- 25-34: 11
- 35-44: 8
- 45-54: 2
- 55-64: 10

Designated Workspace

- I had a designated workspace at home: 11
- I did not have a designated workspace at home: 10

Other:

- 1 UX Designer - Turkey
- 1 Public Service - Australia
- 1 B&D Manager - Turkey
- 1 Assoc. Director - Switzerland
- 9 HSLU Employee

Quote: "Because [the office] is a formal setting, it is another setting, it does not mean that I don't work [at home]. It just feels different."

Quote: "I think we should not be converting one thing into another at home [...] I make that distinction strictly for me home is home, workplace is workplace."

When I work from home,

88.9% I prefer sitting.

68.7% I mostly work in one location.

66.7% I have a permanent work set-up.

63% I feel I have or am able to create an adequate workspace.

59.0% I work in a space where I can close the door.

44.4% I make some physical arrangements so that I am able to concentrate.

33.3% I use things I originally bought for other purposes to create my workspace.

22.2% I have to share my workspace with others.

16.7% I make physical arrangements for confidentiality/privacy.

16% I tend to spread out my work on the sofa/couch/bed etc.

0% I prefer standing.

Other:

- I prefer to have enough sunlight.
- I share external office with friends.

Quote: "Since I realised that this situation will continue like this, I will create a workspace at home similar to my office."

When I work from home,

88.9% I am often by myself.

50.0% I feel well supported by my supervisors/instructors/colleagues.

38.9% I benefit from other people being around.

27.8% I am taking care of others (children, elderly, pets, etc.).

16% My work interferes with the needs of people around me.

16% Most of the day, people around me wear earphones/headphones.

0% I am often distracted by people around me.

0% People around me interfere with my work.

Other:

- I am distracted by my private life (habits, to-dos, mind set).

Quote: "I adapted my lunch breaks to [my child's] timetable."

Quote: "The kids have to learn to accept that shut door, just can't walk in. But they know how it works now."

When I work from home,

94.4% I have access to my employer's/university's server.

94.4% I can arrange and participate in online meetings (Zoom, Teams, etc.).

83.3% I use collaborative digital tools (Google Docs, SharePlus, etc.).

77.8% I share the internet access at home with others.

33.3% I use digital workspaces for collaboration (MURAL, Miro, Notion, etc.).

27.8% Most of the day, I wear earphones/headphones.

16.7% I share computer equipment with others (Computer, printer, etc.).

0% I share the software I use with others.

Other:

- I use own printer, office supply, copy machine, letters and stamps, take care for coffee supply, cook lunch.

Quote: "I am very surprised that, you know, things worked that well. Instead of meeting, showing papers and then looking at the piece of paper, we also share desktops. It is amazing how things work."

When I work from home,

63.9% I feel more productive.

63.9% I feel more in control of my work pace.

55.6% I engage more in sports and exercises.

55.6% I lack physical, human connection with co-workers and others.

50.0% I do take appropriate and healthy breaks.

44.4% I take additional steps to structure my day.

44.4% I need to find ways to motivate myself.

22.2% I engage less in sports and exercises.

22.2% I join online Happy Hours/Coffee Chats, etc. from my work.

16.7% I feel less in control of my work pace.

16.7% I have initiated an online casual meeting like a Happy Hour.

16% I use reminders to take breaks.

0% I tend to do house chores rather than my work.

Other:

- Die Spaziergänge mit meinem Hund machen mich produktiv.
- I spend less time in public transport, see more friends.

Quote: "Working from home is not as relaxed as working from office [...] You are expected to work 7/24 when you are working from home."

Quote: "But generally, I was really focused, also really efficient. All this informal talks or distractions I have in the office, they were not there at home."

Demands on and from...

physical set-up
e.g. things needed to get working or consequences from sitting, standing

digital/technical set-up
e.g. cost, access, knowledge related to digital/technical set-up

social context
e.g. tending to others at home or aligning work schedules with them, agreeing on workspaces and work times

self-organisation
e.g. managing household chores and working tasks and responsibilities

Quote: "How can we translate our experience and the things we know from the physical world into the digital way of working?"

Quote: "I see the advantages of working from home, so I would prefer if we could keep this at least partially."

Have you made any changes or additions to your home to improve your working from home situation?

44.4% Bought technology hardware/electronic equipment

33.3% Converted a space into workspace

27.8% Bought piece of furniture

22.2% Moved workspace

22.2% No

11.1% Bought digital service (internet, network, streaming etc.)

5.6% Bought new software

5.6% Bought lighting products

5.6% Bought carpet

0% Bought room dividers

Other:

- I rented a co-working space.

Quote: "Because I think [my employer] profit also a lot, if I can focus that much they profit a lot, so, maybe they can also support the equipment or the space."

Overall, what are the 3 biggest challenges for you when working from home?

Self-management

- Lack of socialization
- Self motivation

Overall, what are the 3 most beneficial things for you when working from home?

Flexibility

- No commuting
- Working at the comfort of home

Quote: "My balance has been completely lost. Now, when I am at home, I constantly think about work! Playing guitar, computer games, drinking coffee, etc... I don't consider these anymore."

Quote: "In general, I don't like working from home every day. Because I really miss the interaction with people; the personal interaction."

Quote: "For me, I realise also that it is much more easier to organise childcare and work together [...] You have other issues, but overall, I would say, it makes it better for women and men which have a childcare to take over and are ambitious at work."

Quote: "I've never thought that this would work!"

If you would need to work more from home in the future, what would you like to change or improve first?

61.1% Something that improves my physical set-up (better light, better chair, better table, etc.)

33.3% Something that improves the way I co-work and share my workspace in the home

33.3% Something that helps me with my self-management and/or self-organisation (better work-personal life separation, spare time for sports, better organise leisure time, etc.)

27.8% Something that improves my digital/technical set-up (employer provided equipment, software, subscriptions, internet, etc.)

22.2% Something that better clarifies my organisation/superior's expectations

Other:

- Maybe some set days in office, with team meetings etc. on those days.

Quote: "I don't think we could look at this isolated just on the home office. I think it is really connected to our understanding of work in general. The hierarchical structure is one and control is one part of these... I think it's hard to just switch to the home office and leave everything else as it was before."