SCM
Studies in Communication and Media

FULL PAPER

Well-known phenomenon, new setting: Digital stress in times of the COVID-19 pandemic

Bekanntes Phänomen, neues Setting: Digitaler Stress in Zeiten der COVID-19-Pandemie

Cordula Nitsch & Susanne Kinnebrock

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

Cordula Nitsch (Dr., corresponding author), Department of Media, Knowledge and Communication, University of Augsburg, Universitätsstr. 10, 86159 Augsburg, Germany. Contact: cordula.nitsch(at)phil.uni-augsburg.de. ORCID: https://orcid.org/0000-0002-2369-2332

Susanne Kinnebrock (Prof. Dr.), Department of Media, Knowledge and Communication, University of Augsburg, Universitätsstr. 10, 86159 Augsburg, Germany. Contact: susanne.kinnebrock(at)phil.uni-augsburg.de. ORCID: https://orcid.org/0000-0002-9723-1387

© Cordula Nitsch, Susanne Kinnebrock

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

FULL PAPER

Well-known phenomenon, new setting: Digital stress in times of the COVID-19 pandemic

Bekanntes Phänomen, neues Setting: Digitaler Stress in Zeiten der COVID-19-Pandemie

Cordula Nitsch & Susanne Kinnebrock

Abstract: Digital stress caused by the proliferation and omnipresence of digital media has been attracting scientific interest for several years. The physical contact restrictions related to the COVID-19 pandemic have further increased the importance of digital media in people's professional and private lives. This article investigates the consequences of this new situation for people's perceptions of digital stress. It applies a lifeworld perspective and considers several individual and situational factors. Our study was based on semi-structured interviews with German adults. Five key findings emerged: (1) during the pandemic, digital stress was predominantly caused by home office work; (2) already-known stressors were amplified in home offices; (3) digital devices contributed to the dissolution of boundaries between work and private life; (4) people experienced multiple stressors simultaneously, both digital and analog; (5) the private use of digital media was not associated with stress but perceived as saving social connections. Furthermore, the results show that the experience of digital stress is highly dependent on situational contexts and individual lifestyles.

Keywords: Digital stress, digital media use, health and well-being, COVID-19 pandemic, semi-structured interviews

Zusammenfassung: Digitaler Stress als Folge der Verbreitung und Omnipräsenz digitaler Medien stößt bereits seit einigen Jahren auf wissenschaftliches Interesse. Die mit COVID-19 verbundenen Kontaktbeschränkungen haben die Bedeutung der digitalen Medien im Berufs- und Privatleben der Menschen noch weiter erhöht. Dieser Beitrag untersucht die Folgen dieser neuen Situation für die Wahrnehmung von digitalem Stress. Er wendet eine lebensweltliche Perspektive an und berücksichtigt verschiedene individuelle und situative Faktoren. Die Studie basiert auf Leitfadeninterviews mit deutschen Erwachsenen. Es kristallisierten sich fünf zentrale Ergebnisse heraus: (1) digitaler Stress entstand während der Pandemie vor allem durch die Arbeit im Homeoffice; (2) bereits bekannte Stressoren wurden im Homeoffice verstärkt wahrgenommen; (3) digitale Geräte trugen zur Auflösung der Grenzen zwischen Arbeit und Privatleben bei; (4) Menschen erlebten mehrere Stressoren, sowohl digitale als auch analoge, gleichzeitig; (5) die private Nutzung digitaler Medien wurde nicht mit Stress assoziiert, sondern als Rettung sozialer Verbindungen wahrgenommen. Darüber hinaus zeigen die Ergebnisse, dass das Erleben von digitalem Stress stark von situativen Kontexten und individuellen Lebensweisen abhängig ist.

Schlagwörter: digitaler Stress, digitale Mediennutzung, Gesundheit und Wohlbefinden, COVID-19-Pandemie, Leitfadeninterviews

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

1. Introduction

The proliferation and omnipresence of digital media are known to affect health and well-being. One phenomenon that has attracted academic attention in this context is digital stress – that is, stress reactions triggered by environmental demands that originate from the presence or use of information and communication technology (ICT) and that exceed people's coping resources (Freytag et al., 2021; Reinecke et al., 2017). Digital stress can substantially affect a person's health and is often related to depression, burnout, and anxiety (Reinecke et al., 2017, p. 90). Studies on digital stress usually focus on ICT use at work (e.g., Gimpel et al., 2018; Tarafdar et al., 2011) or in private life (e.g., Reinecke et al., 2017; Weinstein & Selman, 2016). Such studies identify and distinguish different stressors, consequences for health and well-being, and coping strategies. As research on stress is rooted in psychology, studies tend to concentrate on the underlying psychological constructs and consequences of stress (e.g., effects on mental health) while paying less attention to the manifold situational contexts in which stress arises.

The COVID-19 pandemic has resulted in massive changes in people's lives. Everyday routines have become obsolete due to curfews and physical contact restrictions. The pandemic has impeded gatherings with friends and family, shopping trips, restaurant visits, vacations, and hobbies, while home offices and home schooling have become the "new normal". Overall, we have witnessed a shift of everyday life into both the private sphere and the digital space. Unlike before, people spend most of their time at home, and digital media use has increased significantly (e.g., Bitkom, 2020).

This article investigates digital stress under these new conditions brought about by the COVID-19 pandemic; in other words, we examine an already-known phenomenon in a new situation. Our aim is to gain an in-depth understanding of digital stress experiences during the pandemic. We apply a holistic lifeworld perspective to the phenomenon of digital stress and consider both private and work-related uses of digital media, whereas previous studies focused on either one or the other. Furthermore, we consider the situational context of the COVID-19 pandemic and various other individual and situational factors (e.g., age, phase of life, family status, living situation, experience with remote work, work situation) that may be related to digital stress. Thus, we do not limit our examination to single components of digital stress, such as digital stressors, but look at the interplay of individual and situational factors in relation to digital stress experiences in everyday life. In doing so, we further distinguish between digital and analog stressors and specify the temporality of the stressors – that is, whether they cause short-term or long-term stress.

The article begins with an overview of existing research on the stress caused by technology and digital media and discusses how the COVID-19 pandemic has affected people's daily routines, media use, and well-being, all of which are related to digital stress. The following sections describe our study's methodological approach and present the results of interviews with 16 German adults. In the final

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

section, we discuss the five key findings, demonstrating the significance of situational contexts for understanding the phenomenon of digital stress.

2. Digital stress

Stress occurs when demands tax or exceed available coping resources (Lazarus & Folkman, 1984, p. 131) and can be produced by various situations, which makes stress an interesting phenomenon to many scientific disciplines. However, influential stress researchers mainly come from the discipline of psychology (e.g., Richard S. Lazarus, Susan Folkman, Craig Brod), which explains why research on stress typically focuses on individuals and their stress-related impairments and coping attempts. The often-cited transactional model of stress (Lazarus & Folkman, 1984) considers environmental influences insofar as stress experiences are assumed to result from individuals' evaluations of their respective person-environment relationships. However, the manifold contexts in which stress regularly arises are not explored systematically.

Whereas Lazarus and Folkman's model refers to stress in general, studies on digital stress concentrate on the stress caused by ICT. Initial studies date back to the early 1980s, a time before ICT became a central part of people's private lives. These studies investigated the effects of early ICT implementation in workplaces and coined the term "technostress" (e.g., Brod, 1982). An early definition by Brod (1984, p. 16) described technostress as "a modern disease of adaptation caused by inability to cope with new computer technologies in a healthy manner." Today, scholars continue to use the term "technostress" when analyzing the stress caused by ICT in the workplace, whereas studies that focus on private ICT use typically use the term "digital stress". Since our study analyzes stress experiences that result from both work-related and private use of ICT, we decided to use "digital stress" as an umbrella term when presenting our results.

Technostress has been well researched in the field of business informatics, and scholars have identified a rich set of stressors related to the demands of ICT use in the work context (e.g., Ayyagari et al., 2011; Gimpel et al., 2018; Ragu-Nathan et al., 2008; Tarafdar et al., 2010, 2011). The literature on technostress considers the following six stressors to be central when it comes to the stress produced by ICT: (1) *techno-overload* refers to people's perceptions that ICT causes "too much" of something – for example, too much information or communication; (2) *techno-invasion* describes the omnipresence of ICT and the blurring of boundaries between work and private life, which can result in the feeling that one's privacy is compromised (see also the stressor *invasion of privacy* by Ayyagari et al., 2011); (3) *techno-unreliability* refers to the perception that ICT is unstable and malfunctioning; (4) *techno-complexity* describes people's perceived lack of competence in using technical tools; (5) *techno-uncertainty* refers to the experience of continuous ICT changes that require constant adaption and further training; and (6) *techno-insecurity* describes the fear of job loss due to technological advances (e.g., Ragu-Nathan et al., 2008; Tarafdar et al., 2011). The six techno-stressors differ not only in content but also in terms of temporality. Some stressors are highly situational and can be assumed to cause acute and mostly

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

short-term stress (e.g., techno-unreliability and techno-overload). Others, such as techno-insecurity and techno-invasion, can be described as latent and permanent forms of stress that can accompany employees for weeks, months, or even years (even though acute peaks may be experienced in specific situations).

Due to technical progress and digitalization, ICT use is no longer limited to the workplace. Digital media form a central part of our everyday lives, and smartphones have become permanent companions. Nowadays, smartphones are used to communicate with friends and family as well as for entertainment and information purposes. We are "permanently online, permanently connected" (Vorderer et al., 2018), which, in turn, can cause digital stress and impair our health and well-being. Therefore, in recent years, studies have increasingly concentrated on digital stress in the context of private life (e.g., Hefner & Vorderer, 2016; Maier et al., 2015; Reinecke et al., 2017; Weinstein & Selman, 2016; Weinstein et al., 2016).

Other than *techno-insecurity*, the aforementioned stressors can also be experienced during voluntary, private use of digital media. Digital stress in private life is usually not investigated by studies from the field of business informatics. However, it is of interest to disciplines such as communication science and media psychology, which typically focus on the use of digital media for personal and group communication. The focus on communication is also reflected in the terminology that omits technology-based and work-related terms (Kinnebrock & Nitsch, 2020). For example, scholars have coined terms such as *connection overload* (Hefner & Vorderer, 2016; LaRose et al., 2014) or *communication load* (Reinecke et al., 2017), which are both related to the concept of *techno-overload*. Communication load implies further specific stressors, such as *permanent accessibility* and the associated *pressure to respond quickly* to incoming messages. For example, studies on "entrapment" (Hall, 2017; Hall & Baym, 2012) point to the anxiety, guilt, and stress involved in responding and being available to others via digital devices. Another stressor to do with social media use is *continuous communication vigilance* – that is, the individually perceived obligation or even compulsion to continuously monitor and check for new content, which can be attributed to the *fear of missing out* (Przybylski et al., 2013). Young people in particular often experience stress due to the perceived need for *permanent self-presentation* and due to *negative social comparisons* on social media or *cyberbullying* (e.g., personal attacks and public shaming). Finally, studies on both work-related and private uses of digital media have consistently found *media multitasking* – that is, the use of digital media while engaging in other activities – to increase stress (e.g., Reinecke et al., 2017; Tarafdar et al., 2011).

This overview shows that previous research on digital stress has pointed out numerous stressors that can influence (mental) health. However, during the COVID-19 pandemic, daily routines and media use have changed remarkably. Therefore, we consider whether and in which respect the pandemic has affected people's perceptions of digital stress in general, of individual stressors in particular, and of the associated effects.

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

3. The COVID-19 Pandemic: Effects on daily routines, digital media use, and well-being

In early 2020, the COVID-19 pandemic dramatically changed life, as we knew it. The restrictions that were adopted to protect populations from the disease affected both professional and private lives and led to significant changes in daily routines (e.g., Eimeren et al., 2020). For many, the restrictions were tantamount to a professional ban: people experienced job insecurity and job losses, and many companies switched to home office work. In Germany, as in many countries, home office work increased sharply in spring 2020, with highly educated people being more likely to work from home (Hoenig & Wenz, 2020; Naumann et al., 2020). Although the average daily working time decreased during the pandemic (Eimeren et al., 2020; Gimpel et al., 2020), employees increasingly worked at unusual times of the day (Hofmann et al., 2020). The closure of schools and kindergartens posed major challenges to families. Parents were suddenly left without external assistance, which resulted in "a traditional division of care work in families in Germany during the first months of the COVID-19 pandemic, (…) with mothers acting as main caregivers" (Zoch et al., 2020, p. 11).

In these times of remote work and physical contact restrictions, (digital) media became indispensable to most people. According to data from Germany, average daily media use increased by more than half an hour (Eimeren et al., 2020), video calls (e.g., via Zoom, Microsoft Teams, Houseparty) replaced face-to-face communication both at work and in private lives (e.g., Gentemann, 2020; Hofmann et al., 2020; Newman et al., 2020, p. 14), and social media use increased sharply (Bitkom, 2020; Lemenager et al., 2021).

The pandemic also impacted individual well-being and general mood. The new restrictions brought about previously unknown challenges, and the pandemic left people with a general sensation of unease, frustration, and insecurity. Surveys point to worsening psychometric scores (e.g., anxiety, depression, distress) throughout the population (Bäuerle et al., 2020; Rees et al., 2020; Skoda et al., 2020) and intense concerns regarding the health of friends and family, particularly when they belong to the category of people who have a high risk of being infected (Rees et al., 2020). Even though the lockdown generally affected everyone, people were impacted in different ways. For example, satisfaction with family and work decreased the most for mothers (Möhring et al., 2020) because they had to bear the double burden of reconciling work with childcare and home schooling. Moreover, Betsch and colleagues (2020) have shown that parents with younger children are more likely to feel overworked and overwhelmed than parents with older children. Meanwhile, people without children are likely to suffer from the impoverishment of social contacts (e.g., Best et al., 2020; Möhring et al., 2020).

4. Digital stress in times of the COVID-19 pandemic

The COVID-19 pandemic has resulted in manifold changes, which can be assumed to affect people's experiences of digital stress. The overall increase in digital media use (both at work and in private life), the lack of alternatives to digital

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

media, and the resulting greater dependency on such media may have amplified individuals' perceptions of digital stress. Scholars have discussed the initial effects of these changes, for example, using the term "Zoom fatigue" (e.g., Bailenson, 2021; Wiederhold, 2020). The shift in working hours to unusual times of the day (Hofmann et al., 2020) could indicate a greater blurring of boundaries between work and private life, which may be further amplified by greater intrusion of work into the private space (techno-invasion). Finally, the general feeling of unease and persistent uncertainty during the pandemic may contribute to the perception of digital stress experiences. As previous studies on various crises and catastrophes have shown, situations of uncertainty increase people's stress levels, even if people are not directly affected themselves (e.g., Schuster et al., 2001, on 9/11; Pfefferbaum et al., 2000, on the Oklahoma City bombing). A general increase in stress also shows during the COVID-19 pandemic (e.g., Bäuerle et al., 2020; Skoda et al., 2020).

Therefore, the pandemic itself can be considered a stressor, namely an analog and – in terms of temporality – long-term stressor that underlies everything else. The pandemic's broad impact may result in fewer resources being available for coping with additional (digital and analog) stressors, which would result in situations being perceived as stressful more rapidly. Studies by Gimpel et al. (2020), Oksanen et al. (2021), and Schmitt et al. (2021) have provided the first results on work-related digital stress during the pandemic. To begin with, the increase in social media communication at work predicted technostress (Oksanen et al., 2021). Second, while the increased use of text-based communication tools was associated with cognitive overload, this was not the case for videoconferencing tools (Schmitt et al., 2021). Finally, in terms of commonly analyzed stressors, a comparison of 1,017 employees' panel data before and during the pandemic revealed mixed results (Gimpel et al., 2020). Some stressors increased (e.g., techno-invasion), while others caused stress due to specific settings (e.g., the unavailability of digital technologies at home). Overall, perceptions of digital stress differed in relation to various influencing factors. For example, Oksanen and colleagues (2021) found no effects for employees who were already accustomed to using social media tools at work (see also Gimpel et al., 2020). Also, the presence of children in the household proved to be an additional impact factor for perceived stress (e.g., Gimpel et al., 2020; Schmitt et al., 2021). Therefore, it seems clear that dealing with digital stress during the pandemic is a highly individual task and depends on a mixture of professional, private, and personal contextual factors.

In summary, the COVID-19 pandemic provides a unique setting for analyzing digital stress experiences. People's digital media use increased sharply, as did their dependency on digital communication tools. The pandemic itself can be understood as an underlying long-term stressor in people's daily lives that may have reduced coping resources for additional (digital as well as analog) stressors. Empirical findings suggest that individuals' perceptions of digital stress depend on numerous contextual impact factors. However, these findings concern the work context. To the best of our knowledge, no studies have so far investigated wheth-

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

er and how private uses of digital media were related to digital stress during the pandemic.

Our study aimed to take a closer look at digital stress experiences during the COVID-19 pandemic. More specifically, we broadened the understanding of the phenomenon by studying digital stress related to both work and private uses of digital media, and by considering multiple contextual factors (e.g., living situation, experience with remote work, life phase) that go beyond the usual scope of common socio-demographic characteristics. We posed the following research question: How did the COVID-19 pandemic affect people's perceptions of digital stress? More specifically, we divided the research question into the following four sub-questions (SQs) that guided our analysis:

SQ1. What were the contexts (private vs. work-related) in which people perceived digital stress during the COVID-19 pandemic?
SQ2. Which stressors were prevalent, and which combinations of stressors were apparent?
SQ3. Which individual and situational characteristics were perceived as influencing factors?
SQ4. What were the perceived consequences of digital stress?

5. Method

To gain an in-depth understanding of people's digital stress experiences during the COVID-19 pandemic, we relied on semi-structured qualitative interviews with adults in Germany. A qualitative approach was a good fit with our holistic perspective, whose goal was to investigate an already-known phenomenon, digital stress, in a new situation, namely the COVID-19 pandemic.

Two trained student interviewers conducted 16 interviews in August and September 2020. The interviews were carried out over the phone or using digital platforms, such as Skype or Zoom. To make sure that the interviewees felt comfortable during the interviews, we left the choice of the medium to them. The interviews lasted between 20 and 65 minutes, with an average duration of approximately 45 minutes. The interviewees were between 18 and 63 years of age; eleven were female and five male.

The interviewees were chosen via convenience sampling and had to qualify for the study by using digital media, being 18 years or older, and either being employed or studying full-time. We intentionally did not include individuals who had lost their jobs due to the pandemic because work-related stress experiences were part of our study. When selecting the interviewees, we took care to cover a broad spectrum of life situations. For our holistic perspective on digital stress it was necessary to consider contextual conditions. The sample included persons from different age groups and life phases and with varying living arrangements (e.g., with children, in a single household) and gender roles (e.g., mother, father) as well as students and employees from diverse professions. Most of the interviewees worked (mainly) from home during the pandemic; some had previous

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

experience with remote work, while for others working from home was a completely new situation (see Table 1).

In general, our interview guideline dealt with digital stress and its contexts (private vs. work-related), causes (stressors), and consequences, as known from previous research. To gather information on the participants' specific life contexts, the interviews started with some general questions on the participants' professional and private backgrounds and their digital media use. The interview guideline focused on the participants' experiences of digital stress over the last few months – that is, since the beginning of the pandemic. We asked about stressful situations to do with both work-related and private uses of digital media. In addition, we asked what consequences these stressful situations had on the participants' health and well-being. Even though the interviews focused on stress experiences related to digital media use during the pandemic, the interviewees mentioned several positive effects of digital media, which they clearly distinguished from stress experiences. The openness of our qualitative instrument allowed us to integrate these positive descriptions and to follow up on them.

With the consent of all the participants, the interviews were audio-recorded, fully transcribed, and anonymized. After reading all 16 transcripts carefully, we carried out a qualitative content analysis, which was supported by the QDA software f4. Our analysis was initially guided by the deductive categories reflected in the interview guidelines (e.g., stressors, such as techno-unreliability, communication load, or techno-invasion, and consequences, such as health issues connected to digital stress). During the coding process, these deductive categories were inductively refined, and additional categories as well as new subcategories were introduced whenever new themes and issues emerged in the data (e.g., the increased importance of social media for keeping in contact with family members and friends). Applying Schmidt's (2000) five-stage procedure for coding semi-structured qualitative interviews, we combined deductive and inductive approaches when developing our final coding scheme. Having coded the material once again using the final coding scheme, we condensed interrelated codes (e.g., specific stress experiences and specific situations) into recurring patterns and could finally synthesize five key findings.

All direct quotations presented in the results section were translated into English by the authors. Direct quotations are marked with I (for interviewee) plus the interviewee's identification number, gender, and age. For indirect quotations, we referred to the identification number only.

6. Results

Our analysis of the interview data revealed five key findings on digital stress during the COVID-19 pandemic. The first key finding deals with the contexts of digital stress (SQ1), key findings two to four address perceived single stressors and their interplay (SQ2), and the fifth key finding concerns the positive effects of digital media use during the pandemic. The results related to SQ3 (differences in relation to individual and situational characteristics) and SQ4 (consequences of digital stress) are presented along with the respective contexts and stressors. This

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

better reflects that contexts and stressors are intertwined with individual and situational characteristics as well as with consequences of digital stress. Following the logic of the five key findings thus allows for a more holistic presentation of the results. In our final discussion, however, we summarize the results once more for each of the four sub-questions.

Key finding 1: Digital stress during the pandemic was caused by home office work

For the participants in our sample, digital stress during the COVID-19 pandemic was almost exclusively associated with work-related digital media use in home offices. All those who worked from home during the pandemic described digital stress experiences, while the interviewees who continued to work on site hardly mentioned any stress related to ICT in their work. However, it should be noted that only two people in our sample (I7, I13) continued working on site and, furthermore, had jobs that involved fairly low ICT use. Strikingly, the private use of digital media was mostly reported to cause no stress. The few interviewees who did mention it were of younger age and referred, for example, to the perceived *pressure to reply* to incoming WhatsApp messages in a timely manner (I1, I4) or to the constant checking of social media content (I5). This age difference points to the relevance of individual characteristics (SQ3) for the perception of digital stress.

As many companies were not adequately prepared to send their employees to home offices, the initial stressful experience was the transition to digital work. Technical equipment had to be upgraded or purchased, virtual private network (VPN) software had to be installed, server capacities had to be increased, and data protection issues had to be addressed (I4, I5, I9, I10, I11, I16). In this process, most interviewees received little to no support from their employers, and some had to organize the technical equipment themselves: "I must say that the employer would have had to provide much more support. I have my own laptop, my own screen, and actually, I expect to get that from the employer" (I6, male, 35; I15). Even though the transition to working from home cost the interviewees time, effort, and nerves, one can assume that this stressful experience was temporary. For example, one interviewee explained that the lack of data capacity caused "initial stress . . . that wore off after 10, 14 days . . . , and then this stress factor was no longer present" (I12, male, 54; I10). However, various stressors accompanied people throughout their time in the home offices (see Key Finding 2). Generally, home office work during the pandemic was less difficult and stressful to those who had prior home office experience, had their own study, and/or were better technically equipped (SQ3), which supports the findings of previous studies (Gimpel et al., 2020; Oksanen et al., 2021). One participant described the home office experience as follows:

> *I have a fully equipped office at home. I know horror stories from my colleagues. . . . I have two big screens, I was fine because I had the big desk . . . But few had that at home. We are equipped by default by the company with a laptop, it works for a day with the laptop, but it was two months*

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

> *home office, and I know it from others that they bought screens. Just a laptop is simply unergonomic. (I11, female, 53)*

When describing digital stress experiences in the home offices, many interviewees mentioned the lack of ergonomic equipment at home. They identified poor equipment as the reason for suffering back pain (I1, I2, I4, I8, I14), which indicates that working from home during the pandemic resulted in physical health issues. However, based on our data, we cannot say for certain whether these health issues were exclusively caused by unergonomic workplaces or whether other forms of stress were involved – as physical reactions, such as back pain, can also be caused by psychosomatic factors, such as stress (SQ4).

Key finding 2: Known stressors were amplified in home offices

The stressors (SQ2) reported as prevalent in the home offices matched the stressors identified by previous studies on work-related technostress (e.g., Ayyagari et al., 2011; Gimpel et al., 2018; Ragu-Nathan et al., 2008; Tarafdar et al., 2010, 2011). However, due to the changed conditions, the interviewees experienced a noticeable intensification of these stressors, which they mainly attributed to the increased dependency on digital media and the lack of technical support compared to the pre-pandemic times.

The interviewees experienced situations related to problems with the technical equipment as particularly stressful. Such situations can be traced back to the stressors *techno-unreliability* and *techno-complexity*. The interviewees reported server crashes (I5), sound problems during video conferences (I2, I16), and limited productivity due to a lack of storage space for data and emails (I4, I5). Even when the technology worked, there was always the underlying concern that a new problem could suddenly occur (I3). One interviewee described the following strategy to avoid such stressful situations:

> *I ordered so many technical products, for example, another larger hard drive, because I noticed that there is not enough space on my laptop. Another mouse, . . . and then suddenly the adapter stopped working. How stressed I was when I realized that the adapter wasn't working anymore. . . . I didn't care about the price . . . . The inhibition threshold to buy better technical products was insanely low. (I4, female, 25)*

Privately financed ICT tools helped avoid hardware problems, but the interviewees felt at the mercy of unstable internet connections (I1, I3, I9). Internet problems caused "panic" and "stress" (I3, I5, I9) and were attributed to the sharply increased use of the internet at home (I9). These problems were worse for larger households with many household members using the same internet connection simultaneously (I3), which again indicates the importance of housing situation and good technical infrastructure for preventing digital stress experiences (SQ3).

Another stressful situation arose when the interviewees had insufficient technical expertise. Such a lack of competence matches the stressor *techno-complexity*. The interviewees admitted their own lack of digital competence in specific situa-

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

tions and/or pointed out that other, mainly older, colleagues struggled with switching to home offices and digital technologies (I5, I9, I15, I16). The insufficient technical competence of some employees affected, in turn, the workload of others and thus caused stress for digitally competent persons as well: "Personally, I was not stressed by technical problems. What I was stressed about was that my colleagues couldn't work because of technical problems, and I had to absorb all that" (I4, female, 25).

Overall, experiences with technical problems, whether due to techno-unreliability or techno-complexity, were perceived as demotivating (I1) and led to frustration and anger (e.g., "I'll yell at my laptop", I5, male, 28). The two stressors were further amplified by the higher dependency on digital media in the home offices and the lack of technical support:

> *All of a sudden, we had to use Zoom, we had to learn the ropes first, which really puts you under stress because we didn't have anyone who said, "No problem, I know how that works." Well, it's this pressure or this necessity to deal with all these new tools. (I9, female, 43)*

As receiving assistance from companies' own IT departments became more difficult when working from home, having technically skilled people in one's own environment became highly important. Many interviewees, mainly women, expressed relief that their partners dealt with the technical issues and provided help when necessary (I7, I10, I15). This finding underlines the importance of personal networks during the pandemic for coping with ICT-related problems and, consequently, for reducing or even preventing digital stress. Simply knowing that a competent helper is at hand when problems arise leads to situations being judged as less (or not at all) stressful (SQ3).

In addition to the stressors related to technical issues described above, the interviewees reported a massive increase in work-related digital communication. This matches the stressors *techno-overload* and *communication load*. As work-related communication shifted almost exclusively to digital channels, the interviewees agreed that communication became much more stressful. The interviewees stated that digital communication was highly time-consuming and that communicating online was unpleasant in general.

Regarding the time spent on digital communication, the interviewees stated that the sheer quantity of digital communication (i.e., emails and video calls) increased significantly in the home offices (emails: I5, I14, I15; video calls: I11, I12). One interviewee explained that "it was the abundance that caused stress, not the fact that media was used" (I12, male, 54). As a consequence (SQ4) of the increased quantity of video calls, the interviewees experienced exhaustion (I6, I11, I12) and difficulties concentrating. In general, they were more easily distracted and tempted to multitask during videoconferences (I1, I2, I6, I9). How exhausting a day packed with video calls could be became evident when the interviewees mentioned that they could not handle additional video calls to catch up with friends in the evening (I1, I14). Overall, there appears to be a limit of tolerable screen time, and the interviewees claimed that increased digital media use caused headaches (I2) and eye problems (I12, I15). In sum, contrary to the findings of

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

Schmitt et al. (2021), our interviewees clearly associated video conferences with digital stress.

Digital communication was also perceived as more time consuming than face-to-face conversations (I11, I16). The interviewees reported delays in their working processes due to having to wait for an email response (I2) instead of quickly dropping by to ask a question. Especially the people working in the educational sector emphasized that teaching and communication with students took up far more time than before the pandemic (I5, I10, I15).

Digital communication in general and video calls in particular were also perceived to be stressful per se. For many interviewees, video calls were a new tool, and especially the older generation felt uncomfortable communicating in this manner (I15, I16), which may also be related to their perceived lack of technical skills. However, the younger interviewees also reported suffering from "more fear-sweat, more concern, more restlessness" (I2, male, 21) during video calls because they missed non-verbal cues (I8, I11, I16) and feedback from their interlocutors (I3). Additional stress arose when the meetings or presentations were recorded for future use (I8), which meant that mistakes or slip-ups were documented and accessible to others for a long time.

Key finding 3: Dissolution of boundaries between work and private life

During the pandemic, it became even more difficult to maintain the separation between work and personal life, and ICT has contributed to this difficulty. Scholars have described the blurring of boundaries between work and private life as *techno-invasion*, which is strongly related to *permanent accessibility* due to digital media. In times of the pandemic, this blurring culminated in a complete dissolution of said boundaries, with spatial (e.g., between the office and the living room) and temporal (between working and leisure time) boundaries collapsing.

Due to the "stay at home" orders, the life of many interviewees was suddenly restricted to one place, the home. The formerly known life, with its different places for different roles, dissolved (I2, I8, I9). This dissolution was accompanied by a sense of loss of control – for example, due to the (digital) intrusion of work and home schooling into the previously more protected private space – which favored the emergence of stressful situations. Mothers were particularly affected (SQ3), with one interviewee describing the problem as follows:

> *It is also difficult with the children or the partner. Technically, you are present . . . . So you have to reject people and say, "Stop, I'm working now!" I felt like I always have to distance myself from them, push them away . . . and say, "Leave me alone, I'm working!" I don't know if it's a bit specific to women, falling back on old gender roles. (I9, female, 43)*

The dissolution of spatial boundaries was further evident in the comments about the perceived *invasion of privacy* due to work-related video calls. The interviewees stated that they felt uncomfortable and stressed due to this form of ICT use because "there were so many people in my living room who didn't belong there" (I8, female, 41; I3). Others admitted that they consciously chose their back-

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

grounds, made sure that there were no personal items to be seen, and tidied up their rooms before video calls (I1, I5, I7).

In addition to the lack of spatial boundaries, the interviewees reported a temporal dissolution between work and private life. The lack of formerly clear structures, such as "classical lunch breaks in the canteen" (I16, male, 63) or closing the office door in the evening, made it more difficult to draw a line between work and leisure (I2, I4, I8, I14, I15). Most interviewees admitted to having difficulties structuring their day and motivating themselves. As a result, working hours were scattered throughout the day. Especially women with children reported having to "work a lot of evenings, night shifts" (I9, female, 43) because their professional and private lives were particularly intertwined as they had to care for their children during the day (SQ3).

The dissolution of boundaries between work and private life was further intensified by the fact that the same digital devices were used for both work and leisure. Most interviewees used their private smartphones for work-related communication during the pandemic (I4, I15, I16). As they often received emails and even phone calls outside regular office hours, the interviewees were confronted with work issues 24/7 (*techno-invasion*). Having a dedicated business cell phone was praised for putting an end to the permanent accessibility and enabling a better demarcation between work and private life (I11). This shows that device equipment also plays an important role for the perception of digital stress (SQ3).

Key finding 4: Simultaneity of multiple stressors

The interviews made it clear that the interviewees often experienced situations in which multiple stressors occurred simultaneously. Stress resulted not only from the use of digital media itself but was regularly accompanied by additional analog strains. These analog strains had to do with not only the permanent distress caused by the pandemic itself but also numerous acute, temporary demands. One interviewee described her thoughts when giving a presentation via Zoom as follows:

> *You're at home, and you don't know if the internet line will hold, if someone from the IT can support me. Probably not! My neighbor might come home and turn up the music, and it will all be recorded. (I8, female, 41; I3)*

This quotation reveals the interplay of diverse stressors in home offices (analog: the wish to perform well, uncontrollable background noises; digital: *techno-unreliability*). The perceived pressure to perform may explain why digital stress during the COVID-19 pandemic has been reported almost exclusively in the work context. Regarding her concerns about an unstable internet connection, one interviewee explained that "in working life, you are a bit of a perfectionist, . . . among your friends, it's not a big deal if someone is cut off after five minutes. . . . It was annoying when it happened, but it didn't cause any stress" (I8, female, 41; I2).

The double workload experienced by parents who had to reconcile childcare and work was another analog strain caused by the pandemic. It was striking that the mothers in our sample reported very detailed experiences of this double work-

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

load in times of COVID-19 (I9, I10, I15), whereas the fathers did not even mention it (SQ3). The mothers felt that it was impossible to do justice to everyone (I10) and that they hardly had any time for themselves (I9, I15). Feeling responsible for their children's schoolwork also involved digital stress experiences because, on top of their own work, the mothers were busy downloading worksheets for their children and faced *techno-unreliability* in terms of non-functioning digital education platforms (I10). One interviewee mentioned permanent interruptions in her work due to having to help her children with the schoolwork:

> *It was constant multitasking . . . . The phone rings, and that puts me under stress because right now I'm cooking something for my children. And it's embarrassing when I answer and it's someone important and my little one is chattering meanwhile. (I9, female, 43)*

Overall, it was often difficult to distinguish whether the stress was caused by digital or analog demands. The interviewees reported that they experienced general distress, irritability, exhaustion, and tiredness (SQ4) but could not say for sure whether "it is exclusively caused by digital stress. It was just this specific time period, in which you did not know precisely what would happen – this general insecurity" (I8, female, 41; I5). In any case, it is safe to conclude that people were more susceptible to digital stress during the COVID-19 pandemic due to their already-battered general condition and a higher overall stress level (Bäuerle et al., 2020).

Key finding 5: Digital media as saviors of private life

Although our research focused on digital stress experiences during the COVID-19 pandemic, the interviewees often mentioned positive aspects of digital media use in relation to the pandemic. The positive aspects were related to private communication, with digital media being seen as helpful tools to compensate for the lack of face-to-face communication. Digital media allowed maintaining private contacts by enabling social connectedness in times of social distancing. The interviewees reported that they revived old contacts (I3), played games online with friends (I3, I5), visited virtual bars, and communicated digitally even with family members of old age (I3, I9). Especially those who were living alone (SQ3) perceived the increase in WhatsApp video calls as "enriching" (I11, female, 54) and were "thankful that these digital media exist" (I8, female, 41). As opposed to the work context, the interviewees often explicitly mentioned that they perceived no stress because they were voluntarily relying on digital media in their private lives (I5, I8, I11; see also Key Finding 4).

The positive effects of digital media were also related to the fact that these means enabled home office work, which none of the interviewees had experienced to such an extent before. Despite the stressful double workload that was described by the mothers in our sample, they enjoyed the increased flexibility at the same time. For example, the fact that all family members were at home allowed for spontaneous bike tours with the whole family in the afternoon (I9). Generally,

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

there was more family time than before, which enabled positive activities such as extended breakfasts, conversations, and walks (I10, I14).

7. Discussion

Our findings add to the growing body of research on digital stress. In our analysis of digital stress experiences during the COVID-19 pandemic, we applied a holistic lifeworld perspective. As we considered various individual and situational factors (e.g., age, phase of life, family status, living situation, experiences with remote work, work situation), our findings provide specific insights into the interplay of different factors related to digital stress experiences. To answer our research question (How did the COVID-19 pandemic affect people's perceptions of digital stress?), we divided it into four SQs. The SQs addressed the contexts (private vs. work-related) of digital stress (SQ1), specific stressors and their interplay (SQ2), the aforementioned individual and situational factors (SQ3), and the consequences of digital stress (SQ4).

To summarize, the results of our semi-structured interviews showed that the pandemic-related changes affected digital stress experiences. During the pandemic, digital stress was almost exclusively associated with home office work (Key Finding 1; SQ1), and the stressors identified by previous studies were strongly present in the home office situation (Key Finding 2; SQ2). This was particularly the case with *techno-unreliability* and *communication load*. The high dependency on digital tools and the lack of technical support during the pandemic intensified stress experiences to do with non-functioning technical tools and/or unstable internet connections. Meanwhile, communicating via video calls was not only perceived as incredibly time consuming but also led to stress and exhaustion, in line with findings on Zoom fatigue (e.g., Bailenson, 2021; Wiederhold, 2020). The blurring of the boundaries between work and private life, a phenomenon known as *techno-invasion*, culminated in a complete dissolution of boundaries during the COVID-19 pandemic (Key Finding 3; SQ2). The dissolution affected both spatial and temporal boundaries and was accompanied by a sense of loss of control. ICT contributed to this dissolution, with *invasion of privacy* (especially evident during work-related video calls from home) being a central stressor. Finally, people often experienced multiple stressors simultaneously (Key Finding 4; SQ2). During the pandemic, digital stress was frequently accompanied by additional analog demands, including the general distress caused by the pandemic (e.g., Bäuerle et al., 2020), the underlying pressure to perform well in a changed work context, and the double workload for mothers, who had to juggle childcare and work.

One striking result of our study was that the use of digital media was reported to cause a lot of stress in work-related situations but hardly any in the private context. This finding is opposed to previous studies that found significant levels of digital stress associated with the voluntary, private use of digital media (e.g., Kinnebrock & Nitsch, 2020; Reinecke et al., 2017; Weinstein & Selman, 2016). However, the finding can be explained by the unique situation of the pandemic. Due to physical contact restrictions, digital media appeared as saviors of social contacts (Key Finding 5). They were seen as helpful tools to compensate for the

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

lack of analog communication, which produced a sense of beneficial connectedness instead of digital stress. The living situation further contributed to this perception, as the people who were living on their own emphasized this positive aspect far more than the people who were living in a family household.

Various individual and situational factors (SQ3) significantly affected people's perceptions of digital stress in home offices. In line with other studies (Gimpel et al., 2020; Oksanen et al., 2021), our findings showed that people with previous home office experience were better at coping with the changed situation and perceived less digital stress. This is due to the fact that these people usually had more and better work equipment at home (sometimes even their own studies) and were already used to working from home. However, those who were not used to remote work had difficulties structuring their day and motivating themselves. This resulted in the situation that was also described by Hofmann and colleagues (2020): during the pandemic, working hours were scattered throughout the day, and employees increasingly worked at unusual times of the day. Consistent with previous research (e.g., Betsch et al., 2020; Gimpel et al., 2020; Kohlrausch & Zucco, 2020), our findings further revealed a re-traditionalization of gender roles and the division of (care) work in families. In our study, mothers with children reported suffering disproportionately during the pandemic, which can be explained by the need to reconcile work, childcare, and home schooling. The mothers' situation resulted in increased multitasking and more interruptions, with the latter having particularly stressful effects during work-related video calls. As mentioned above, digital stress was almost exclusively associated with home office work, while the private use of digital media was mostly reported to cause no stress. Strikingly, however, all interviewees who described digital stress experiences in their private use of digital media were of younger age. This suggests that constant accessibility and the perceived pressure to respond quickly to incoming messages particularly concerns young people, which can be explained by the high relevance of the social environment.

The consequences of digital stress (SQ4), as reported by our interviewees, involved commonly known impairments of physical and mental health. However, the interviewees often found it difficult to assess whether these consequences resulted from digital or analog stressors. This finding once more points to the interplay of manifold strains that people had to face during the pandemic. It can thus be assumed that people had fewer resources to cope with digital and analog stressors during the pandemic, which resulted in situations being perceived as stressful more quickly.

Limitations of our study concern the composition of our sample. As with all qualitative studies, our sample was not representative and consisted of a small number of people. Therefore, our results are not generalizable. The fact that the few interviewees who continued to work on site hardly mentioned any ICT-related stress, may be due to their fairly ICT-free jobs and has to be taken into account when interpreting the results. Moreover, our sample lacked people from socially deprived households. It can be assumed that individuals from socially deprived households experienced stressful situations that did not come up in our sample. For example, while our interviewees reported that they simply acquired

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

new technological tools (e.g., screens, laptops) when needed, financial problems would prohibit such spontaneous purchases. Seeing that scholars have identified the *unavailability of digital technologies* as an important stressor in home offices (Gimpel et al., 2020), it is likely that financial problems may also increase digital stress. Furthermore, and particularly during the pandemic, a cramped living situation (which is particularly likely in socially deprived households) can be assumed to be an influencing factor that intensifies certain stress experiences (e.g., due to a lack of retreat spaces for working or doing homework).

We conducted our interviews in the summer of 2020. It is imperative that this is taken into account when interpreting the findings, as one can assume that people's perceptions of digital stress changed over the course of the pandemic. Based on the transactional model of stress (Lazarus & Folkman, 1984), two explanations for such perception changes are plausible. Due to habituation effects, certain situations (e.g., video calls) may not be assessed as stressful anymore in the later stages of the pandemic (primary appraisal). In addition, people may have acquired better technical skills or better technical equipment and may thus have sufficient resources to cope with the situation (secondary appraisal).

Our interviewees referred to many daily burdens that, at first sight, may appear trivial. However, such intertwined strains, especially the interplay of analog and digital stressors, increasingly affect our daily lives and can result in chronic stress, thus causing long-term health problems. Given the increasing number of diagnosed stress-related illnesses, such as burnout (Meyer et al., 2020), it is important to analyze the manifold and interwoven circumstances that lead to stress in general and to digital stress in particular. The pandemic has intensified our dependency on digital tools and has revealed certain problems related to a highly digitalized way of life. Knowing that even after the pandemic, a large share of office work is likely to take place in home offices and that digitization continues to advance, digital stress and its impacts on health and well-being will continue to significantly affect individuals and society. Our article has shown that, in addition to demographic characteristics, many other life-world factors and individual experiences affect people's perceptions of digital stress. Investigating the various individual and situational factors in future research can help us better understand why stress occurs, how stressors are interconnected, and which coping strategies may be helpful in particular settings.

This paper was partly funded by the Bavarian Ministry of Science and Arts (Bavarian Research Association on Healthy Use of Digital Technologies and Media, ForDigitHealth).

References

Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *Management Information Systems Quarterly*, *35*(4), 831–858. https://doi.org/10.2307/41409963

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

Bailenson, J. N. (2021). Nonverbal overload: A theoretical argument for the causes of Zoom fatigue. *Technology, Mind, and Behavior, 2*(1). https://doi.org/10.1037/tmb0000030

Bäuerle, A., Teufel, M., Musche, V., Weismüller, B., Kohler, H., Hetkamp, M., Dörrie, N., Schweda, A., & Skoda, E. (2020). Increased generalized anxiety, depression and distress during the COVID-19 pandemic: A cross-sectional study in Germany. *Journal of Public Health*, *42*(4), 672–678. https://doi.org/10.1093/pubmed/fdaa106

Betsch, C., Korn, L., Felgendreff, L., Eitze, S., Schmid, P., Sprengholz, P., Wieler, L., Schmich, P., Stollorz, V., Ramharter, M., Bosnjak, M., Omer, S. B., Thaiss, H., De Bock, F., Von Rüden, U., Ebert, C., Steinert, J., & Bruder, M. (2020). *German COVID-19 snapshot monitoring (COSMO) – Welle 12 (19.05.2020)*. PsychArchives. https://doi.org/10.23668/PSYCHARCHIVES.3023

Best, L. A., Law, M. A., Roach, S., & Wilbiks, J. M. P. (2020). The psychological impact of COVID-19 in Canada: Effects of social isolation during the initial response. *Canadian Psychology/Psychologie canadienne*. Advance online publication. http://dx.doi.org/10.1037/cap0000254

Bitkom (2020, May 27). *Social-Media-Nutzung steigt durch Corona stark an* [Social media usage rises sharply due to Corona] (Press release). Retrieved from https://www.bitkom.org/Presse/Presseinformation/Social-Media-Nutzung-steigt-durch-Corona-stark-an

Brod, C. (1982). Managing technostress: Optimizing the use of computer technology. *Personnel Journal*, *61*(10), 753–757.

Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Addison-Wesley.

Eimeren, B. v., Kessler, B., & Kupferschmitt, T. (2020). Auswirkungen der Corona-Pandemie auf Mediennutzung, Motive und Bewertungen. Sonderauswertungen der ARD/ZDF-Massenkommunikation Langzeitstudie [Effects of the Corona pandemic on media use, motives, and evaluations. Special analyses of the ARD/ZDF mass communication long-term study]. *Media Perspektiven*, 10–11, 526–555.

Freytag, A., Knop-Huelss, K., Meier, A., Reinecke, L., Hefner, D., Klimmt, C., & Vorderer, P. (2021). Permanently online – Always stressed out? The effects of permanent connectedness on stress experiences. *Human Communication Research, 47*(2), 132–165. https://doi.org/10.1093/hcr/hqaa014

Gentemann, L. (2020). *Corona-Pandemie: Arbeit im Homeoffice nimmt deutlich zu* [Corona pandemic: Home office work increases significantly]. Bitkom research. Retrieved from https://www.bitkom-research.de/de/pressemitteilung/corona-pandemie-arbeit-im-homeoffice-nimmt-deutlich-zu

Gimpel, H., Lanzl, J., Manner-Romberg, T., & Nüsken, N. (2018). *Digitaler Stress in Deutschland: Eine Befragung von Erwerbstätigen zu Belastung und Beanspruchung durch Arbeit mit digitalen Technologien* [Digital stress in Germany: A survey of employees on stress and strain caused by working with digital technologies] (Working Paper 101). Hans Böckler Stiftung.

Gimpel, H., Bayer, S., Lanzl, J., Regal, C., Schäfer, R., & Schoch, M. (2020). *Digitale Arbeit während der COVID-19-Pandemie. Eine Studie zu den Auswirkungen der Pandemie auf Arbeit und Stress in Deutschland* [Digital work during the COVID-19 pandemic. A study on the impact of the pandemic on work and stress in Germany].

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

Projektgruppe Wirtschaftsinformatik des Fraunhofer FIT. https://doi.org/10.24406/FIT-N-618361

Hall, J. A. (2017). The experience of mobile entrapment in daily life. *Journal of Media Psychology*, *29*(3), 148–158. https://doi.org/10.1027/1864-1105/a000228

Hall, J. A., & Baym, N. K. (2012). Calling and texting (too much): Mobile maintenance expectations, (over)dependence, entrapment, and friendship satisfaction. *New Media & Society*, *14*(2), 316–331. https://doi.org/10.1177/1461444811415047

Hefner, D., & Vorderer, P. (2016). Digital stress: Permanent connectedness and multitasking. In L. Reinecke & M. Oliver (Eds.), *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects* (pp. 237–249). Routledge. https://doi.org/10.4324/9781315714752

Hoenig, K., & Wenz, S. E. (2020). Education, health behavior, and working conditions during the pandemic: Evidence from a German sample. *European Societies*, *23*(Supl. 1), 1–14. https://doi.org/10.1080/14616696.2020.1824004

Hofmann, J., Piele, A., & Piele, C. (2020). *Arbeiten in der Coronapandemie – Auf dem Weg zum New Normal* [Working in the Corona pandemic –Toward the new normal]. Retrieved from http://publica.fraunhofer.de/eprints/urn_nbn_de_0011-n-5934454.pdf

Kinnebrock, S., & C. Nitsch (2020). "Ganz schön sozial-medial erschöpft... " Eine qualitative Inhaltsanalyse über digitalen Stress und immanente Genderbezüge ["Quite exhausted by social media... " A qualitative content analysis on digital stress and immanent gender references]. *Medien Und Kommunikationswissenschaft*, *68*(3), 288–303. https:/doi.org/10.5771/1615-634X-2020-3-288

Kohlrausch, B., & Zucco, A. (2020). Die Corona-Krise trifft Frauen doppelt: Weniger Erwerbsarbeit und mehr Sorgearbeit [The Corona crisis hits women twice: Less gainful employment and more care work]. *Policy Brief WSI*, *40*, 1–11.

LaRose, R., Connolly, R., Lee, H., Li, K., & Hales, K. D. (2014). Connection overload? A cross-cultural study of the consequences of social media connection. *Information Systems Management*, *31*(1), 59–73. https://doi.org/10.1080/10580530.2014.854097

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Lemenager, T., Neissner, M., Koopmann, A., Reinhard, I., Georgiadou, E., Müller, A., Kiefer, F., & Hillemacher, T. (2021). COVID-19 lockdown restrictions and online media consumption in Germany. *International Journal of Environmental Research and Public Health*, *18*(1), 14. https://dx.doi.org/10.3390/ijerph18010014

Maier, C., Laumer, S., Weinert, C., & Weitzel, T. (2015). The effects of technostress and switching stress on discontinued use of social networking services: A study of Facebook use. *Information Systems Journal*, *25*(3), 275–308. https://doi.org/10.1111/isj.12068

Meyer, M., Wiegand, S., & Schenkel, A. (2020). Krankheitsbedingte Fehlzeiten in der deutschen Wirtschaft im Jahr 2019 [Sickness-related absences in the German economy in 2019]. In B. Badura, A. Ducki, H. Schröder, J. Klose, & M. Meyer (Eds.), *Fehlzeiten-Report 2020. Gerechtigkeit und Gesundheit* [Absenteeism Report 2020. Equity and Health]. Berlin, Heidelberg: Springer. https://doi.org/10.1007/978-3-662-61524-9_23

Möhring, K., Naumann, E., Reifenscheid, M., Wenz, A., Rettig, T., Krieger, U., Friedel, S., Finkel, M., Cornesse, C., & Blom, A. G. (2020). The COVID-19 pandemic and subjective well-being: Longitudinal evidence on satisfaction with work and family. *European Societies*, *23*(Supl. 1), 1–17. https://doi.org/10.1080/14616696.2020.1833066

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

Naumann, E., Möhring, K., Reifenscheid, M., Wenz, A., Rettig, T., Lehrer, R., Krieger, U., Juhl, S., Friedel, S., Fikel, M., Cornesse, C., & Blom, A. G. (2020). COVID-19 policies in Germany and their social, political, and psychological consequences. *European Policy Analysis*, *6*(2), 191–202. https://doi.org/10.1002/epa2.1091

Newman, N., Fletcher, R., Schulz, A., Andi, S., & Nielsen, R. K. (2020). *Reuters Institute Digital News Report 2020*. Reuters Institute for the Study of Journalism. Retrieved from https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2020-06/DNR_2020_FINAL.pdf

Oksanen, A., Oksa, R., Savela, N., Mantere, E., Savolainen, I., & Kaakinen, M. (2021). COVID-19 crisis and digital stressors at work: A longitudinal study on the Finnish working population. *Computers in Human Behavior*, *122*, 106853. https://doi.org/10.1016/j.chb.2021.106853

Pfefferbaum, B., Seale. T. W., McDonald, N. B., Brandt, E. N. Jr, Rainwater, S. M., Maynard, B. T., Meierhoefer, B., & Miller, P. D. (2000). Posttraumatic stress two years after the Oklahoma City bombing in youths geographically distant from the explosion. *Psychiatry*, *63*(4), 358–370. https://doi.org/10.1080/00332747.2000.11024929

Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, *29*(4), 1841–1848. https://doi.org/10.1016/j.chb.2013.02.014

Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, *19*(4), 417–433. https://doi.org/10.1287/isre.1070.0165

Rees, J., Papendick, M., Rees, Y., Wäschle, F., & Zick, A. (2020). *Erste Ergebnisse einer Online-Umfrage zur gesellschaftlichen Wahrnehmung des Umgangs mit der Corona-Pandemie in Deutschland* [First results of an online survey on the societal perceptions of the handling of the Corona pandemic in Germany]. Institut für interdisziplinäre Konflikt- und Gewaltforschung (IKG). https:/doi.org/10.13140/RG.2.2.25322.34249

Reinecke, L., Aufenanger, S., Beutel, M. E., Dreier, M., Quiring, O., Stark, B., Wölfling, K., & Müller, K. (2017). Digital stress over the life span: The effects of communication load and internet multitasking on perceived stress and psychological health impairments in a German probability sample. *Media Psychology*, *20*(1), 90–115. https://doi.org/10.1080/15213269.2015.1121832

Schmidt, C. (2000). Analyse von Leitfadeninterviews [Analysis of guided interviews]. In U. Flick, E. v. Kardorff, & I. Steineke (Eds.), *Qualitative Forschung: Ein Handbuch* [Qualitative research: A handbook] (pp. 447–456). Rowohlt.

Schmitt, J. B., Breuer, J., & Wulf, T. (2021). From cognitive overload to digital detox: Psychological implications of telework during the COVID-19 pandemic. *Computers in Human Behavior*, 106899. https://doi.org/10.1016/j.chb.2021.106899

Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., Zhou, A. J., Kanouse, D. E., Morrison, J., & Berry, S. H. (2001). A national survey of stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine*, *345*(20), 1507–1512. https://doi.org/10.1056/NEJM200111153452024

Skoda, E.-M., Bäuerle, A., Schweda, A., Dörrie, N., Musche, V., Hetkamp, M., Kohler, H., Teufel, M., & Weismüller, B. (2020). Severely increased generalized anxiety, but not

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

COVID-19-related fear in individuals with mental illnesses: A population based cross-sectional study in Germany. *International Journal of Social Psychiatry, 67*(5), 550–558. https://doi.org/10.1177/0020764020960773

Tarafdar, M., Tu, Q., & Ragu-Nathan, T. S. (2010). Impact of technostress on end-user satisfaction and performance. *Journal of Management Information Systems*, *27*(3), 303–334. https://doi.org/10.2753/MIS0742-1222270311

Tarafdar, M., Tu, Q., Ragu-Nathan, T. S., & Ragu-Nathan, B. S. (2011). Crossing to the dark side: Examining creators, outcomes, and inhibitors of technostress. *Communications of the ACM*, *54*(9), 113–120. https://doi.org/10.1145/1995376.1995403

Vorderer, P., Hefner, D., Reinecke, L., & Klimmt, C. (Eds.). (2018). *Permanently online, permanently connected: Living and communicating in a POPC world*. Routledge. https://doi.org/10.4324/9781315276472

Weinstein, E. C., & Selman R. L. (2016). Digital stress: Adolescents' personal accounts. *New Media & Society*, *18*(3), 391–409. https://doi.org/10.1177/1461444814543989

Weinstein, E. C., Selman R. L., Thomas, S., Jung-Eun, K., White, A. E., & Dinakar, K. (2016). How to cope with digital stress: The recommendations adolescents offer their peers online. *Journal of Adolescent Research*, *31*(4), 415–441. https://doi.org/10.1177/0743558415587326

Wiederhold, B. K. (2020). Connecting through technology during the Coronavirus disease 2019 pandemic: Avoiding "Zoom fatigue." *Cyberpsychology, Behavior, and Social Networking*, *23*(7), 437–438. https://doi.org/10.1089/cyber.2020.29188.bkw

Zoch, G., Bächmann, A.-C., & Vicari, B. (2020). Who cares when care closes? Care arrangements and parental working conditions during the COVID-19 pandemic in Germany. *European Societies*, *23*(sup1), 576–588. https://doi.org/10.1080/14616696.2020.1832700

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -

Table 1. Overview of the interviewees

ID	Age	Gender	Professional situation	Private situation
01	18	female	Student Home study (no experience)	Living with parents
02	21	male	Student, part-time job Home study/office (no experience)	Living with parents
03	22	female	Student, part-time job Home study/office (no experience)	Living in a shared apartment
04	25	female	Student, part-time job Home study/office (experience)	Living with parents
05	28	male	Full-time job, teacher Home office (no experience)	Living with partner
06	35	male	Full-time job, research assistant Home office (some experience)	Living with family (2 children under 14 years)
07	40	female	Part-time job, medical assistant On-site work	Living with family (1 child under 14 years)
08	41	female	Full-time job, market research Home office (no experience)	Single household
09	43	female	Part-time job, project leader Home office (some experience)	Living with family (2 children under 14 years)
10	44	female	Part-time job, teacher Home office (no experience)	Living with family (4 children; 2 under 14 years)
11	53	female	Full-time job, manager of branding Home office (some experience)	Single household
12	54	male	Full-time job, sales manager Home office (no experience)	Living with family (2 children above 14 years)
13	54	female	Full-time job, medical assistant On-site work	Living with partner
14	55	female	Full-time job, head of communications Home office (some experience)	Living with family (1 child above 14 years)
15	63	female	Full-time job, teacher Home office (no experience)	Living with family (1 child above 14 years)
16	63	male	Full-time job, public relations Home office (no experience)	Living with family (one child above 14 years)

https://doi.org/10.5771/2192-4007-2021-4-533 https://www.inlibra.com/de/agb - Open Access -